



## The Value Chain and Benefit Distribution in East Java's Goat Meat Business for Sustainable Management

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### Abstract

This research evaluates the value chain and benefit distribution within the goat meat industry in East Java, Indonesia, which is becoming a critical component of the country's livestock sector. A total of 120 goat farmers, three retailers, three wholesalers, twelve intermediaries, three slaughterhouses, three processors, and twelve consumers from three districts in East Java were selected as respondents. Snowball sampling and a purposive approach were employed to gather relevant data. The findings revealed two distinct value chains in the goat meat industry, with intermediaries playing a crucial role in both. The shortest value chain involved farmers, intermediaries, and consumers, while longer chains included additional actors such as slaughterhouses. The study found that farmers contributed significantly to the value chain, and as the chain lengthened, consumers demonstrated a willingness to pay higher prices. These findings indicate that strengthening and growing the goat meat supply chain is crucial for the industry's long-term development. Key recommendations include boosting goat production and improving the supply chain's effectiveness to satisfy domestic meat consumption while ensuring fair distribution of benefits among all participants.

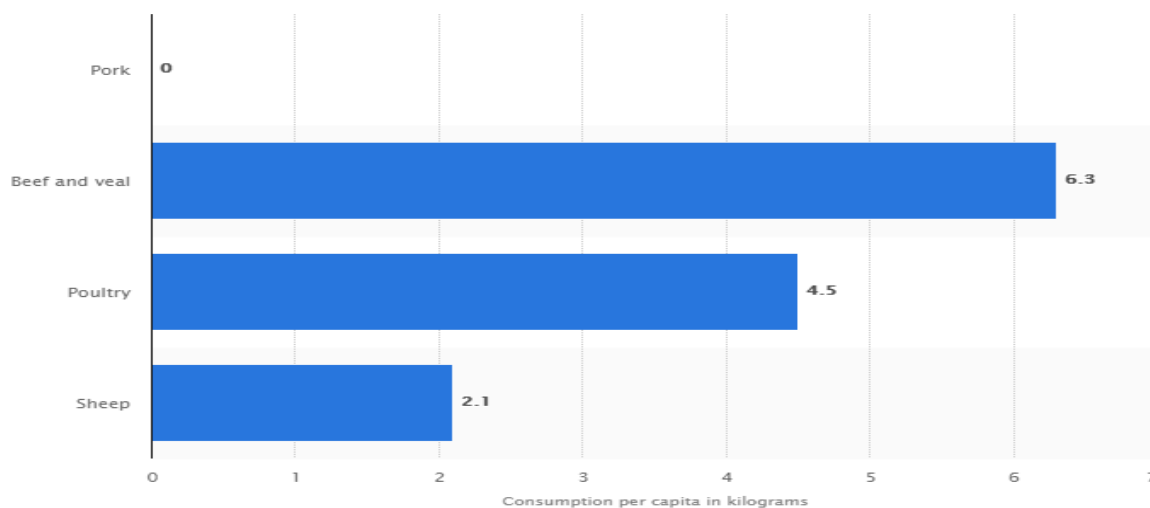
**Keywords:** Goats Farming; Meat; Value Chain; Value Added; Middlemen in Meat Process to Consumers

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## INTRODUCTION

In Indonesia, the goat farming business has grown, bringing more money to Indonesian people and providing jobs for Indonesian customers throughout the value chain (BPS, 2019). The consumption of meat by goats is much greater than that of other types of meat. In Indonesia, goat meat makes up a large portion of the meat eaten, accounting for 2.1 kg per capita in 2018.



**Figure 1.** Consumption per Capita in Kilogram  
(Source: BPS, 2019)

As a consequence of the outbreak of the African Goat Kids Fever that occurred in Indonesia this year, approximately 2,000,000 goats were slaughtered and numerous farms were closed (Jamal et al., 2021). Indonesian customers have decided to consume goat meat from open markets as their style of behavior in recent years. In Indonesia, the open market is where many goat meat-related operations are conducted. Indonesian customers make an average of 13 trips to market food merchants each week, showing their propensity to frequent traditional fresh markets. Purchasing goat meat from an open market was a favorite pastime for Indonesian customers, and it was the most frequent way of doing so (Kagan et al., 2020).

Several studies have reported notable results. Asfia et al. (2021) in Indonesia's Java region, there is a lack of information regarding goat value chains. Studies on the goat value chain have been conducted, mostly in the northernmost region of East Java. Several meat flow routes have been identified in Indonesia's central and western regions. The shortest route was from the farmer to the butcher, then to the store, and ultimately to the consumer, who was the final link in the value chain.

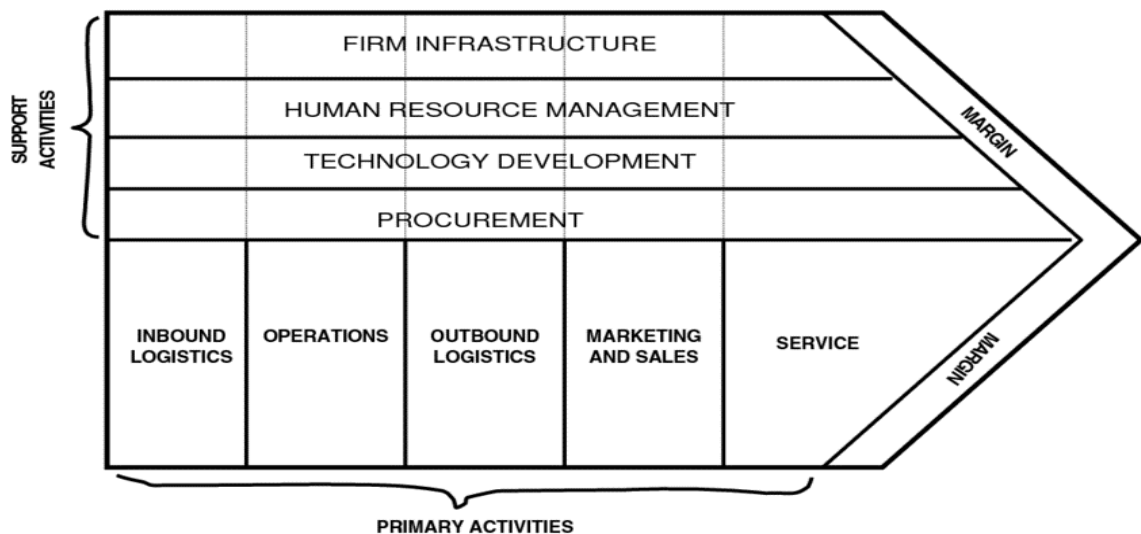
Research conducted by Asfia et al. (2021) revealed that goat farmers face limited selling opportunities due to insufficient market information and the lack of formal agreements between producers and purchasers. Because all goats bought from farmers were transported via several intermediaries to reach the customer, it is reasonable to assume that all goats purchased from farmers reached consumers through several intermediaries (Vanany et al., 2019). According to Alam and Yoshino (2022), the researchers also mentioned a farmer who sold goats to local merchants since he had fewer than 30 goat babies at the time of the study. Furthermore, Thuy et al. (2020) demonstrated that the value chain for goat meat in Indonesia was composed of farmers, intermediaries, slaughtermen, retailers, and consumers, with participants often combining their operations with those of other value chain actors, such as slaughterhouses. Goats were acquired at the farm through intermediaries and slaughtered at a family owned abattoir on the premises (Thuy et al., 2020). Goat meat constituted the vast majority of all the products sold in the local marketplace.

It has been reported that certain private butchers have used these slaughterhouses to slaughter live goats with the assistance of workers. Rodriguez et al. (1993) stated that the middleman is the individual who contacts farmers prior to purchasing goats from them. Rodriguez et al. (1993) Slaughterhouses played a crucial role in the goat value chain and in the generation of economic value (Adicha et al., 2021). Approximately 14-25 percent of the value added by goats is produced in the northern region of Indonesia. At the time of writing, there were no farmer organizations or cooperatives in the value chain. The farmer groups in Indonesia that specialize in various agricultural products including coffee, vegetables, fruits, and aquaculture.

In previous research, the value chain has been examined not only in the context of goats, but also in relation to other animals within the agricultural system. Regarding poultry, that to achieve effective market value addition, it is necessary to close the open market, establish a more organized slaughterhouse, and implement price control regulations, among other measures. Owing to the open market processing of chicken products in the value chain, they cannot be marketed in supermarkets catering to middle- and high-income consumers. According to Ranaei et al. (2021), input suppliers such as feed mills, poultry producers including broiler farmers and collectors, poultry distributors such as shops and restaurants, and consumers were all incorporated. Beverage processors are in-

tegral to the beef value chain, which comprises supply suppliers, farms, livestock processing and assembly facilities, retail and wholesale outlets, and consumers (Jeffer, 2020).

The beef value chain offers advantages to various stakeholders, including farmers, brokers, dealers, hotels, and restaurants. We identified several key players in the beef value chain, such as input suppliers, producers, collectors, traders, cooperatives, brokers, abattoirs, butchers, and processors, with consumers being the exception. The numerous intermediaries were involved in the rabbit value chain, encompassing input suppliers, producers, abattoirs, and distributors. In addition to receiving live animals, abattoirs prepare meat for human consumption. In recent years, a wide range of factors have affected the goat value chain, resulting in modifications of value chain activities. In the words of Porter (1985), the value chain is "the fundamental instrument for diagnosing competitive advantage and identifying opportunities to enhance it." It is the value chain that separates a company into the distinct operations that it conducts in the design, production, marketing, and distribution of its goods, or we might think of it as "the sequence of actions that must be completed."



**Figure 2.** The generic value chain  
(Source: Porter, 1985)

Porter (1985) identifies several major logistics activities, including incoming logistics, operations, outgoing logistics, marketing, sales, and services, all of which are illustrated in Figure 3. Furthermore, Bisht (2021) demonstrated that the agri-food value chain, encompassing livestock producers, extends to consumers or points of purchase.

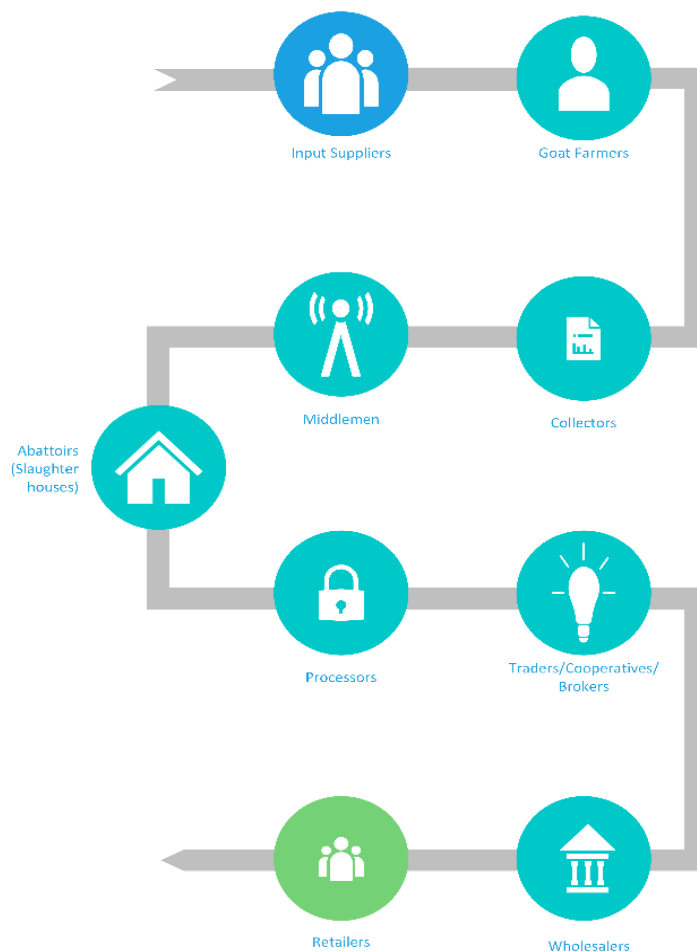
Furthermore, the network architecture of a value chain comprises two interrelated dimensions: vertical and horizontal. Multiple researchers, including Le Thi Minh et al.

(2017) and Alam and Yoshino (2022), have demonstrated that the value chain initiates with input suppliers and culminates with consumers. Based on these investigations, the conceptual framework illustrated in Fig. 2 was used to construct the research. This study also formulated the following hypotheses: Joseph et al. (2013), Ponguru and Kanna (2015), and Le Thi Minh et al. (2017).

H<sub>1</sub>: Before reaching ultimate customers, the value chain has gone through many middlemen.

H<sub>2</sub>: Value contributions vary across value chain participants and intermediaries play a critical role in the value chain.

H<sub>3</sub>: The longer the value chain is, the more customers spend on goat meat.



**Figure 3.** Conceptual Framework  
(Source: Researchers own, 2024)

## RESEARCH METHODS

Three districts in East Java, Indonesia, namely Surabaya, Malang, and Jember, were chosen as study sites because they had a significant goat-producing population area among the province's districts. Additionally, the goat trade is highly active in these three

regions, contributing substantially to East Java's performance in goat output within Indonesia. This study was conducted qualitatively. To conduct in-depth face-to-face interviews across the three districts, a total of 172 respondents were selected, including 120 farmers, a dozen middlemen, three slaughterhouses, three processors, a dozen market vendors, and a dozen customers.

For this study, a purposive sampling technique was used, with the following criteria: farmers must have at least one year of experience trading and raising goats; other value chain players, such as feed wholesalers and retailers, must have experience selling feed or animal medicine products; middlemen, slaughterhouses, food processors, sellers, and consumers must all have experience selling goats; and consumers must have experience purchasing goats. This technique yielded a total of 122 responses.



**Figure 4.** Value chain if exporter involved Amendment in Porter value chain Model  
(Source: Researchers own, 2024)

The information gathered in this study is qualitative. Information can be extracted from questionnaire designs in the form of numerical numbers, and this knowledge is useful. The study's results were supported by data from two sources, which included the following: in-depth interviews with respondents who were sampled from this study, including farmers, animal feed wholesalers, retailers, middlemen, slaughterhouses, processors, market sellers, and consumers, as well as interviews conducted in response to a questionnaire that provided the primary data for this study. Secondary data was obtained from secondary sources

The framework is based on the methods developed by van Hoang (2015), which emphasize the importance of revenue, processing expenses, added value, and profit in a business. The following formula may be useful for explaining several of the financial indicators used in this study:

Revenue = Output of meats in KG × Unit price

Margin Price of Meat = Revenue from sales of next unit of meats – total previous revenue

Processing cost = Cost of raw meat+ Cost of Labor, Overhead Cost

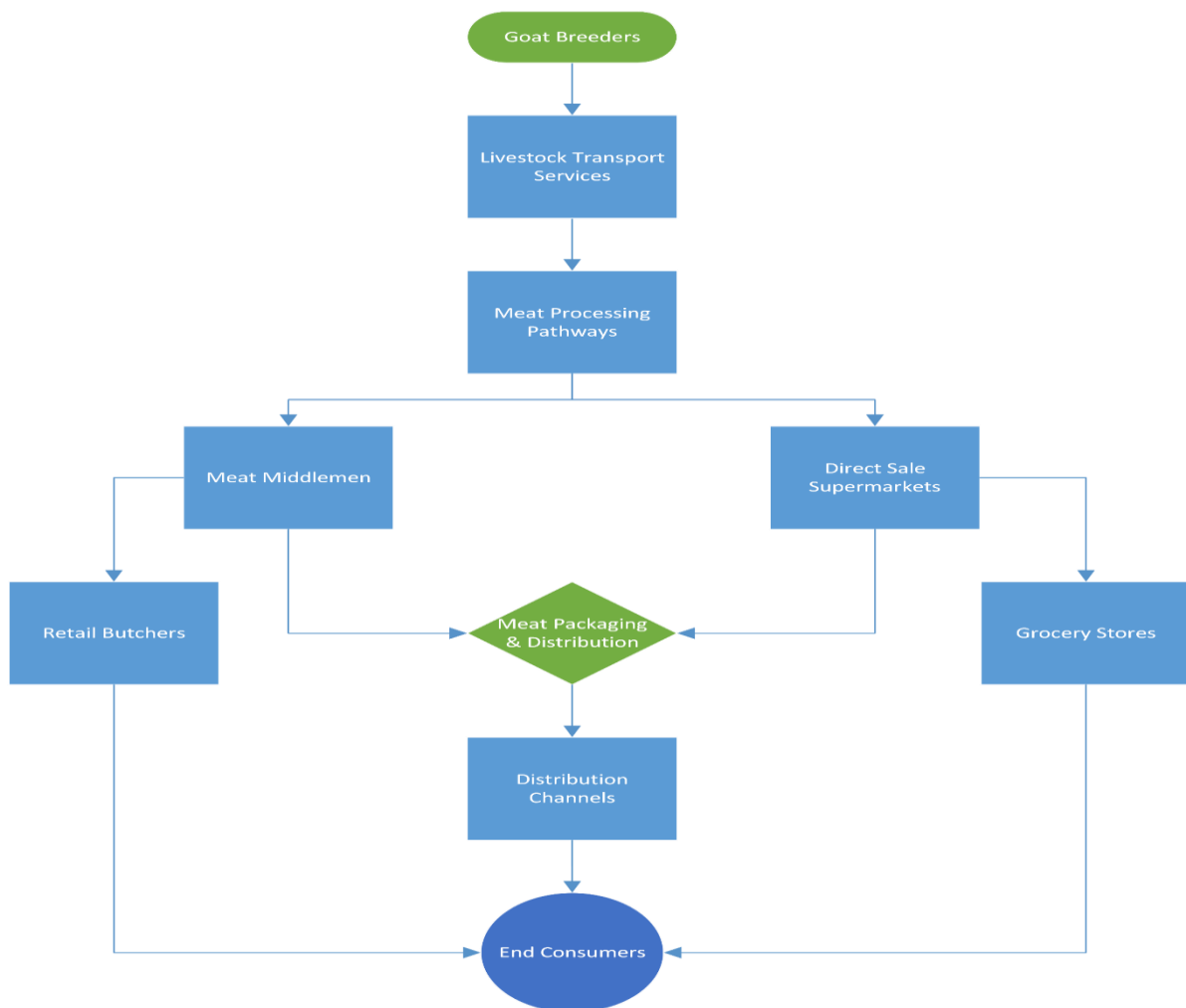
Total cost = Variable cost + Fixed cost

Net Profit = Revenue - Total cost

value Added = Revenue - Processing cost

## RESULTS AND DISCUSSION

In this study, various value chains were discovered (Figure. 4). There was a centralized structure in which goat farmers were autonomous in selling and trading goats, as shown in Figure. 4. The first value chain was from the farmer – slaughterhouse – middlemen –Goat Meat merchants cum Packaging – consumer (Channel 1), whereas the second value chain was from the farmer – slaughterhouse –a middleman –Goat Meat retailers cum Packaging – the consumer. Consumers of the Cum Supermarket (Channel 2).



**Figure 5.** Goat Meat Value Chain Processing Industry in East Java Indonesia  
(Source: Researchers own, 2024)



This study reveals that the goat meat value chain in East Java, Indonesia, is predominantly controlled by intermediaries, who act as the primary link between farmers and the market. Farmers sell their goats exclusively to these intermediaries, bypassing direct sales to slaughterhouses or consumers.

**Table 1.** Summary of Findings

<b>Aspect</b>	<b>Observation</b>	<b>Implication</b>
Farmer Sales Channels	Farmers sell goats exclusively to intermediaries.	Farmers' market access is dependent on intermediaries, limiting direct market participation.
Intermediary Role	Intermediaries purchase goats, arrange slaughter, and distribute meat to markets.	Intermediaries centralize the value chain, controlling both logistics and distribution.
Slaughterhouse Function	Slaughterhouses focus on butchering services without engaging in meat sales.	Slaughterhouses are specialized service providers within the value chain.
Market Distribution	Goat meat is primarily sold in local markets by vendors or intermediaries.	Traditional markets are key to meat distribution, reflecting consumer preferences for fresh products.
Consumer Preferences	Consumers prefer buying fresh goat meat from markets over frozen meat from supermarkets.	There is a strong demand for fresh meat, guiding distribution and marketing strategies.
Processing and Product Variety	Companies like XYZ Meat & Food Company produce various products from goat meat, including sausages and other processed items.	Processing adds value to goat meat, contributing to market diversity and consumer options.

Source: Researchers own (2024)

Consumers in East Java demonstrate a strong preference for purchasing fresh goat meat from local markets, rather than frozen meat from supermarkets. This preference is driven by perceptions of quality, taste, and freshness, which are superior in fresh meat than in frozen meat. Demand for fresh meat shapes the entire value chain, influencing how intermediaries and market vendors operate. To meet this demand, intermediaries ensure that the meat reaches markets quickly after slaughter, maintaining its freshness. This preference also affects the marketing strategies of meat vendors who focus on promoting the freshness and quality of their products. The consumer inclination toward fresh meat suggests that any attempt to introduce frozen meat on a large scale would face significant resistance unless it could convincingly address concerns about quality and taste. Therefore, the demand for fresh meat remains a guiding factor in the distribution and sales strategies within the value chain.

Companies such as XYZ Meat & Food Company add value to goat meat by processing it into various products such as sausages and other locally packaged items. This processing not only diversifies product offerings in the market, but also caters to different consumer preferences and occasions. By transforming raw goat meat into a variety of processed

goods, these companies create additional revenue streams and expand the goat meat market beyond traditional consumption patterns. The presence of processed goat meat products in the market reflects a trend toward value-added goods that can command higher prices and appeal to a broader consumer base. This diversification also helps to stabilize the demand for goat meat, as processed products have longer shelf lives and can be distributed through different channels, including supermarkets and convenience stores.

## **Discussion**

Farmers sold their goats directly to the intermediaries. This result was comparable to the findings of Barua et al. (2021). They carried out the procedure without the help of any other norms or regulations. There are no cooperatives in East Java, Indonesia. This has become common practice among farmers. The middlemen were significant actors according to Mann and Iazzolino (2021). In the value chain, middlemen play a significant role in activities, such as assembly, purchasing, and transportation. Instead of purchasing goats from other players in the value chain, middlemen have attempted to approach farmers directly to purchase goats from the farm. According to Adicha et al. (2021), middlemen in the value chain have a significant ability to influence price. Because of large profit margins, middleman-cum-sellers are prevalent throughout East Java Indonesia's value chain. In the value chain, the middlemen-cum-seller served two purposes. These were both sellers and intermediaries. As a result, they were able to effectively manage the pricing of the entire value chain, particularly at the farmer level (Grandin, 2022).

As a result, intermediaries took care of the entire process, from farm to market. A truck owned by middlemen was used to transport the goats and meat. As they wanted to save money on shipping and keep the meat fresh, they decided to make their own. This is a point of contention. Goats were killed in a slaughterhouse. Furthermore, Indonesian customers, such as slaughter workers and Indonesian customers, provided employment at this location. The slaughterhouse did not purchase or sell goats in the facility. Asfia et al. (2021) Slaughterhouses were just a service in the value chain of the goat business in East Java, Indonesia. They did so because they did not want to risk the transmission of illness. If the illness spreads to the slaughterhouse, they may shut down to avoid disease transmission. It might be argued that in the case of Asfia et al. (2021), limiting goat movement is a smart approach for managing benefit loss. The illnesses spread mostly via animal migration and

herd contact. Some private butchers came to slaughterhouses to kill live goats by employing employees there (Lâm et al., 2013).

Lâm et al. (2013) found similar results because they sought to control the pricing of the entire market chain from farmers to consumers, middlemen-cum-sellers developed in the goat value chain. Because of Indonesia's desire for fresh meat, no vendor wanted to keep the meat in a freezer. Alam and Yoshino (2022) argued that meat is supplied to the local market after processing. According to Lâm et al. (2013), almost half of vendors transported meat and carcasses via motorcycles. Processors prefer meat from vendors. They didn't have any contracts with intermediaries, slaughterhouses, or even farmers since they didn't have. Furthermore, since processors did not purchase meat every day and the quantity of meat was inconsistent, they were unable to negotiate with market vendors.

Meat processors opted to source their supplies from market vendors for several reasons. Lâm et al. (2013) noted that the open market was the primary source of beef. Increasing urbanization has led to growing demand for processed and high-quality agricultural products, resulting in processors playing a more significant role in the value chain. For large-scale processors, that the process began at a slaughterhouse and concluded with product packaging. However, the situation in East Java, Indonesia, differed, as processors operated on a smaller scale. Meat is the most commonly consumed protein among Indonesian consumers, with the majority of purchases made from open markets or vendors. The meat-buying habits of Indonesian consumers may have been shaped by cultural factors, which encompass the practices people use to fulfill their needs. This study found that Indonesian consumers make 13 visits to food retailers.

Furthermore, culture has affected numerous areas of people's lives, but the most obvious is consumer behavior. Everything begins with culture, including all kinds of needs, living behavior, consumer behavior, and so on. Furthermore, consumer attributes influence pricing, income, profession, and meeting demand. Age, buyer gender, residence location, and household size have an impact on meat demand (Lâm et al., 2013). According to Lâm et al. (2013), although price and accessibility were less significant, consumers valued confidence in meat vendors and the cleanliness of seller stalls as variables that affected meat purchases (Marius et al., 2021). Furthermore, customers may visit the market at any time and purchase fresh meat (Reis et al., 2022). This has occurred because of the increasing need for high-quality, secure, and convenient products.

Furthermore, technical advances have increased competition, requiring the development of one-of-a-kind products to remain competitive (Njaramba et al., 2021). Therefore, modern consumers flock to supermarkets to satisfy their demands for goods and services. Compared to le Thi Minh et al. (2017), who discovered that the value-added of goats in northern Indonesia was 14-25 percent, the results from this study were higher. This may be explained by the fact that as a result of Indonesia's meat scarcity, each player in the value chain has the opportunity to create more value and profit from the high price of meat.

The farmer, in contrast to le Thi Minh et al. (2017), is the actor in the value chain who earns the least money. This was due to the exorbitant price of live goats at the time of writing. Middlemen play an important role in creating extra value across the value chain (Paiva & Coutinho, 2023). The intermediaries must provide value to their business partners in some manner. The second value chain is the shortest of the two channels. Because intermediaries serve two functions in the value chain, they are referred to as middlemen cum-sellers (Ridoutt, 2024). As a result, middlemen cum-sellers may create greater value across the value chain. It is prevalent in East Java and Indonesia.

The importance of merchants and intermediaries has grown in recent years. Customers accept a cheaper price if the chain is shorter. This is shown in the findings of the study. There were various fees that each actor in the value chain had to pay (Dubeuf et al., 2023). Consequently, the value contributed by each player in the value chain differed. Furthermore, there is no method to connect farmers and customers in the value chain of the goat business in East Java, Indonesia to minimize middleman costs. Because they rely on the services of intermediaries, producers or farmers have given up their market positions and have no negotiating leverage. Nguyen et al. (2020) also reported this result.

## **CONCLUSION**

In East Java, Indonesia, the goat industry operates through two primary supply chains, each with different levels of intricacy and stakeholder engagement. The most streamlined supply chain consists of farmers and intermediaries, who also act as vendors, abattoirs, and end-users. This study emphasizes the vital function of intermediaries in facilitating product movement and price determination. While these middlemen contribute significantly to the supply chain, they also result in increased consumer costs. Farmers, while adding the most value to the product, often lack bargaining power because of their dependence on intermediaries. This reliance affects profitability and limits control

over market conditions. To improve the current value chain, it is recommended to establish farmer cooperatives to reduce dependence on middlemen and to enhance farmers' profits. Additionally, investment in slaughterhouse infrastructure could increase the efficiency and reduce the risk of disease transmission. Small-scale processors should be supported with resources to meet the growing demand for high-quality processed meat, whereas transparency and regulations for middlemen could prevent monopolistic practices and unfair price markups. Future research should focus on examining the impact of cooperatives on farmer profitability, understanding consumer behavior across different regions, and quantifying value added at each stage of the value chain. Further studies could also explore how technological adoption can improve processing efficiency, the regulatory practices surrounding middlemen-cum-sellers, and the long-term economic effects of shorter value chains on the sustainability of all actors involved.

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