Supply Chain Management Local Sheep: Fat Tailed Sheep in Jember Indonesia During and After Eid Adha

Niswatin Hasanah[1*], Hariadi Subagja[1], Nanang Dwi Wahyono[2]

[1]Departmen of Animal Science, Politeknik Negeri Jember
Jl. Mastrip Po Box 164, Jember 68101, Indonesia
[2] Department of Management Agribusiness, Politeknik Negeri Jember
Jl. Mastrip PO BOX 164, Jember 68101, Indonesia
*Corresponding author: niswatin_hasanah@polije.ac.id

ABSTRACT

Aims of this research are to know the supply chain of fat-tailed sheep with institutions involved in marketing in Gumukmas District, Jember Regency. 2) find out the difference in the price of fat tail sheep in Gumukmas District, Jember Regency. This research was conducted in May-August 2021 in Gumukmas District, Jember Regency. The data obtained were analyzed descriptively by calculating the formula for marketing margin, margin percentage, and marketing efficiency. The results showed that the most efficient supply chain during the Eid al-Adha period in Gumukmas District, Jember Regency, male and female sheep tails were pattern I in terms of farmer price share, males 95.24% and females 92.29%. The efficiency of the supply chain after Eid al-Adha male fat-tailed sheep is a pattern I with a farmer price share of 88.00% and a female in pattern III with a farmer price share of 90.17%.

Keywords: supply chain, fat-tailed sheep, farmer share, eficiency

INTRODUCTION

The development of the fat tail sheep business has a fairly high market opportunity in Jember because of its climate suitability and accessibility to various areas that are easily accessible. The high imports and the low domestic production of meat have an impact on the people's shift to consumption of lamb at a lower price. Lamb's demand for consumers in particular such as restaurants and hotels is still met by imports. This is because the domestic lamb meat is not up to the standards desired by the restaurant and hotel.

The demand for lamb is getting higher ahead of Islamic holidays such as Eid al-Adha, because the majority of the Indonesian population and especially in Jember Regency are Muslim, which causes the need for lamb meat to continue to increase every year. Many breeders use this time to do business selling sheep on a larger scale as well as take advantage of their spare time to raise sheep, the main commodity chosen by the community is sheep, one of which is sheep. From the above background, a study of the supply chain and price margins for fat atail sheep using the DombaHub playstore application, in this case specifically for sheep, becomes a very interesting thing to research. Gumukmas District is an area with a large population of sheep and its maintenance is still traditional in terms of maintenance to marketing which can be used as a place to find out the supply chain analysis of fat tail lambs in the post-period and Eid al-Adha holidays.

MATERIAL AND METHOD

This research was carried out from May to August 2021 at the farmers, Gumukmas District, Jember Regency. The research location was determined by a purposive method, namely choosing the research location intentionally with the consideration that the sample area was a center for large fat tail sheep farming in Jember Regency with a population of 20758 heads. The data obtained were analyzed descriptively based on the formula:

Analysis of marketing margin

$$MP = Pr - Pf$$

Note: MP = marketing of fat-tailed sheep at the sheep (IDR/kg); Pr = price of fat-tailed sheep at the consumer level (IDR/kg); Pf = price of fat-tailed sheep at producer level (IDR/kg) (Mukson, 2005)

Mark up using the following formula:

$$\text{Mark up} = \frac{\text{price spread}}{\text{selling price}} \times 100\%$$

Margin percentage using the following formula:

$$\text{Margin} = \frac{\text{price spread}}{\text{mount of marketing margin}} \times 100\%$$

Analysis of the price share received by farmers

$$SPf = \frac{Pf}{Pr} \times 100\%$$

Note: SPf = Marketing Efficiency; Pf = Price at farmer level (IDR/head); Pr = Price at the consumer level (IDR/head)

RESULT AND DISCUSSION

Marketing Margin Analysis of Fat Tailed Sheep for the period of Eid al-Adha and Post-Eid al-Adha

Marketing margin is the price difference at the agency level of a marketing system or the difference in the price paid by consumers to get the product at the price received by the producer to produce it, including marketing costs and profits. Marketing costs are costs incurred for marketing purposes other than the profits obtained by marketing institutions or individual business actors.

Analysis of Margin, % Margin, Mark Up Price, and Price Share In Pattern I

Marketing margins in pattern I for the male and female Eid al-Adha period are obtained from the difference between the selling price of fat-tailed sheep from breeders and the selling price of fat-tailed sheep by wholesaler, so marketing margin, % margin, mark up price and price share in the supply chain will be found. Pattern I of Fat Tailed Sheep can be seen in Tables 1 and 2.

Marketing of fat-tailed sheep during the Eid al-Adha period has a shorter supply chain, directly marketing to consumers directly in strategic places because during the Eid al-Adha period the demand is increasing and the prices received by consumers are increasing. The marketing supply chain of fat-tailed sheep during the Eid al-Adha period is wholesaler buying female fat-tailed sheep from farmers at a price of IDR1,650,000/head resold to consumers at a price of IDR1,750,000/head. The marketing margin data is around IDR100,000/head, the mark up price is 5.71 and the farmer price share is 94.29%. The supply chain of female Fat Tailed Sheep is efficient because the farmer's price share is >40%.

Fat-tailed sheep marketing during the Eid al-Adha period has a shorter supply chain, wholesaler directly markets to consumers directly in strategic places because during the Eid al-Adha period the demand for fat-tailed sheep is increasing. During this period, retailers were not involved in marketing and the prices received by consumers were increasing. As for the marketing supply chain of fat-tailed sheep for the Eid al-Adha period, namely wholesaler buying female fat-tailed sheep from farmers at a price of IDR1,650,000/head resold to consumers at a price of IDR1,750,000/head. The marketing margin data is around IDR100,000/head, the mark up price is 5.71 and the farmer price share is 94.29%. The supply chain of female Fat Tailed Sheep in pattern I is efficient because the farmer's price share is >40%.

Table 1. Marketing margin, % margin, mark up price, share price, supply chain for the Idul Adha period, male fat tail lamb pattern I

Description	Total	Marketing margin (IDR)	Margin percentage (%)	Mark up price	Share price (IDR)
Breeder					95.24
Selling price	2,000,000				
		100,000	100	4.76	
Wholesaler					
Selling price	2,100,000				
Price	2,100,000				
Total		100,000			

Source: Primary Data Processed (2021)

Table 2. Marketing margin, % margin, mark up price, share price, supply chain for the Idul Adha period of female Fat Tailed Sheep Pattern I

Description	Total	Marketing margin (IDR)	Margin percentage (%)	Mark up price	Share price (IDR)
Breeder					95.24
Selling price	1,650,000				
		100,000	100	4.76	
Wholesaler					
Selling price	1,750,000				
Price	1,750,000				
Total		100,000			

Source: Primary Data Processed (2021)

Analysis of Marketing Margin, % Margin, Mark Up Price and Price Share of Fat Tailed Sheep Supply Chain for Eid Al Adha Male and Female Pattern II

The marketing margin in pattern II for the male and female Eid al-Adha period is obtained from the difference between the selling price of fat-tailed sheep from farmers and the selling price of fat-tailed sheep by Wholesaler. In addition, the supply chain will affect the selling price of an item due to the addition of marketing costs for product delivery, from sellers of breeders and sellers of sheep, marketing margins, % margins, mark up prices and share prices in the supply chain pattern I of Fat Tailed Sheep can be seen in Tables 3 and 4.

Wholesaler buys male Fat Tailed Sheep from breeders at a different price of IDR2,000,000 / head and then resold them to traders outside the city at a price of IDR2,140,000/head. Marketing margin IDR140,000/head. Pattern II has a long marketing reach outside the city, namely Yogyakarta and Semarang. Remote marketing involves many institutions with a total marketing margin of around IDR140,000/head, mark up prices, 2.34 and 4.21 and a farmer price share of 93.46%. The supply chain of Male Fat Tailed Sheep pattern II is said to be efficient because the farmer price share is >40%.

Fat-tailed sheep marketing during the Eid al-Adha period has a different supply chain, retailers are not involved in this pattern and lamb is directly sold by wholesaler outside the city. The marketing supply chain of Fat Tailed Sheep in pattern II is wholesaler buying female Fat Tailed Sheep from farmers at a price of IDR1,650,000/head then resold to consumers at a higher price of IDR1847,000/head. The total marketing margin is IDR197,000/head due to the long supply chain pattern to the provinces so that the mark up price is 2.71 and 7.96 and the farmer price share is 89.33%. The female fat-tailed supply chain pattern II is efficient because the farmer share is >40%.

Table 3. Marketing margin, % margin, mark up price, share price, supply chain for the period of Eid al-Adha, male fat tail sheep pattern II

Description	Total	Marketing margin (IDR)	Margin percentage (%)	Mark up price	Share price (IDR)
Breeder					93.46
Seeling price	2,000,000				
		50,000	100	2.34	
Wholesaler					
Selling price	2,050,000				
		90,000	64,29		
Out of town merchant					
Selling price	2,140,000				
Total		140,000	100		

Source: Primary Data Processed (2021)

Table 4. Marketing margin, % margin, mark up price, share price, supply chain for the period of Eid al-Adha female fat tailed sheep pattern II

Description	Total	Marketing margin (IDR)	Margin percentage (%)	Mark up price	Share price (IDR)
Breeder					89.33
Selling price	1,650,000				
		50,000	25.38	2.71	
Wholesaler					
Selling price	1,700,000				
		147,000	74.62	74.62	
Out of town merchant					
Selling price	1,847,000				
Total		197,000	100		

Source: Primary Data Processed (2021)

Analysis of Marketing Margin, % Margin, Mark Up Price and Price Share of Fat Tailed Sheep Supply Chain for Eid Al Adha Male and Female Pattern III

The marketing margin of pattern III for the male and female Eid al-Adha period is obtained from the difference between the selling price of fat-tailed sheep from breeders and the selling price of fat-tailed sheep by wholesaler. pattern III can be seen in Tables 5 and 6.

Fat-tailed sheep marketing during the Eid al-Adha period has a diverse supply chain, in pattern III, this involves buying directly and reselling to religious institutions ahead of Eid al-Adha. The supply chain of fat-tailed sheep in pattern III is wholesaler buying male fat-tailed sheep from farmers at a price of IDR2,000,000/head then resold to religious institutions at a price of IDR2100,000/head with marketing costs of IDR180,000 the total price received by religious

institutions is IDR2,280,000/head, the total marketing margin is IDR280,000/head because religious institutions do not sell lamb but are slaughtered immediately. The mark up price is 12.28 and the farmer price share is 87.72%. The male fat-tailed lamb supply chain pattern III is said to be efficient because the farmer share is >40%.

The supply chain of fat tailed sheep in pattern III is wholesaler buying male Fat Tailed Sheep from breeders at a price of IDR2,000,000/ head, resold to religious institutions at a price of IDR2,100,000/head with marketing costs of IDR180,000 the total price received by religious institutions is IDR2,280,000/head, the total margin is IDR 280,000/head because religious institutions do not sell sheep but are slaughtered immediately. The mark up price is 12.28 and the farmer price share is 87.72%. The male fat-tailed lamb supply chain pattern III is efficient because the farmer share is >40%.

Table 5. Marketing margin, % margin, mark up price, share price, supply chain for the Idul Adha period, male fat-tailed sheep pattern III

Description	Total	Marketing margin (IDR)	Margin percentage (%)	Mark up price	Share price (IDR)
Breeding					87.72
Selling price	2,000,000				
		280,000	100	12.28	
Wholesaler					
Selling price	2,100,000				
Religion institution					
Selling price	2,280,000				
Total		280,000	100		

Source: Primary Data Processed (2021)

Table 6. Marketing Margin, % Margin, mark up price, share price, supply chain for the period of Eid al-Adha female fat-tailed sheep pattern III

Description	Total	Marketing margin (IDR)	Margin percentage (%)	Mark up price	Share price (IDR)
Breeder					89.19
Selling price	1,650,000				
		200,000	100	10.81	
Wholesaler					
Selling price	1,700,000				
Religion institution					
Selling price	1,850,000				
Total		200,000	100		

Source: Primary Data Processed (2021)

Analysis of Marketing Margin, % Margin, Mark Up Price and Price Share of Fat-Tailed Sheep Supply Chain Post Eid Al Adha Male and Female Pattern I

Marketing margins in Pattern I after Eid al-Adha male and female types are obtained from the difference between the selling price of fat-tailed sheep from farmers and the selling price of fat-tailed sheep by wholesaler can be seen in Tables 7 and 8.

The supply chain of ram I wholesaler pattern buys Fat Tailed Sheep from the breeder at a price of IDR1,760,000/head then resells it at a marketing cost of IDR50,000/head so that the total price received by the restaurant is IDR200,000/head. The total marketing margin is IDR240,000/head, the mark up price is 12 and the farmer price share is 88%. The ram supply chain pattern I is said to be efficient because the farmer share is >40%.

The post-Idul Adha supply chain period begins with the sale of a female Fat Tailed Sheep from a farmer at a price of IDR1,623,000/head then sold back to the restaurant with a purchase price of IDR1,820,000/head including marketing costs of IDR120,000/head. The results of the total marketing margin data are IDR197,000 because the restaurant does not sell lamb in the form of tails but in the form of carcasses. The mark up price is 10.82 and the farmer price share is 89.18%. Sheep supply chain pattern I is efficient because the farmer share >40%.

Table 7. Marketing margin, % margin, mark up price, price share, supply chain after Eid al-Adha male fat-tailed sheep pattern I

Description	Total	Marketing margin (IDR)	Margin percentage (%)	Mark up price	Share price (IDR)
Breeder					88
Selling price	1,760,000				
		240,000		112	
Wholesaler			100		
Selling price	1,850,000				
Resturant					
Seling price	2,000,000				
Total		240,000	100		

Source: Primary Data Processed (2021)

Table 8. Marketing margin, % Margin, mark up price, price share, supply chain after Eid al-Adha female Fat Tailed Sheep Pattern I

Description	Total	Marketing margin (IDR)	Margin percentage (%)	Mark up price	Share price (IDR)
Breeder					89.18
Selling price	1,623,000				
		197,000		100.82	
Wholesaler			100		
Selling price	1,700,000				
Restaurant					
Sellig price	1,820,000				
Total		197,000	100		

Source: Primary Data Processed (2021)

Analysis of Marketing Margin, % Margin, Mark Up Price and Price Share of Fat Tailed Sheep Supply Chain Post Eid Al Adha Male and Female Pattern II

Marketing margins in pattern II after Eid al-Adha Male and female sexes are obtained from the difference between the selling price of Fat Tailed Sheep from breeders and the selling price of Fat Tailed Sheep by wholesaler, marketing margin, % margin, mark up price and share price of Fat Tail Sheep will be found . Buyers will choose short supply chains to get products at affordable prices. Marketing margins can be seen in tables 9 and 10.

In pattern II wholesaler buy fat-tailed sheep from farmers at a price of IDR1,760,000/head resold at a price of IDR1,800,000/head. The marketing margin is IDR140,000/head or about 43.75% of the total margin, then retailers resell it at a price of IDR2,080,000/head or about 56.25% of the total margin. The marketing margin of the retailer's ram is IDR180,000/head, total marketing margin IDR320,000. The mark up price was 6.73 and 8.65 and the farmer price share was 84.62%. The supply chain pattern II is efficient because farmer share >40%.

The marketing margin in Pattern III after Eid al-Adha, male and female, is obtained from the difference between the selling price of fat-tailed sheep from the breeder and the selling price of fat-tailed sheep by wholesaler. Marketing margin, % margin, mark up price and share price of fat-tailed sheep will be found. can be seen in tables 11 and 12. The supply chain pattern II Wholesaler buys female fat-tailed sheep from farmers at a price of IDR1,623,000/head and then resells it at a price of IDR1,750,000/head. The marketing margin is IDR127,000/head or about 36.29% of the total margin. Retailers resell at a price of IDR1,973,000/head with the marketing margin of the retailer's Sheep at IDR1,973,000/head or about 63.71% of the total margin. The total marketing margin in pattern II is IDR35,000. The mark up price was 6.44 and 11.30 and the farmer price share was 82.28%. The supply chain of pattern II ewes is said to be efficient because the farmer share >40%.

Table 9. Marketing margin, % Margin, mark up price, price share, supply chain post Eid al-Adha male fat tailed sheep pattern II

Description	Total	Marketing margin (IDR)	Margin percentage (%)	Mark up price	Share price (IDR)
Breeder					84.62
Selling price	1,760,000				
		140,000	43.75	6.73	
Wholesaler					
Selling price	1,900,000				
		180,000	56.25	8.65	
Retailer	2,080,000				
Selling price					
Total		320,000	100		

Source: Primary Data Processed (2021)

Tabel 10. Marketing margin, % Margin, mark up price, price share, supply chain post Eid al-Adha female fat tailed sheep pattern II

Description	Total	Marketing margin (IDR)	Margin percentage (%)	Mark up price	Share price (IDR)
Breeder					82.26
Selling price	1,623,000				
		127,000	36.29	6.44	
Wholesaler					
Selling price	1,750,000				
		223,,000	63.71	11.30	
Retailer	1,973,000				
Selling price					
Total		350,000	100		

Source: Primary Data Processed (2021)

Analysis of Marketing Margin, % Margin, Mark Up Price and Price Share of Fat Tailed Sheep Supply Chain Post Eid Al Adha Male and Female Pattern III

The marketing margin in Pattern III after Eid al-Adha, male and female, is obtained from the difference between the selling price of fat-tailed sheep from the breeder and the selling price of fat-tailed sheep by wholesaler. Marketing margin, % margin, mark up price and share price of Fat Tail Sheep will be found. , can be seen in Tables 11 and 12.

Marketing of fat-tailed sheep in post-Idul Adha in pattern III is quite a long distance outside the city, namely, Lamongan, Blitar and Surabaya. The marketing supply chain of pattern III fat-tailed sheep is wholesaler buying male Fat Tailed Sheep from farmers at a price of IDR1.760.000/head and then selling them back out of town at a price of IDR1,880,000/head with a marketing margin of IDR120,000/head then sell out of town by increasing

marketing costs of IDR20,000/head so that the price received by buyers outside the city is IDR200,000 the total margin for pattern III is IDR240,000/head, Mark up price, 6 and farmer price share is 88%. The ram supply chain pattern III is efficient because the the farmer share > 40%.

The supply chain of fat-tailed sheep after Eid al-Adha, sheep directly sold by wholesaler out of town. The marketing supply chain for fat-tailed sheep pattern III is wholesaler buying female sheep from breeders at a price of IDR1,623,000/head marketing margin of IDR57,000 or 32.20% of the total percentage of the existing margin then resold out of town at a price of IDR1,680,000/head, then added with marketing costs of 120,000 so that the price received by the buyer is IDR1,800,000/head. The total marketing margin for pattern III is IDR177,000/head, while the Mark up price is 3.17 and 6.67, the farmer price share is 90.17%. Sheep supply chain pattern III is efficient because the farmer share is > 40%.

Table 11. Marketing margin, % margin, mark up price, share price, supply chain after Eid al-Adha male fat tailed sheep III

Description	Total	Marketing margin (IDR)	Margin percentage (%)	Mark up price	Share price (IDR)
Breeder					88
Selling price	1,760,000				
		120,000	50	6	
Wholesaler					
Selling price	1,880,000				
		120,000	50	6	
Out of town merchant					
Selling price	2,000,000				
Total		240,000	100		

Source: Primary Data Processed (2021)

Table 12. Marketing margin, % Margin, mark up price, share price, supply chain after Eid al-Adha female fat tailed sheep pattern III

Description	Total	Marketing margin (IDR)	Margin percentage (%)	Mark up price	Share price (IDR)
Breeder					90.17
Selling price	1,623,000				
		57,000	32.20	3.17	
Wholesaler					
Selling price	1,680,000				
		120,000	67.80	6.67	
Out of town merchant					
Selling price	1,800,000				
Total		177,000	100		

Source: Primary Data Processed (2021)

Marketing Efficiency

Efficient marketing is the ultimate goal to be achieved in the marketing system, the marketing system provides satisfaction to all parties involved such as producers, consumers, and marketing institutions. According to Sudiyono (2001), to measure marketing efficiency, a structure, performance, and market behavior approach can be used. Efforts to improve marketing efficiency can be done by increasing marketing output and reducing marketing costs. The measurement of marketing efficiency uses farmer price share, namely the comparison between the selling price of farmers and the final consumer's purchase price multiplied by 100%, marketing is said to be efficient if the farmer price share is above 50%.

The marketing supply chain of Fat Tailed Sheep in Gumukmas District, Jember Regency during the Eid al-Adha period for the male sheep shows an efficient marketing supply chain because the farmer price share is more than 40% with an average percentage of 92.14%. Sheep during the Eid al-Adha period were also efficient due to the farmer price share <40% with a percentage of 90.94%.

The most efficient marketing supply chain for Fat Tailed Sheep during the Eid al-Adha period for rams is in pattern I because the highest farmer price share is 95.24%, while the most efficient female sheep supply chain pattern is pattern I because the highest farmer price share is 94.29%.

Table 13. Efficiency of the marketing supply chain of male and female fat-tailed sheep during the Eid al-Adha period

Pattern	Prices at farmer level (a)	Prices at consumer level (b)	Marketing upply chain efficiency of fat-tailed sheep (a/b) x 100%
Male (IDR/head)%			
Pattern I	2,000,000	2,100,000	95.24
Pattern II	2,000,000	2,140,000	93.46
Pattern III	2,000,000	2,280,000	87.72
Female (IDR/head) x 100%			
Pattern I	1,650,000	1,750,000	94.29
Pattern II	1,650,000	1,847,000	89.33
Pattern III	1,650,000	1,850,000	89.19
Average			90.94

Source: Primary Data Processed (2021)

Table 14. Efficiency of marketing supply chain of male and female fat-tailed sheep after Eid al-Adha

Supply chain pattern	Prices at farmer level (a)	Prices at consumer level (b)	Marketing supply chsin efficiency of fat-tiled sheep (ab/b) x 100%
Male (IDR/head)			
Pattern I	1,760,000	2,000,000	88.00
Pattern II	1,760,000	2,080,000	84.62
Pattern III	1,760,000	2,000,000	88.00
Average			86.87
Female			
Pattern I	1,623,000	1,820,000	89.18
Pattern II	1,623,000	1,973,000	82.26
Pattern III	1,623,000	1,800,000	90.17
Average			87.20

Source: Primary Data Processed (2021)

The marketing supply chain of Fat Tailed Sheep in Gumukmas District, Jember Regency after Eid al-Adha on Male Sheep shows an efficient marketing supply chain because the farmer price share is >40% with an average percentage of rams of 86.87%. Sheep after Eid al-Adha are also efficient due to farmer price share <40% with an average percentage of 87.20%. The most efficient marketing supply chain for Fat Tailed Sheep after Eid al-Adha for male sheep is in pattern I and III because the highest farmer price share is 88.00%, while the most efficient female sheep supply chain pattern is pattern III because the highest farmer price share is equal to 90.17%.

CONCLUSION

Supply chain of Fat Tailed Sheep in Jember Regency during the Eid al-Adha period: Pattern I: breeders ± wholesaler ± consumers (community), Pattern II: breeders ± wholesaler ± traders outside the city outside the province, Pattern III: breeders ± wholesaler ± religious institutions (takmir of mosques, religious institutions). Supply chain of Fat Tailed Sheep in Jember Regency after Eid al-Adha: Pattern I: breeders - wholesaler - restaurant entrepreneurs, Pattern II: breeders ± wholesaler ± retailers–consumers, Pattern III: breeders ± wholesaler ± traders outside the city in the province. The most efficient supply chain during the Eid al-Adha period in Gumukmas District, Jember Regency, male and female Fat Tailed Sheep are pattern I in terms of farmer price share, males 95.24% and females 92.29%. The efficiency of the supply chain after Eid al-Adha male Fat Tailed Sheep is pattern I with a farmer price share of 88.00% and a female in pattern III with a farmer price share of 90.17%. This indicates that the shorter the supply chain, the more efficient it is.

CONFLICT OF INTEREST

The authors whose names are listed have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

REFERENCE

Arifin, R., E. Rianto, & I. Susilowati. 2016. Analisis keuntungan jagal sapi di RPH Kota Semarang berdasarkan saluran pemasaran dan sistem penjualan. Jurnal Kesejahteraan Sosial 3(2): 94-103

[Ditjen PKH] Direktorat Jenderal Peternakan dan Kesehatan Hewan. 2020. Statistik Peternakan dan Kesehatan Hewan. Direktorat Jenderal Peternakan dan Kesehatan Hewan. Jakarta.

Dzikron, M. 2014. Perancangan Raintai Pasok Komoditas Daging Domba di Jawa Barat.Unisba. Bandung.

Emhar, A., J.M.M. Aji, & T. Agustina. 2014. Analisis rantai pasokan (suppy chain) daging sapi di Kabupaten Jember. Berkala Imiah Pertanian 1: 53–61.

Fidaruzziar, I., N.D. Wahyono, Y. Wibisono, & N. Hasanah. 2022. Strategi keberlanjutan usaha ekspor peternakan domba sebagai komoditas ekspor di Kabupaten Jember. Jurnal Ilmiah Fillia Cendekia 7(1):21-25.

Hamdan, M., E. Susanto, & A.A. Hertanto. 2019. Analisis penerapan manajemen agribisnis dan pemasaran ternak domba pada peternakan rakyat di Kecamatan Kadungpring Kabupaten Lamongan. International Jounal of Animal Science 2(03):75-82.

Hasanah, N. & Z. Fanani. (2018). Factors influencing the revenue of broiler open house system partnership corporate X in Indonesia. Journal of Development Research 2(1): 28-31.

Hastang, S.N. Sirajudin, & A. Asnawi. 2013. Efisiensi Pemmasaran daging sapi pada perusahaan daerah rumah potong hewan (PD RPH) Kota Makasar. Fakultas Peternakan Universitas Hasanuddin, 314–320.

Janvier James, A.M. 2012. A new introduction to supply chains and supply chain management: definitions and theories perspective. International Business Research 5(1):194-208.

Muhammad, S. & G.C. Budiarto. 2017. Studi kasus tingkat pemotongan domba berdasarkan jenis kelamin, kelompok umur dan bobot karkas di tempat pemotongan hewan Wilayah Malang. Juunal Ternak Tropika 18:51–57.

Rahayu, S., E.L. Aditia, & S. Jamil. 2015. Sifat fisik daging domba garut jantan dengan waktu pemberian pakan yang berbeda. Jurnaal Ilmu Produksi Dan Teknologi Hasil Peternakan 3: 79-82.

Rusdiana, S. & L. Praharani. 2015. Peningkatan usaha ternak domba melalui diversifikasi tanaman pangan: ekonomi pendapatan petani. Agriekonomika 4(1): 80-96.

Saptana & R.D. Yofa. 2016. Penerapan konsep manajemen rantai pasok pada produk unggas. Forum Penelitian Agro Ekonomi 34(2):143-161.

Sari, S.W., R. Nurmalina, & B. Setiawan. 2014. Efisiensi Kinerja rantai pasok ikan lele di Indramyu, Jawa Barat. Jurnal Manajemen dan Agribisnis 11(1):12-23.

Sudana, I.W. 2019. Analisis efisiensi pemasaran ikan teri segar hasil tangkapan nelayan di Desa Sanggalangit Kabupaten Buleleng. Jurnal Pendidikan Ekonomi 11(2):637-648.

Suryaningsih, Y. 2019. Kualitas dan palatabilitas silase daun mangrove pada ternak domba ekor gemuk. Cermin: Jurnal Penelitian 3(2):125. DOI: 10.36841/cermin_unars.v3i2.460.

Triana, I.N., Ratnasari, R. R., & Azmijah, A. 2017. Program penggemukan ternak domba ekor gemuk di Kecamatan Semanding, Kabupaten Tuban. Jurnal Layanan Masyarakat 1(2):51. DOI: 10.20473/jlm.v1i2.2017.51-55

Wahyono, N.D., N. Hasanah, & A. Harkat. 2022. The business development of beef cattle through regional approach in jember east java. in 2nd international conference on social science, humanity and public health (ICOSHIP 2021). Atlantis Press. pp: 311-318.