



Stakeholder Analysis of Livestock Beef Demand in Samarinda City

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ABSTRACT

Stakeholder analysis is required to determine the roles of each stakeholder in satisfying the meat supply needs of Samarinda City, East Kalimantan Province. The purpose of this study was to assess and categorize the influence and interests of stakeholders in the beef cattle supply chain. Primary data was collected via a survey method, involving questionnaires and interviews with 49 respondents representing farmers, slaughterhouses, government officials, traders, and consumers. A stakeholder analysis was carried out utilizing an influence–interest matrix. The results indicated two main groups: Farmers and traders are major stakeholders in the meat supply chain, with enormous power and interest. In contrast, the mob, which includes customers, the government, and slaughterhouses, has significantly less power and interest. Farmers, as primary producers, and traders, as mediators between customers, play critical roles in guaranteeing meat availability and quality. While the government has regulatory power, its role as a facilitator must be expanded to encourage stakeholder participation. This study provides collaborative solutions for aligning stakeholders' views and objectives with the goal of enhancing beef availability and quality in Samarinda City.

Keywords: beef, influence-interest matrix, Samarinda City, stakeholders, supply chain

INTRODUCTION

Samarinda has an area of 716.783 km², a population of 834,820 people, and a 0.47% annual growth rate (BPS Kaltim 2023). The increased population growth and public awareness of the importance of animal protein consumption will have an impact on meat supply. According to the Central Statistics Agency, beef production in 2023 was 1.9 million kg, with a population of only 6,859 cattle. Samarinda's beef cow herd is insufficient to meet public demand for beef. Local production remains limited and does not meet rising demand, forcing the city to rely on beef cattle sourced from neighboring regions, like as livestock-producing areas like East Nusa Tenggara. Population growth and urbanization are expected to have a significant impact on the rising demand for livestock products (Paul *et al.* 2020), thus requiring all livestock sector stakeholders to be prepared to address these challenges.

The public consumes a significant amount of livestock products, with meat being among the most popular. Meat, particularly beef, is a popular and highly regarded animal-based dietary product in all segments of society. Beef is regarded as having great nutritional content and providing a significant source of animal protein to the population (Hidayat *et al.* 2023). Meeting

public demand for meat requires guarantees of quality. Ensuring the safety of meat products is a critical topic that must be taken seriously (Jakubowska-Gawlik *et al.* 2022).

Farmers, slaughterhouses, government organizations, traders, and consumers are all important stakeholders in meeting beef demand. Farmers, as primary producers, could raise production by modernizing infrastructure and improving management capacity. Farmers' productivity development efforts can be achieved by updating production facilities (Masyitah *et al.* 2024). Slaughterhouses also play a key role in ensuring that the slaughtering process follows the Safe, Healthy, Whole, and Halal requirements, resulting in high-quality and safe goods for consumers. Slaughterhouses must ensure food safety, including quality, hygiene, health, and halal status of meat products (Juhari *et al.* 2017). Local governments play an essential role in facilitating stakeholder engagement by providing facilities, rules, and policies that promote local products. The Government Regulation of the Republic of Indonesia No. 6 of 2013 concerning the Empowerment of Farmers states that farmer empowerment includes all efforts made by the central government, provincial governments, municipal/regency governments, and stakeholders in livestock and animal health to increase self-reliance, facilitate business development, enhance competitiveness and farmer welfare. Traders can expand the market by improving meat distribution in accordance with established standards, such as halal certification (Cania and Batubara 2024), whereas

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consumers' preferences influence meat product selection decisions (Ansarif *et al.* 2021), promoting continuous innovation in the livestock industry.

Each livestock stakeholder's role entails various key aspects that must be carefully considered to achieve the best possible fulfillment of meat demand. The issue of meeting beef demand has prompted scholars to investigate the influence and interests of livestock stakeholders in the upstream and downstream sectors of Samarinda. A stakeholder analysis assesses the position of each livestock stakeholder using a classification system that comprises important players, subjects, context setters, and the general public.

METHODS

Data collecting took place from August to October 2024 at a variety of locales, including farms, markets, slaughterhouses, and the Samarinda City Government in East Kalimantan. To collect primary data, this study used a survey strategy, which included field observations with key stakeholders. Questionnaires were sent and respondents were interviewed to conduct the sampling process. Furthermore, documentation was developed to aid in the data collection process.

The respondents in this study were stakeholders who have duties in their various jobs and are actively involved in the livestock value chain process from start to finish. Respondents were chosen using the snowball sampling technique (Nurdiani 2014). Individuals included in this study were stakeholders who actively contributed to the implementation of the livestock

marketing chain or beef distribution in Samarinda. Stakeholders (49 respondents, Table 1) were selected as key actors in Samarinda's beef value chain or distribution network.

The stakeholder analysis step was started by identifying the relevant stakeholders. To support the analysis, a stakeholder matrix was used to classify influence and interest. Data was processed using Microsoft Excel and IBM SPSS Statistics 26 software. This study used an interval scale to represent each respondent according to stakeholder classification. Scoring was decided using an assessment guide prepared by Jaya (2017), which included questions aimed at quantifying the amount of interest on a five-point Likert scale, as shown in Table 2.

Stakeholder interest was measured using interview-based questions posed to key informants, which included the following:

- Interest (Int1): Does the stakeholder play any part in the production process?
- Interest (Int2): Do stakeholders influence market demand?
- Interest (Int3): Does the stakeholder have responsibility for food safety and public health?
- Interest (Int4): Does the stakeholder support sustainable cattle management?
- Interest (Int5): Does the stakeholder participate in the cattle value chain process?

Scoring was established using an assessment guide containing questions designed by Jaya (2017) to quantify the extent of influence, and a five-point Likert scale, as shown in Table 3.

Table 1 List of stakeholders and respondents

Respondent	Number
Farmer	20
Slaughterhouse	1
Government	2
Trader	17
Consumer	9
Total	49

Table 2 Quantitative assessment of stakeholder interest identification and mapping

Score	Value	Criteria
5	21–25	Very High
4	16–20	High
3	11–15	Moderate
2	6–10	Low
1	1–5	Very Low

Table 3 Quantitative assessment of stakeholder influence identification and mapping

Score	Value	Criteria
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1	1–5	Very Low

Stakeholder influence was measured via interview questions posed to key informants, which included the following:

- Influence (Inf1): Is the stakeholder able to influence market conditions?
- Influence (Inf2): Is the stakeholder able to influence pricing decisions?
- Influence (Inf3): Does the stakeholder have authority over decision-making processes?
- Influence (Inf4): Is the stakeholder able to influence other parties?
- Influence (Inf5): Do the stakeholders have strategic capital and resources?

RESULTS AND DISCUSSION

General Condition of Samarinda City

Samarinda is the capital city of East Kalimantan Province, located on 0°21'81"–1°09'16" S and 116°15'16"–117°24'16" E, with a total area of 718 km² comprising 10 districts. North Samarinda is the largest district, while Central Samarinda (Samarinda City) is the smallest (Figure 1). The city has a tropical climate, with average daily temperatures ranging from 28.7 °C to 29.4 °C, humidity levels reaching up to 98% during certain months, and the highest rainfall typically occurring in January. In 2022, the population was recorded at 834,824 people, with an annual growth rate of 0.41%. The Mahakam River, which runs through the city for approximately 20 km, serves as a hub for economic and transportation activities. With its geographical, economic, and social potential, Samarinda continues to develop as one of the key cities in East Kalimantan

Livestock Stakeholder Analysis

The stakeholder analysis matrix depicts the positions of five important stakeholders in the livestock industry: farmers, traders, consumers, slaughterhouses, and the government, according to their levels of influence and interest. Each stakeholder's position is governed by two dimensions: interest (Y-axis) and influence (X-axis). According to Reed *et al.* (2009), stakeholders are divided into four categories based on their level of influence and interest.

- Key players: Stakeholders who are the most actively involved in management, as they possess both high influence and high interest.
- Subjects: Stakeholders with high interest but low influence.
- Context setters: Stakeholders who have high influence but relatively low interest.
- Crowd: Stakeholders with low levels of both influence and interest.

Stakeholders with Key Player Classifications

The stakeholder analysis results (Figure 2) show that two stakeholders are classified as key players. Key participants are individuals who have both high influence and high interest (Reed *et al.* 2009), which include farmers and dealers in this context. Table 3 presents the comprehensive results of the stakeholder analysis.

Farmers

According to the influence-interest matrix (Table 4), farmers rank first with an influence score of 17.0 and an interest score of 15.9, indicating that they are major players or most engaged actors. Farmers, as primary

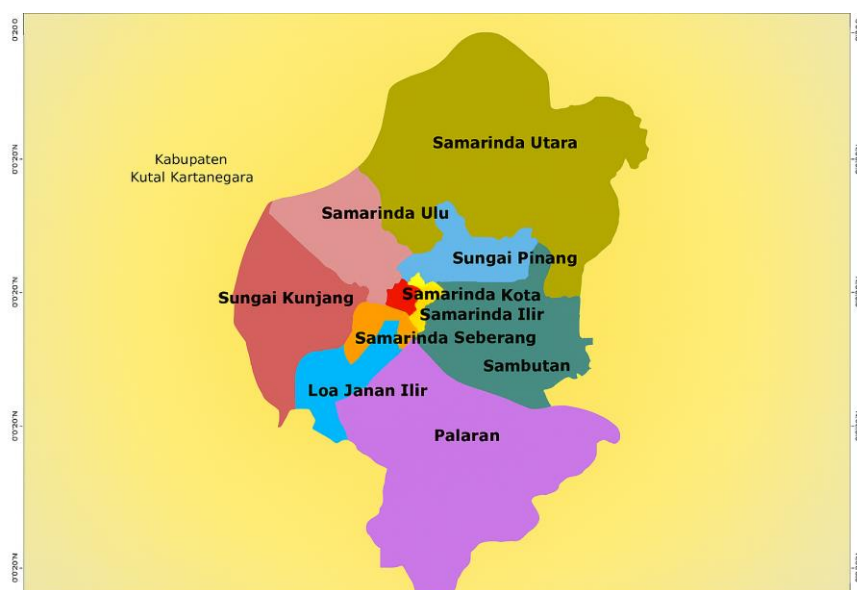


Figure 1 Map of Samarinda City, Borneo East Province (BPS 2024).

Table 4 Stakeholder categorized under key player classification

Stakeholder	Influence (X)	Interest (Y)
Farmer	17.00	15.9
Trader	14.23	13.11

producers, play an important role in delivering livestock products, which are vital sources of animal nutrition for the population. This role is obvious in the function of livestock products as critical sources of animal-based protein to address public nutritional demands (Nasution *et al.* 2020). Farmers' decisions have a direct impact on the availability, price, and quality of beef in the market.

Farmers are responsible for animal welfare, which includes providing feed, water, health care, and a conducive environment to produce premium meat. They sell cattle to a variety of customers, including intermediaries, feedlot operators, and slaughterhouses. Farmers that use proper farming methods can raise healthy, disease-free cattle that meet meat quality standards. Furthermore, farmers modify the availability of beef cattle in response to market demand, particularly during religious holidays or specific seasons when meat consumption increases. Overall, farmers are the primary producers of high-quality beef, and they play a critical role in maintaining market supply and price stability.

The Role of Farmers as Key Player

According to the influence-interest matrix, farmers are key participants, showing that they have significant influence and interest in Samarinda City's beef supply chain. Farmers are the major producers who decide the supply and quality of slaughter cattle. Their animal husbandry, health management, and sales scheduling decisions all have a significant impact on market supply and price stability. Farmers also have an important role in ensuring the long-term viability of beef production, particularly using appropriate farming techniques. Farmers have an important strategic role in ensuring an effective and sustainable beef distribution system, and they require direct support from the government and other stakeholders.

Traders

Traders hold second place in the matrix, with an influence score of 14.23 and an interest score of 13.11. Their presence in the matrix's upper right quadrant illustrates how important and influential merchants are in the supply chain. Traders play an important role in connecting livestock farmers' production with consumers. They oversee distributing (selling) beef directly to consumers or the public (Suherman *et al.* 2015). Traders not only sell products, but they also play an important role in ensuring supply chain stability by altering prices and distribution based on market conditions and production levels.

Traders help determine beef prices based on market factors such as purchase costs, shipping, storage, processing, and consumer demand. In some circumstances, merchants can affect prices by negotiating or collaborating with other traders. They must guarantee that the beef sold satisfies safety and quality criteria, such as proper storage at acceptable temperatures. Traders also guarantee that the meat is free of contaminants and derived from healthy animals. Furthermore, traders provide farmers with information on market demand, price trends, and consumer wants, while also informing consumers about the origin and quality of the products.

Stakeholders with Crowd Classification

Figure 2 depicts the results of the stakeholder analysis, which reveals that the crowd group consists of three stakeholders. This group refers to stakeholders with little influence and interest (Reed *et al.* 2009). Table 5 shows the influence and interest results from a stakeholder analysis of the cattle industry from upstream to downstream in meeting beef demand in Samarinda City.

Consumers

The matrix data shows that consumers have a 9.66 influence score and a 9.22 interest score. Consumers, although not being directly involved in the production process, have a significant power and influence in the livestock business, according to these scores. Consumer decision-making is defined as consistent and purposeful actions performed to meet their requirements (Ansyarif *et al.* 2021). Consumer preferences, such as meat cuts and product quality, serve as benchmarks for business and production decisions. The demand for high-quality livestock products, particularly beef, is a major motivator for farmers and dealers to constantly innovate and meet market demands.

Consumers provide input to traders, producers, and other supply chain partners on quality, price, and service levels. This input enables businesses to enhance their products and services. Muslim consumers' need for halal meat motivates industry operators to ensure that slaughtering and processing adhere to Islamic law. Consumer behavior is a form of power that influences the intensity of rewards for producers (Putri *et al.* 2022). Consumers also serve as market regulators, citing breaches such as rotten meat, unsanitary conditions, and unfair pricing. Consumers

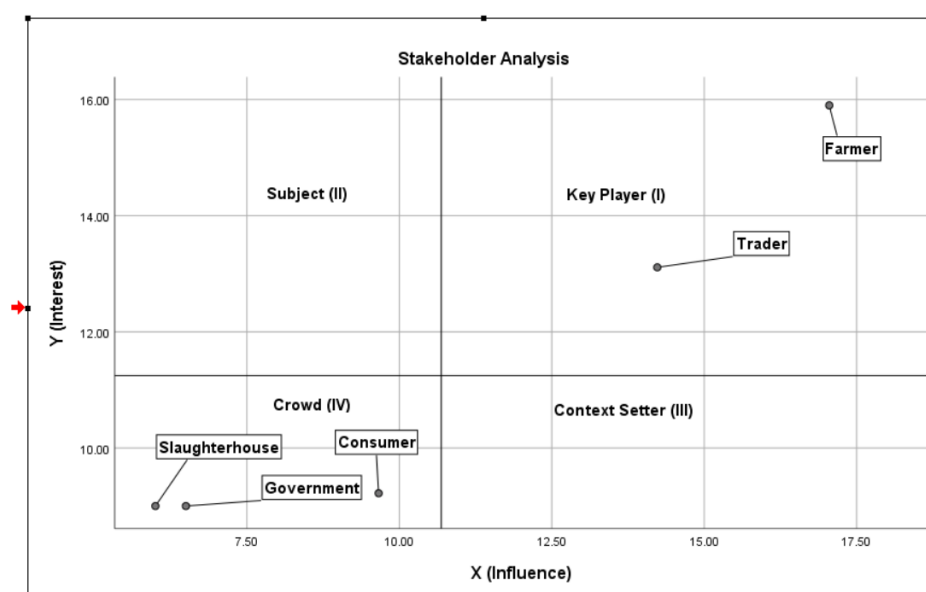


Figure 2 Stakeholder matrix analysis results.

Table 5 Stakeholder categorized under crowd classification

Stakeholder	Influence (X)	Interest (Y)
Consumer	9.66	9.22
Government	6.50	9.00
Slaughterhouse	6.00	9.00

can influence government policy by campaigning for consumer protection regulations.

Government

The government regulates the cattle business through health policies, sanitation, and production standards, which impact the performance of all players. Stakeholder analysis reveals that the government has great influence, with a score of 6.5 and an interest score of 9, placing fourth behind farmers, dealers, and consumers. Although the government's interest in production and commercial processes are relatively modest, its primary duty is to stimulate, mobilize, regulate, and facilitate the cattle sector. The government is in charge of regulating, guiding, managing, and supervising the availability of quality animal products, providing adequate quantity, safety, nutrition, variety, and equitable distribution (Rhama and Setiawan 2020). While the government has influence in planning and regulation, its direct engagement in daily farm activities is limited, compared to other stakeholders.

Several Indonesian regions demonstrate local governments' active engagement as successful examples in the beef cattle supply chain. For example, East Nusa Tenggara's "Productive Female Cattle" program has increased cattle populations and inter-island distribution; Blora's "Prosperous People's Livestock" program and livestock cooperatives have

strengthened local production and supply chains; and East Lombok's empowerment of farmer groups and integration of agriculture and livestock has improved cross-island distribution. In contrast, the Samarinda City Government has yet to perform an optimal position as a facilitator and connector among stakeholders, and it lacks strategic initiatives, therefore it has been classified as a crowd with limited impact and interest in stakeholder analysis.

Local governments must take an active role in fostering collaboration among farmers, traders, slaughterhouses, and consumers through regular communication, partnerships, and cross-sector coordination. To increase competitiveness, the government should provide local farmers with programs such as feed subsidies, production incentives, simplified licensing, and price protection. Furthermore, governments are expected to support community capacity building through training, guidance, and farm business management consultations, as well as monitor product quality, food safety, and halal compliance. Technology usage such as supply chain information systems, e-commerce, and market digitization should also be encouraged to improve distribution efficiency and pricing transparency.

Position of the Government in the Influence-Interest Matrix

In the influence-interest matrix study, the Samarinda City administration is placed in the crowd quadrant, indicating a low level of influence and interest in the beef supply chain. Although the government has regulatory and facilitative authorities, the study findings show that its involvement in both operational and strategic growth of the cattle sector is minimal. This shows that the government's role in encouraging collaboration among important stakeholders, such as farmers, dealers, and slaughterhouses, has not been fully realized. This viewpoint emphasizes the need for local governments to increase their capacity and commitment to being more involved as connectors and drivers of a sustainable livestock marketing system.

Slaughterhouses

Slaughterhouses have less impact and are primarily concerned with the slaughtering process as well as the quality and safety of beef, as opposed to farmers, traders, customers, and the government, all of whom play larger roles in production, distribution, demand, and policy regulation. Slaughterhouses are responsible for producing high-quality meat while also upholding animal welfare requirements (Edwards-Callaway and Calvo-Lorenzo 2020). However, stakeholder analysis shows that their influence scored 6 and interest scored 9, indicating that their impact on the cattle sector from upstream to downstream is relatively limited in comparison to other stakeholders.

CONCLUSION

The analysis results show that stakeholders in Samarinda City's beef cattle supply chain are classified into two groups: major actors and the crowd. Farmers and dealers are key participants, as they have a lot of influence and interest in beef production, distribution, and availability. Farmers are the primary producers, while traders play an important role in the production and consumption processes. Both play important strategic roles in ensuring supply and price stability. Meanwhile, stakeholders defined as crowd include customers, the government, and slaughterhouses, which have relatively modest levels of power and interest. The government, as a regulator, has yet to completely utilize its role in encouraging synergy among the primary actors, while consumer and slaughterhouse contributions to product quality and safety are minimal and tend to be passive in supply chain dynamics.

These findings suggest that improving stakeholder collaboration, particularly by expanding local government's role as a facilitator, is critical to developing a sustainable beef supply chain. The government must take active steps to support local farmers by adopting policies, strengthening human resource capacity, providing supporting infrastructure,

and enforcing transparent and equitable meat distribution rules.

Despite its limitations due to the small number of respondents and geographic breadth, this study provides as a foundation for strategic decision-making in the development of the cattle sector in Samarinda City. As a result, additional research is proposed to include more stakeholders and broaden the study area to create more representative and useful results at the regional and national levels.

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