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Market situation analysis survey report for inclusive red meat value chains for women and youth in East and Southern Africa: Malawi

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Market situation analysis survey report for inclusive red meat value chains for women and youth in East and Southern Africa: Malawi

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1 Executive summary

The findings of the market study in Malawi have similarities to findings of the market study conducted in Zimbabwe, and also slight differences. The study has been conducted at a critical time, as Malawi reinforces its efforts to support the livestock sector contributing to economic development, food security and nutrition in the most vulnerable parts of the country like Balaka and Chikwawa districts. This is evidenced by the launching of a new National Livestock Development Policy. The market situation analysis study was conducted using a mixed set of tools, exploring perceptions of consumers, participants in livestock markets and off-takers as critical segments in the livestock value chains.

Key messages include:

1. Consumer behaviour with regards to livestock-based foods: Consumers attribute high importance to livestock-based foods, yet are often unable to afford the consumption of livestock-based foods.

- Consumers determine diet composition primarily by affordability, although they value livestock products as the most nutritious. Urban consumers find it easier to afford livestock products. Rural consumers seem more cash limited; for them, goat meat seems more affordable.
- In both rural and urban areas, consumers prioritize the quality of meat, which influences their decision to purchase the meat. Hence, any intervention that targets improving the quality of red meat can be ideal to promote the value chain.
- Affordability seemed the most important challenge for consumers to buy livestock-based foods, even if they would prefer buying those foods. Sometimes consumers forgo the quality of the food by buying food depending on the affordability, especially in the rural areas, where consumers more often buy red meat based on availability and affordability compared to urban customers.

2. Existing livestock market facilities and their operations: Livestock markets in rural and urban areas differ in their effectiveness, limiting the transfer of information and incentives to smallholder farmers.

- The rural markets, owned by Rural District Councils and farmer organizations, seem less equipped, less organized and less effective in aggregating livestock and informing producers about product quality and standards, as at Phalula in Balaka and Mgabu in Chikwawa district.
- Livestock sales peak during a period (November to December) when farmers are in dire need of cash to balance food deficits and buy inputs for the next growing period. With the replenishing of pastures, livestock conditions also improve. Market planning and implementation should consider the above to ensure that farmers who sell few animals benefit during this critical period.
- Improving access to livestock markets and strengthening bargaining power are seen as the most critical entry points for women and youth to engage in market opportunities. Implementing transparent pricing and grading systems in livestock markets would support these substantially.

3. Off-taker and retailer priorities when buying livestock from smallholder farmers: Off-taker information suggests positive prospects for the livestock sector, which could be captured through better-structured market and information systems.

- Off-takers and retailers perceive increasing trends for income from buying and selling livestock products. They confirm a nuanced business period, with cattle more price-sensitive than goats. Price margins between rural and urban areas are seen to be larger for goats.
- Issues that deter marketing of products are lack of animal handling structure, water facilities, credit facilities and price negotiation skills, among others. As such, women and youths due to their economic vulnerability are not motivated to form sustainable production models to curb production issues.
- The results show that there is a gap in the way value chain actors access market information, as the majority of them access market information from either observation or friends. The hiccups with these modes of sourcing information are that false or incomplete information is shared.

2 Introduction

Malawi's economy depends on agriculture, which includes livestock production in large parts of the country, especially in the southern region. Through Malawi's National Agricultural Strategy, it is recommended that the integration and diversification of the crop–livestock system is the best approach to generate income, livelihoods, food and nutrition security and adapt to the vagaries of climate change. Malawi has developed a 5-year National Livestock Development Policy, which was launched on 20 January 2022. The policy seeks to:

1. Increase by 50% the contribution of the livestock sector to overall agricultural production through effective animal production, health and value chain interventions.
2. Increase the value of livestock exports by 10%.
3. Increase livestock production by 60% through improved animal health and animal welfare.
4. Provide an enabling environment for credible and sustainable provision of veterinary/animal health services to reduce the socio-economic impact of Transboundary Animal Diseases by 50%.
5. Prepare and enforce all the laws governing disease control and food safety to safeguard animal biodiversity.

Supporting the livestock sector in Malawi can contribute to increasing incomes and reducing poverty among smallholders, improving nutrition outcomes for both smallholders and (poor) urban consumers, while reducing overall food insecurity. Value chain actors, particularly smallholders and small and medium-sized enterprises, with a strong representation of women and youth, should become part of the policymaking process, which requires the organization of producers and enterprises into interest groups.

Livestock market development and functional value chains play a critical role in transforming the livestock sector toward higher levels of productivity and income. Participation in markets is expected to stimulate more market-oriented behaviour, and investment in improved management and inputs, with increased off-takes and quality products. This will result in improving productivity and efficient resource use. Market-oriented behaviour will enable smallholder farmers to make use of improved technologies, as increased incomes provide the capital needed for investing in farm enterprises, overall economic development, improved livelihoods, food security and nutrition.

2.1 Purpose of assignment (Mission Goal)

2.1.1 Market survey

This survey was aimed at understanding the functioning, flows, prices and quality of red meat products at different market types in Malawi. For this survey, the team visited different markets and interviewed key actors involved in those markets. Information on prices was also collected while focusing on the following specific areas:

- market structure and organization, main off-takers (institutional buyers, retailers, whole-sellers, traders/ transporters, input suppliers)

- quality, prices, seasonality in supply for red meat products
- red meat and product flows through different market types
- challenges and efforts to improve those
- virtual monitoring of market flows.

2.1.2 Consumer survey

This survey was aimed at understanding the demand, ability to afford, and consumption of particular food groups in major cities including Blantyre and secondary cities (Balaka town, Mchalo trading centre and Chikwawa) in Malawi. For this survey, the data was collected through interviews with consumers focusing on women, who are the primary cooks in most households in Malawi. The information collected focused on consumers':

- access and affordability
- quality preferences
- income spent on livestock-based foods.

2.1.3 Value chain and off-taker survey

This survey was aimed at understanding the demand for, ability to afford, and consumption of particular food groups in major cities including Blantyre and secondary cities (Balaka town, Mchalo trading centre and Chikwawa) in Malawi. For this survey, the data was collected by interviewing key actors in the red meat value chain – producers, transporters, processors, retailers, input suppliers, consumers and support services providers.

3 Market situation analysis survey methodology

The survey used mixed evaluation tools, including both qualitative and quantitative techniques. Market situation analysis survey involved primary and secondary data collection. The secondary data was collected through desk/literature review. Primary data involved the collection of data from key actors of value chains as well as key informant interviews. The consultant worked closely with the K'Lusa project officer and monitoring and evaluation team. The consultant ensured that the data collected was uploaded to the server in good time and no enumerator was allowed to keep the data on tablets for more than a day before being uploaded to avoid losing already collected data. The data was cleaned, and during cleaning the outliers were verified either through the enumerator or the respondent to polish up the data before analysis. In addition, the consultant produced datasets in Excel/CSV/SPSS/Stata format. The desk/literature-based research, in coordination with the K'Lusa team, reviewed all of the documents including the project proposal, logframe and reports.

4 Results and discussion

4.1 Market survey results

4.1.1 Sampling for market survey

The market survey used randomized sampling to select 103 respondents who participate in the marketing of livestock in the selected trading centres of Balaka, Blantyre and Chikwawa districts. The respondents were identified right at the market without prior consultations and were those who solely depend on the livestock business to earn a living, mainly on red meat such as goat, cattle and sheep. Regardless of the gender of the respondent, Chikwawa emerged as the most represented with 47.5% followed by Balaka (40.8%) as shown in Table 1. The results further show that 88 men and 15 women were interviewed for a total of 103 key market actors for the different value chains.

Table 1: Sample size distribution per district by gender of the respondent

	Gender of respondent		
Name of district	Male	Female	Pooled
Balaka	36 (40.9)	6 (40.0)	42 (40.8)
Blantyre	12 (13.6)	0 (0.0)	12 (11.7)
Chikwawa	40 (45.5)	9 (60.0)	49 (47.5)
Total	88 (100.0)	15 (100.0)	103 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

Table 2 shows that among all the markets interviewed, the majority are primary markets (64) followed by terminal markets (25), among all the districts. These are markets where red meat is traded regardless of the district.

Table 2: Market description

	Market description			
District	Primary	Secondary	Terminal	Village
Balaka	22 (34.4)	3 (75.0)	11 (44.0)	6 (60.0)
Blantyre	9 (14.1)	0 (0.0)	3 (12.0)	0 (0.0)
Chikwawa	33 (51.5)	1 (25.0)	11 (44.0)	4 (40.0)
Total	64 (100.0)	4 (100.0)	25 (100.0)	10 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

4.1.2 Demographic and economic characteristics of the respondents

The following sections present an analysis of the demographic and socio-economic characteristics of the respondents from which the sample was made. The red meat value chains involve mainly youth in Balaka and Chikwawa districts, as evidenced by results in Table 3, with an average age of 33 years. This gives a good indicator

of the type of people to support under the K'Lusa project in Chikwawa and Balaka. Among these youth, the majority reside around the market area as their homes for about 25 years on average in the area.

Table 3: Respondent's age and period of living in the district

District	Age (years)	Period of stay (years)
Balaka	33 (10)	27 (13)
Blantyre	38 (13)	19 (8)
Chikwawa	31 (10)	25 (13)
Total	32.6 (10.6)	25.1 (12.6)

Note: N=103. Figures in parentheses are standard deviation for continuous variables.

The educational level of the youth respondents by gender revealed that 50% of men had completed education up to the secondary level, while the majority of women had only completed primary school (66%). This implies that the K'Lusa project needs to train women and men separately, since their understanding will be different based on their education level. Regardless of gender, the majority of respondents are married.

Table 4: Education level of respondents by gender

	Gender of respondent	
Education level	Male	Female
No schooling	2 (2.3)	0 (0.0)
Primary	42 (47.7)	10 (66.7)
Senior secondary	44 (50.0)	4 (26.6)
Tertiary	0 (0.0)	1 (6.7)
Total	88 (100.0)	15 (100.0)
Marital status		
Married	72 (81.8)	10 (66.7)
Single/Divorced/Widow(er)	16 (18.2)	5 (33.3)
Total	88 (100.0)	15 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

4.1.3 Red meat value chain by district

Red meat value chains such as cattle, goats and sheep are the most marketed in the districts. This is evidenced by the results in Table 5 where goats (61 respondents) were the most favourable red meat value chain regardless of the district. Very few market actors do business in pigs, poultry or fish, which are marketed in different markets.

Table 5: Red meat value chain by district

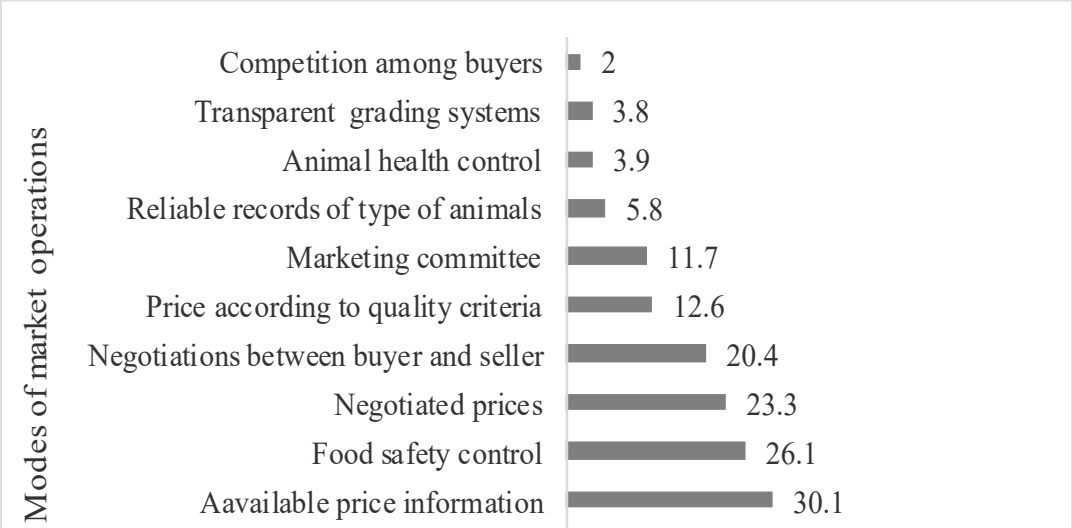
	Type of livestock sold		
District	Cattle	Goats	Sheep
Balaka	8 (61.5)	30 (49.2)	1 (100.0)
Blantyre	1 (7.7)	6 (9.8)	0 (0.0)
Chikwawa	4 (30.8)	25 (41.0)	0 (0.0)
Total	13 (100.0)	61 (100.0)	1 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

4.1.4 Modes of market operations

It was found that markets operate as seen in Figure 1, showing that the majority of market actors are operating on available price information followed by food safety control, negotiation on prices and negotiation between buyers and sellers. This implies that when market actors participate in the market, they already know the prices of products and depend on negotiation skills for sales to occur.

Figure 1: Modes of market operations.



4.1.5 Market demand trends

Table 6 shows the results for the trends of demand for cattle by district. The results show that the majority of respondents revealed that trends are uncertain, with 50% from Chikwawa followed by Balaka with 37.8%. This implies that the majority of market actors are not sure if the demand for cattle will decrease or increase. For goats, Table 7 shows that the majority of respondents reveal that the demand will increase even though some are still uncertain. The increase in demand for goats is because of the cheap price of goat meat and the ease of keeping goats at the farm level.

On the other hand, Table 8 shows that almost all the respondents said the demand for sheep is uncertain due to the scarcity of sheep in the district. Almost none of the markets visited had sheep meat. The demand in other livestock value chains like poultry, pigs and fish is increasing but does not exceed the demand for red meat.

Table 6: Demand trends for cattle by district

	Demand trend for cattle			
District	Uncertain	Decreasing	Increasing	No change
Balaka	34 (37.8)	1 (50.0)	5 (55.6)	2 (100.0)
Blantyre	11 (12.2)	0 (0.0)	1 (11.1)	0 (0.0)
Chikwawa	45 (50.0)	1 (50.0)	3 (33.3)	0 (0.0)
Total	90 (100.0)	2 (100.0)	9 (100.0)	2 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

Table 7: Demand trends for goats by district

	Demand trend for goats			
District	Uncertain	Decreasing	Increasing	No change
Balaka	12 (28.6)	3 (27.3)	21 (50.0)	6 (75.0)
Blantyre	6 (14.3)	1 (9.1)	5 (11.9)	0 (0.0)
Chikwawa	24 (57.1)	7 (63.6)	16 (38.1)	2 (25.0)
Total	42 (100.0)	11 (100.0)	42 (100.0)	8 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

Table 8: Demand trends for sheep by district

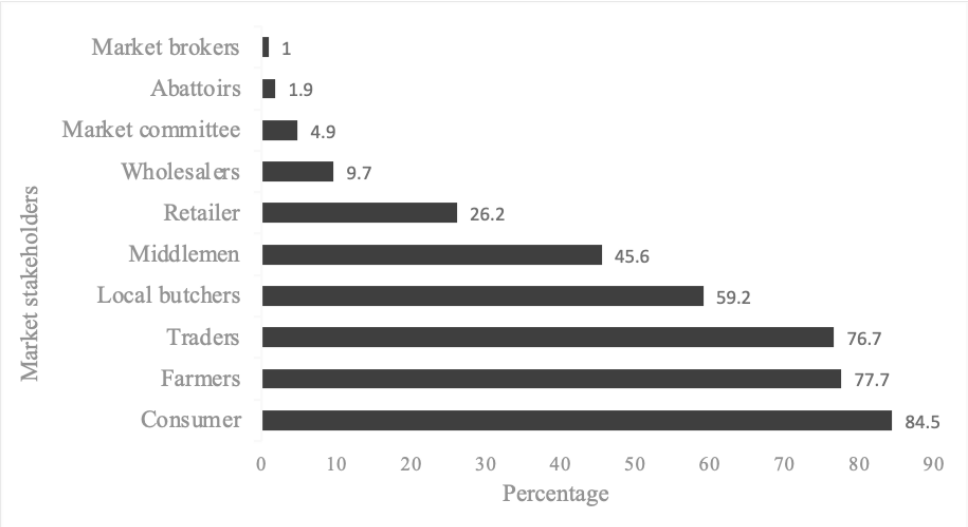
	Demand trend for sheep			
District	Uncertain	Decreasing	Increasing	No change
Balaka	41 (40.2)	0 (0.0)	1 (100.0)	0 (0.0)
Blantyre	12 (11.8)	0 (0.0)	0 (0.0)	0 (0.0)
Chikwawa	49 (48.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	102 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)

Note: Figures in parentheses are percentages for categorical variables.

4.1.6 Main market stakeholders

For stakeholders participating in the red meat markets, the results in Figure 2 reveal that the main stakeholders are consumers, farmers, traders as well as local butchers (like Phalula Butcher in Balaka). These are key market actors for both urban and rural markets in Balaka, Chikwawa and Blantyre. Red meat livestock like goats are mainly produced by small-scale farmers in Balaka and Chikwawa; then traders buy them, and some of these traders are butchers who slaughter goats and sell directly to consumers on a daily basis.

Figure 2: Main market stakeholders.



4.1.7 Stakeholders' influence on markets

Table 9 shows results on the degree of influence that farmers have on the marketing of red meat in the districts. The results show that a majority of market actors interviewed believe strongly that farmers influence red meat markets, while others revealed that farmers have low influence on the red meat markets regardless of the district. Farmers are the producers of red meat animals. Their skills in the management of red meat can highly influence the quality of meat products if supplied to the market by them. There are doubts that farmers can influence markets due to their low negotiation power on price, since the majority are operating individually.

Table 9: Farmers' market influence by district

	Farmers' influence			
District	Uncertain	Low	Medium	Strong
Balaka	7 (30.4)	10 (34.5)	12 (80.0)	13 (36.1)
Blantyre	7 (30.4)	1 (3.4)	1 (6.7)	3 (8.3)
Chikwawa	9 (39.1)	18 (62.1)	2 (13.3)	20 (55.6)
Total	23 (100.0)	29 (100.0)	15 (100.0)	36 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

Table 10 shows that traders have a strong influence on the market for red meat. This is because traders make the final decision on the prices of red meat and its products since there is no organized market. The results show that in Chikwawa 57.5%, and in Balaka 37.5%, of respondents reveal that traders influence the red meat market. In Balaka there is a Goat Auction developed by the Crop Livestock Integration and Marketing in Malawi (CLIMM) project, where traders buy goats at auction and bid for the prices set by farmers. In Chikwawa, they rely on urban traders from Blantyre to buy their livestock, hence imposing a great influence on the livestock market.

Table 10: Traders' market influence by district

	Traders' influence			
District	Uncertain	Low	Medium	Strong
Balaka	7 (29.2)	4 (57.1)	16 (50.0)	15 (37.5)
Blantyre	4 (16.7)	1 (14.3)	5 (15.6)	2 (5.0)
Chikwawa	13 (54.2)	2 (28.6)	11 (34.4)	23 (57.5)
Total	24 (100.0)	7 (100.0)	32 (100.0)	40 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

Table 11 shows results of the extent of influence that middlemen have on the marketing of red meat in the districts sampled for the study. The majority of the respondents reveal that middlemen have a medium influence on red meat. This is because middlemen mainly get livestock from producers (farmers) and never keep them for long but sell to butchers or traders with little cost involved. Hence, their influence is uncertain on the market for red meat. Middlemen normally have a very small profit margin reflecting their low effort made towards the production of the red meat value chain.

Table 11: Middlemen's market influence by district

	Middlemen's influence			
District	Uncertain	Low	Medium	Strong
Balaka	19 (33.9)	1 (16.7)	12 (52.2)	10 (55.6)
Blantyre	8 (14.3)	0 (0.0)	2 (8.7)	2 (11.1)
Chikwawa	29 (51.8)	5 (83.3)	9 (39.1)	6 (33.3)
Total	56 (100.0)	6 (100.0)	23 (100.0)	18 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

Table 12 shows that market brokers do not greatly influence red meat markets regardless of the district. This is due to limited involvement in the red meat value chain.

Table 12: Market brokers' market influence by district

	Market brokers' influence			
District	Uncertain	Low	Medium	Strong
Balaka	41 (40.2)	0 (0.0)	0 (0.0)	1 (100.0)
Blantyre	12 (11.8)	0 (0.0)	0 (0.0)	0 (0.0)
Chikwawa	49 (48.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	102 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

The local butchers' influence on the marketing of livestock and its products is shown in Table 13, showing that local butchers have a strong influence on red meat markets as confirmed by 46 respondents. This is because local butchers play a critical role in determining the prices of red meat since they add value to the products. 42 respondents are uncertain about the local butchers' influence on red meat markets in all the districts.

Table 13: Local butchers' market influence by district

	Local butchers' market influence			
District	Uncertain	Low	Medium	Strong
Balaka	19 (45.2)	0 (0.0)	7 (53.8)	16 (34.8)
Blantyre	5 (11.9)	0 (0.0)	2 (15.4)	5 (10.9)
Chikwawa	18 (42.9)	2 (100.0)	4 (30.8)	25 (54.3)
Total	42 (100.0)	2 (100.0)	13 (100.0)	46 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

Abattoirs' influence on the marketing of livestock and its products is shown in Table 14. Almost all respondents are uncertain about whether abattoirs influence the red meat market, regardless of the districts. This is because there are very few abattoirs that are well known in the study area, like Phalula Abattoir and Balaka Abattoir in the Balaka district. None of the markets visited hosted abattoirs, which resulted in many respondents indicating that abattoirs have no influence.

Table 14: Abattoirs' market influence by district

	Abattoirs' influence			
District	Uncertain	Low	Medium	Strong
Balaka	40 (39.6)	0 (0.0)	0 (0.0)	2 (100.0)
Blantyre	12 (11.9)	0 (0.0)	0 (0.0)	0 (0.0)
Chikwawa	49 (48.5)	0 (0.0)	0 (0.0)	0 (0.0)
Total	101 (100.0)	0 (0.0)	0 (0.0)	2 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

On the degree of influence that wholesalers have in the marketing of the red meat value chain and its products, Table 15 reveals that the majority of respondents are uncertain about the wholesalers' influence on the red meat value chain market. This is because wholesalers like Sana and Shoprite and government institutions like schools and hospitals rarely buy red meat and its products from local markets.

Table 15: Wholesalers' market influence by district

	Wholesalers' influence			
District	Uncertain	Low	Medium	Strong
Balaka	36 (38.7)	0 (0.0)	2 (100.0)	4 (50.0)
Blantyre	11 (11.8)	0 (0.0)	0 (0.0)	1 (12.5)
Chikwawa	46 (49.5)	0 (0.0)	0 (0.0)	3 (37.5)
Total	93 (100.0)	0 (0.0)	2 (100.0)	8 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

Table 16 shows results for the magnitude of influence that retailers have on the marketing of the red meat value chain in the districts. The majority of respondents said they are uncertain about retailers influencing the marketing of the red meat value chain regardless of the district. Very few said that the retailers have a strong influence on the red meat value chain, since retailers sell red meat in their shops using refrigeration to prolong the life span of the product.

Table 16: Retailers' market influence by district

	Retailers' influence			
District	Uncertain	Low	Medium	Strong
Balaka	25 (32.9)	0 (0.0)	6 (100.0)	11 (52.4)
Blantyre	9 (11.8)	0 (0.0)	0 (0.0)	3 (14.3)
Chikwawa	42 (55.3)	0 (0.0)	0 (0.0)	7 (33.3)
Total	76 (100.0)	0 (0.0)	6 (100.0)	21 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

Table 17 shows that consumers have a strong influence on the red meat value chain and its product markets. This was confirmed by the largest group of respondents, followed by those reporting a medium influence.

Table 17: Consumers' market influence by district

	Consumers' influence			
District	Uncertain	Low	Medium	Strong
Balaka	3 (18.8)	5 (45.5)	17 (51.5)	17 (39.5)
Blantyre	2 (12.5)	0 (0.0)	5 (15.2)	5 (11.6)
Chikwawa	11 (68.8)	6 (54.5)	11 (33.3)	21 (48.8)
Total	16 (100.0)	11 (100.0)	29 (100.0)	43 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

4.1.8 Market infrastructure

On whether there is availability of livestock handling and marketing structures in the markets, the survey sampled Balaka, Blantyre and Chikwawa. Results in Figure 3 show that in almost all the markets visited, the following major infrastructures are available: vending stalls, sales pen, water facilities, toilets and a roofed area for buying and selling. These are very crucial to promoting hygiene and marketing the red meat in various markets in Balaka, Chikwawa and Blantyre.

Figure 3: Market infrastructure.

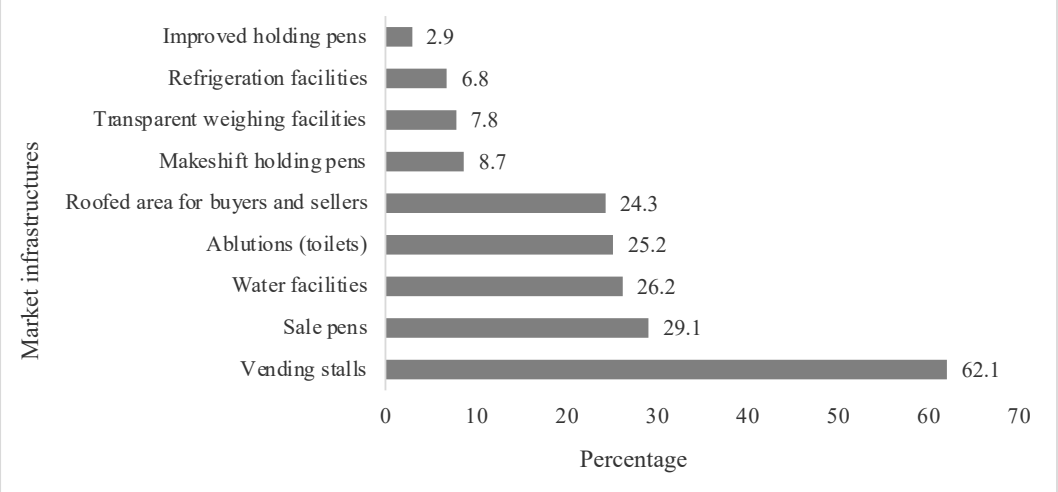
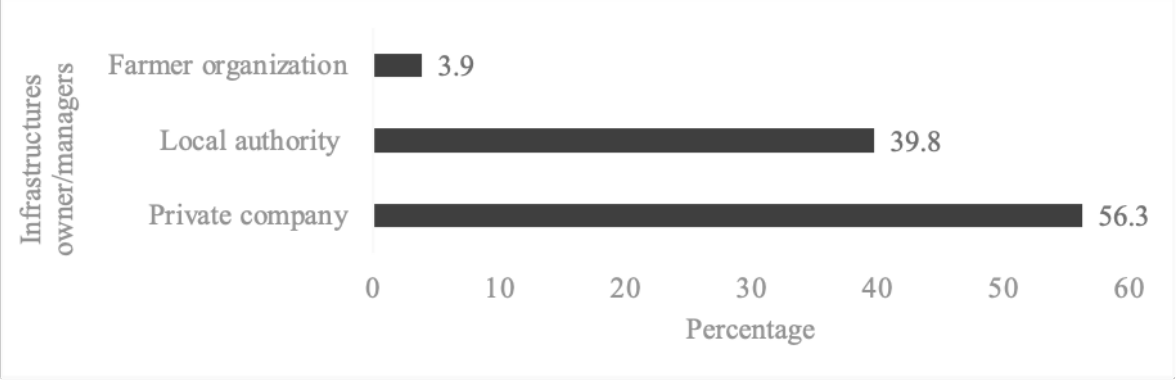


Figure 4 shows results on who owns or manages the market infrastructure available in the markets. The majority of the infrastructure is owned/managed by private companies (56.3%) followed by the local authority (39.8%). All abattoirs in Balaka are owned by the local authority while in Blantyre (urban) they are owned and managed by private companies.

Figure 4: Market infrastructure owners/managers.



4.1.9 Market fee collection

The results in Table 18 show that majority of respondents confirmed that the market fee is being collected at the markets on red meat. The market fee is highly collected in Balaka, since the markets are easily reachable compared to Chikwawa, where a lot of trading centres are in areas where it is difficult to reach for the collection of the fee.

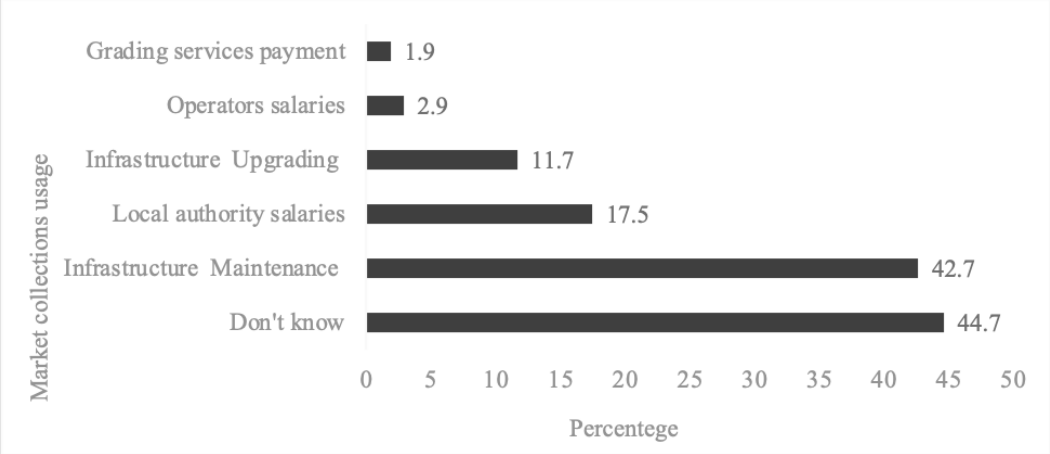
Table 18: Market fees collection

	Are any fees collected in the market?	
District	Yes	No
Balaka	36 (46.2)	6 (24.0)
Blantyre	11 (14.1)	1 (4.0)
Chikwawa	31 (39.7)	18 (72.0)
Total	78 (100)	25 (100)

Note: Figures in parentheses are percentages for categorical variables.

Figure 5 presents the results for the ways in which the fees collected in the markets that were sampled are utilized. The results show that a lot of people are not aware of the use of collected fees – about 44.7% – while 42.7% revealed that the fees are used for infrastructure maintenance. Since the majority of market shareholders are not aware of the use of collected fees, this can contribute to a lack of commitment to paying fees.

Figure 5: Market collections usage.



4.1.10 Costs incurred during market participation

Table 19 shows the results for the types of costs that are incurred by the respondents in Balaka, Blantyre and Chikwawa during their participation in the marketing of the livestock market. The results show that a lot of costs are incurred towards transport and labour during market participation in the red meat value chain. This is because market actors use transport mostly to search for animals in the red meat value chain at greater distances. There is labour cost incurred for workers that slaughter the livestock, and also for the employees that sell the products. For example, Phalula Butcher in Balaka has hired someone to sell red meat products.

Table 19: Costs incurred during market participation

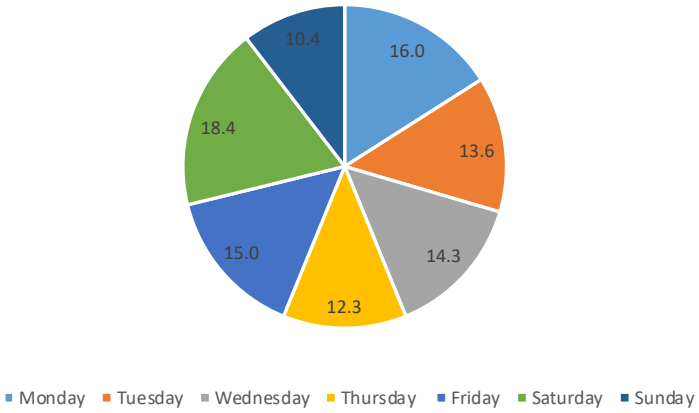
	Transport		Labour		Incidentals e.g. lunch	
District	Yes	No	Yes	No	Yes	No
Balaka	30 (40.5)	12 (41.4)	34 (36.2)	8 (88.9)	2 (28.6)	40 (41.7)
Blantyre	9 (12.2)	3 (10.3)	12 (12.8)	0 (0.0)	0 (0.0)	12 (12.5)
Chikwawa	35 (47.3)	14 (48.3)	48 (51.1)	1 (11.1)	5 (71.4)	44 (45.8)
Total	74 (100.0)	29 (100.0)	94 (100.0)	9 (100.0)	7 (100.0)	96 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

4.1.11 Days of regular market occurrence

The results in Figure 6 show that in all the markets visited red meat sales occur every day, regardless of district.

Figure 6: Market days.



4.1.12 Months of sales peak and decline

Figure 7 shows the results for the months of the year that market sales reach their peak. The results reveal that market sales reached the peak mostly during the celebration months of December and July every year as shown by 82.4% and 56.5%, respectively. In these months several ceremonies take place for Muslims and Christians.

Figure 7: Months of market sales peaks.

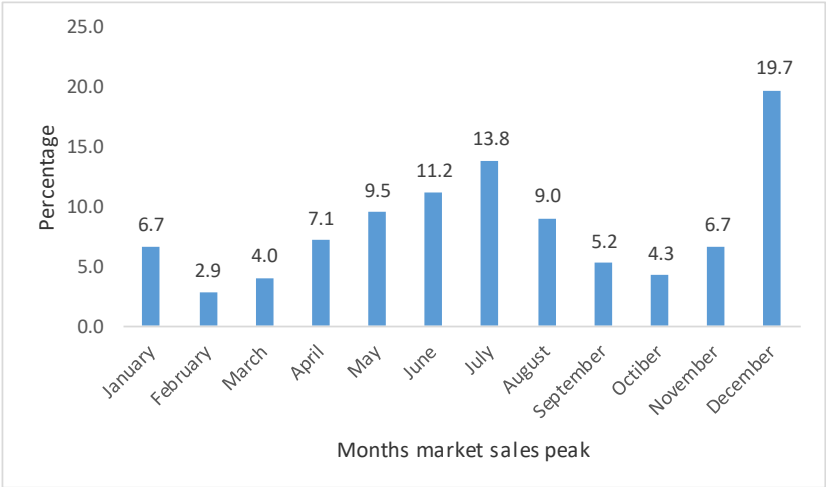


Figure 8 shows the results for the months of the year that market sales decline; the respondents sampled reported that market sales reached their minimum point mostly during January and February, with response rates of 70.6% and 74.1% respectively. In January and February, farmers don't have enough livestock for sale, hence, traders/butchers fail to access enough livestock that they can buy.

Figure 8: Months of market sales decline.

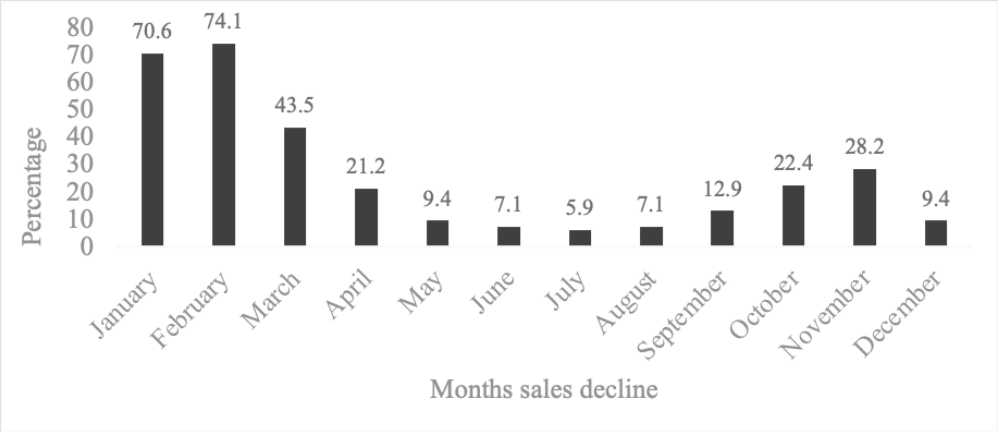
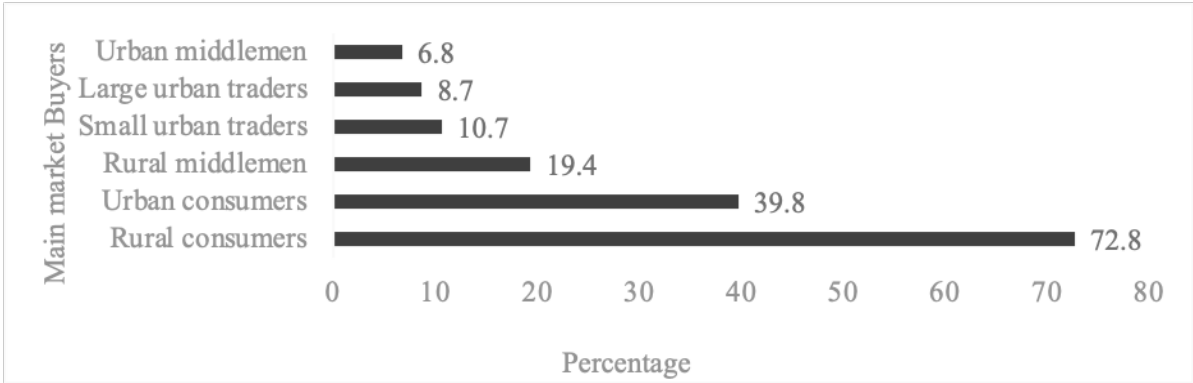


Figure 9 shows responses for the main buyers from the markets sampled. The results show that majority of buyers are rural consumers, followed by urban consumers. This is because rural markets depend on customers around their area, who constitute the majority. There are some exceptions of markets where the majority of the buyers are urban customers, like those markets along the main road, e.g. Phalula market in Balaka and Mchalo market in Chikwawa.

Figure 9: Main market buyers.



Among large urban buyers, small urban buyers, urban middlemen, rural middlemen and urban consumers, respondents reported that they don't know where the products once purchased reach their final destination. With rural consumers, the respondent reported that the final destination of the products purchased from markets is for consumption, as shown in Table 20.

Table 20: Main destination of the products purchased by different market actors

	Market participants					
Destination	Large urban buyers	Small urban buyers	Urban middle-men	Rural middle-men	Rural consum-ers	Urban consum-ers
Undisclosed	94 (91.3)	92 (89.4)	83 (80.6)	96 (93.2)	27 (26.2)	62 (62.2)
Consumption	2 (1.9)	7 (6.8)	10 (9.7)	0 (0.0)	76 (73.8)	41 (39.8)
Butcheries	7 (6.8)	2 (1.9)	2 (1.9)	4 (3.9)	0 (0.0)	0 (0.0)
Restaurants	0 (0.0)	2 (1.9)	8 (7.8)	3 (2.9)	0 (0.0)	0 (0.0)
Total	103	103	103	103	103	103

Note: Figures in parentheses are percentages for categorical variables.

Table 21 contains results for the strong seasonal fluctuation in sales and prices in the marketing of the red meat value chain. The majority of respondents reported that there are strong seasonal fluctuations in sales and prices in all the districts. This is because sales depend on the availability of products within the market, and when red meat value chain products have high demand like in July and December, the prices fluctuate highly.

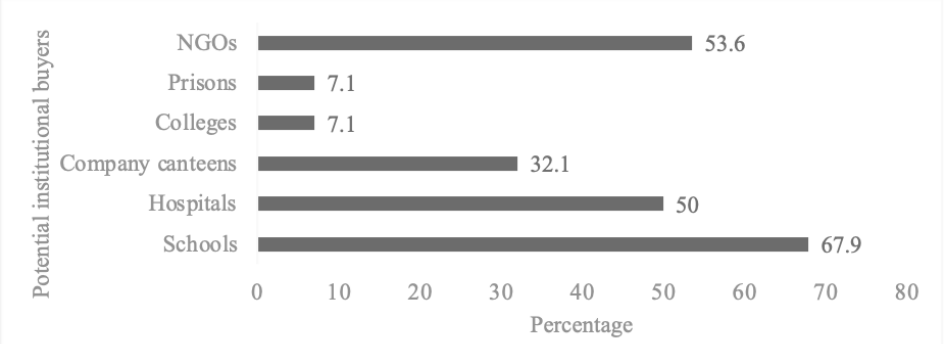
Table 21: Strong seasonal fluctuations in sales and prices

	Strong seasonal fluctuations in sales and prices	
District	Yes	No
Balaka	38 (61.3)	4 (9.8)
Blantyre	4 (6.5)	8 (19.5)
Chikwawa	20 (32.3)	29 (70.7)
Total	62 (100.0)	41 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

On the potential institutions that can buy red meat value chain and its products from the marketers, Figure 10 shows that the major potential institutions include NGOs, schools and hospitals in all the districts.

Figure 10: Potential institutional buyers.



On whether there are opportunities to link up with institutional buyers, Table 22 shows that the majority of respondents reported no opportunities to link up with institutional buyers like schools, hospitals and NGOs. This is because these institutions have complicated procurement processes that rural actors can never manage.

Table 22: Opportunities to link up with institutional buyers by district

	Opportunities seen to link up with institutional buyers	
District	Yes	No
Balaka	15 (50.0)	27 (37.0)
Blantyre	5 (16.7)	7 (9.6)
Chikwawa	10 (33.3)	39 (53.4)
Total	30 (100.0)	73 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

4.1.13 Mechanisms used for product quality

Figure 11 shows the mechanisms that are used by the traders in the markets that were sampled in Balaka, Blantyre and Chikwawa. The results show that eye-based negotiation and body score are key mechanisms used for product quality.

Figure 11: Mechanisms of product quality.

The results in Table 23 show respondents accepted that product quality is rewarded, even though there is a quality gap that exists. The majority of the respondents accepted that there is indeed a quality gap across all the markets visited. On the other hand, the respondents reported that if food safety is high, it is rewarded a lot.

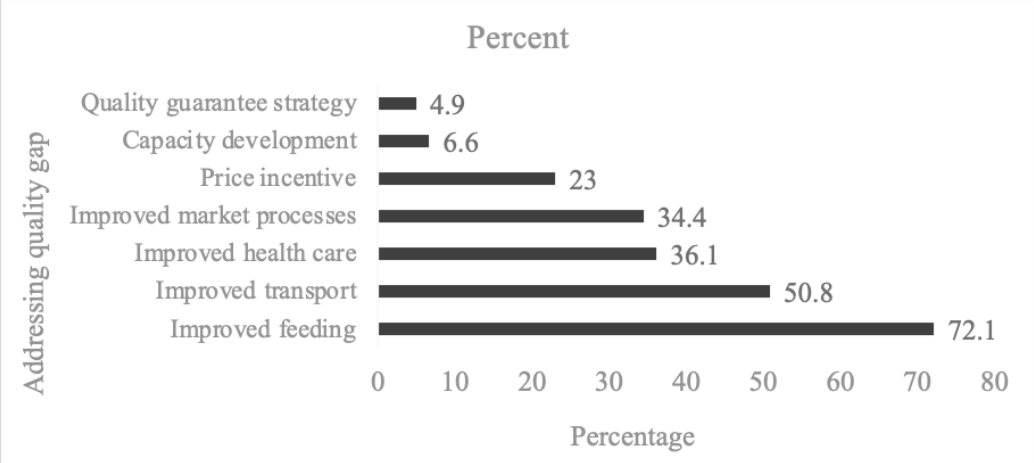
Table 23: Product quality rewarded, quality gap met and food safety rewarded

	Product quality rewarded		Quality gap met		Food safety rewarded	
District	Yes	No	Yes	No	Yes	No
Balaka	34 (39.5)	8 (47.1)	22 (36.1)	20 (47.6)	36 (50.0)	6 (19.4)
Blantyre	11 (12.8)	1 (5.8)	9 (14.8)	3 (7.1)	8 (11.1)	4 (12.9)
Chikwawa	41 (47.7)	8 (47.1)	30 (49.2)	19 (45.2)	28 (38.9)	21 (67.7)
Total	86(100.0)	17(100.0)	61(100.0)	42(100.0)	72(100.0)	31(100.0)

Note: Figures in parentheses are percentages for categorical variables.

Figure 12 shows the results for ways through which the red meat value chain quality gaps of products can be addressed in the markets that were sampled. According to these responses, the quality gap can be mainly addressed by using improved feeding, improved transport mode, improved health care as well as improved market processes.

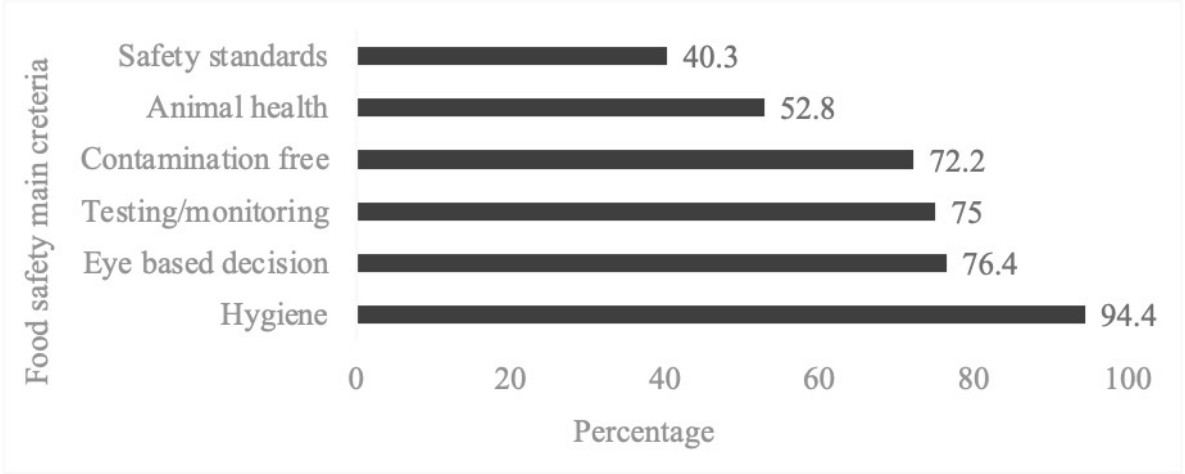
Figure 12:Ways to address the quality gap.



4.1.14 Food safety criteria

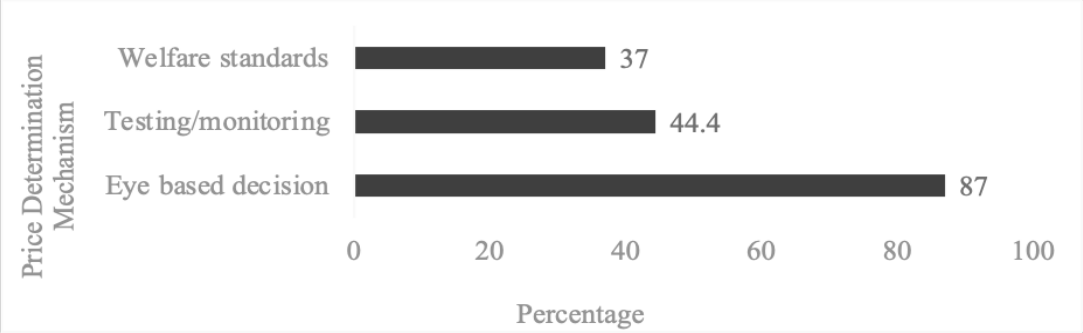
On the criteria to achieve food safety for the livestock and livestock products, Figure 13 shows that 94.4% of the respondents that were sampled indicated that hygiene in the market premises should be applied to achieve food safety for red meat and its products. 76.4% of respondents sampled said that eye-based decisions should be used to ensure safe livestock and livestock products are supplied to the buyers. 75% indicated that testing or monitoring systems should be enforced.

Figure 13: Main food safety criteria.



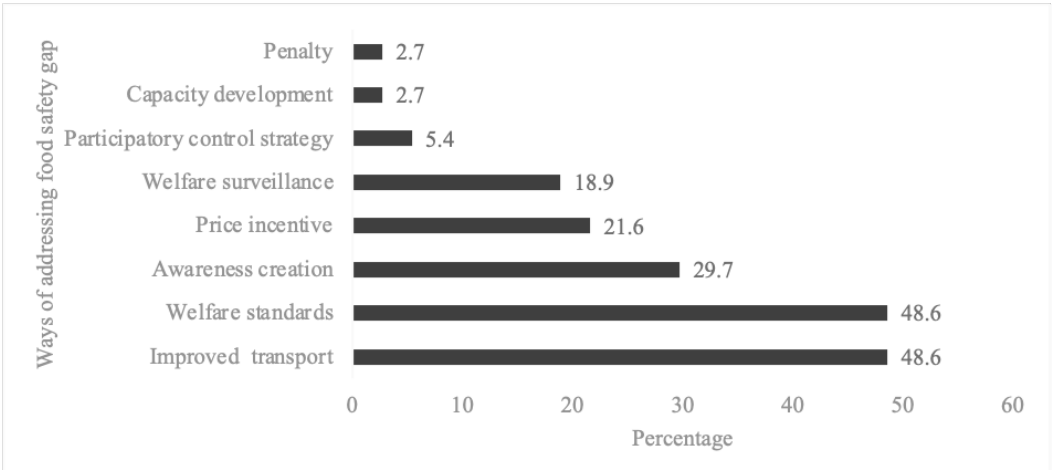
Regarding price determination mechanisms, as shown in Figure 14, eye-based decisions (87%) are mostly used since there is no proper mechanism to determine prices in the sampled markets, while 37% used welfare standards and 44.4% used tests to monitor, and 87% of the respondents sampled.

Figure 14: Mechanisms for price determination.



On ways of addressing the food safety gap, Figure 15 shows the results for ways through which red meat value chains and their product safety gap can be addressed in the markets that were sampled. The results show that majority of respondents reported improved transport, as well as welfare standards, can help address the food safety gap.

Figure 15:Ways of addressing the food safety gap.



4.1.15 Other services provided in the markets

The results in Figure 16 show that other services provided in the markets mainly include food items, agricultural implements, household goods, health products, clothing and animal feeds.

Figure 16: Other market services.

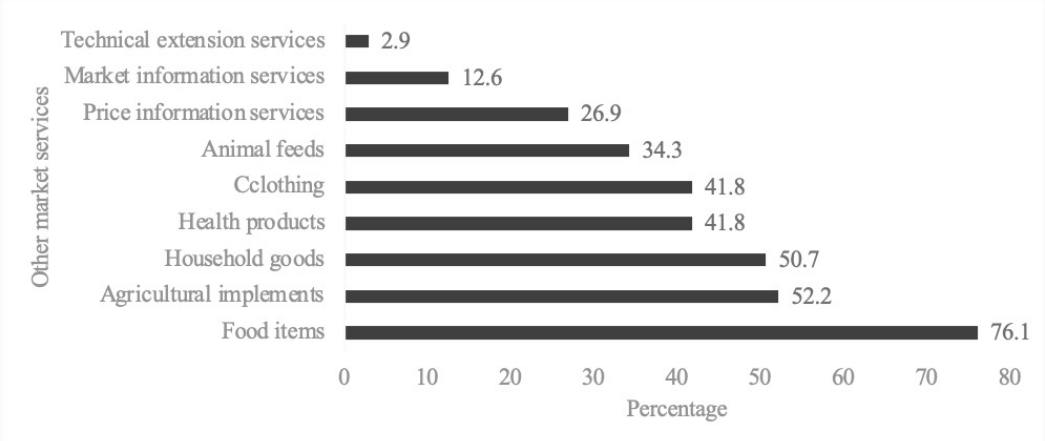


Table 24 shows the results on the possibility of trans-border trade affecting local livestock markets. The results show that majority of respondents reported that cross-border trade does not affect sales of the red meat value chain and its products.

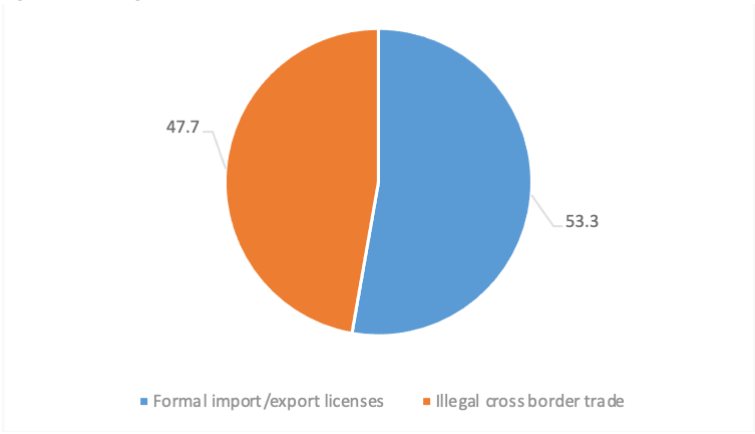
Table 24: Trans-border trade affecting livestock sales

	Cross-border trade affecting livestock sales	
District	Yes	No
Balaka	5 (33.3)	37 (42.0)
Blantyre	0 (0.0)	12 (13.6)
Chikwawa	10 (66.7)	39 (44.3)
Total	15 (100.0)	88 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

Figure 17 contains the results of the responses about the organization of the trans-border trade as follows: 53.3% of respondents said that traders in trans-border trade have formal import/export licences, and 47.7% of the respondents sampled reported that traders involved in trans-border trade illegally cross the border to conduct their business.

Figure 17: organization of trans-border trade.



On benefits of trans-border trade, Figure 18 shows that the majority of respondents reported that cheaper livestock products are the main benefits of trans-border trade, followed by higher prices for livestock when they are selling.

On benefits of trans-border trade, Figure 18 shows that the majority of respondents reported that cheaper livestock products are the main benefits of trans-border trade, followed by higher prices for livestock when they are selling.

Figure 18: Benefits of trans-border trade.

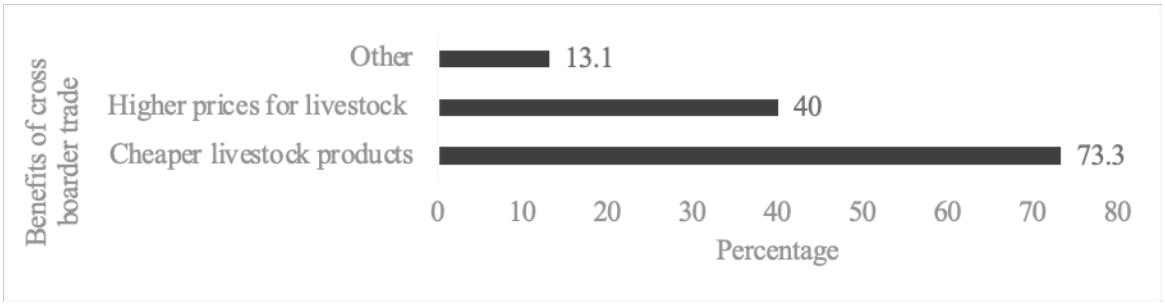
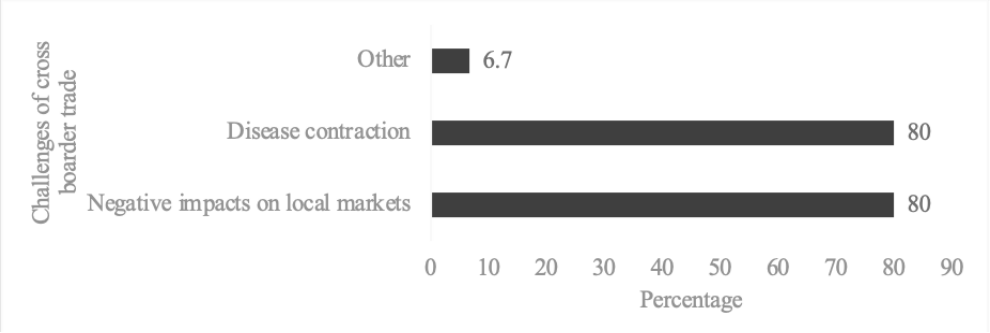


Figure 19 on the challenges of trans-border trade shows that 80% of respondents said disease contraction was a challenge for livestock traders, and the same percentage said that trans-border trade has negative impacts on local trade. 6.7% of respondents indicated that traders encounter other challenges when they get involved in cross-border trade.

Figure 19: Challenges of trans-border trade.



4.1.16 Issues that discourage people from selling in formal markets

Table 25 depicts issues deterring sales of livestock and products in the markets. The results reveal that many issues were raised, and many who responded pointed out poor access to credit, uncertainty over costs, high costs and variability in sales prices.

Table 25: Issues that deter sales at the markets

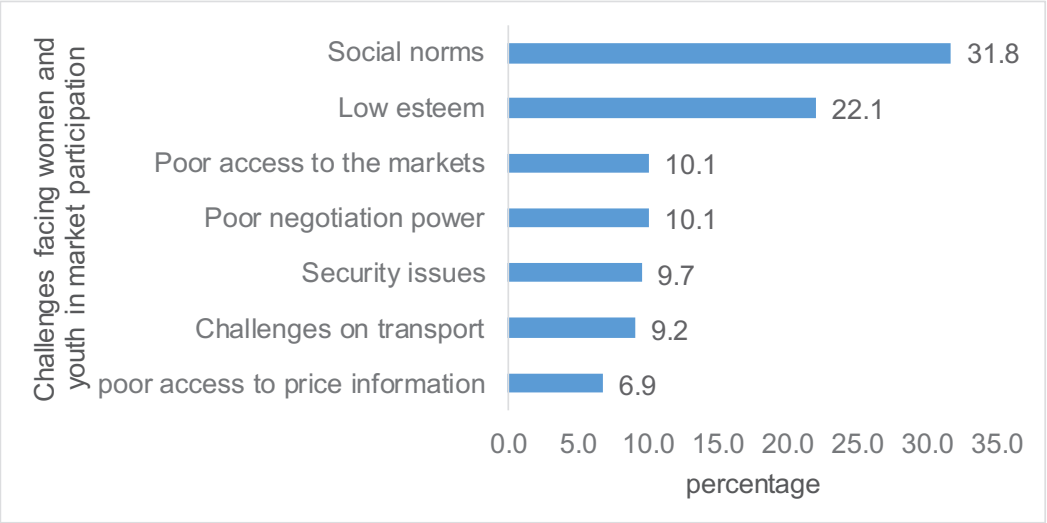
Issue	Frequency	Percentage
Poor access to credit	33	11.5
Miscellaneous	29	10.1
Uncertainty over costs	27	9.4
High other costs	25	8.7
Variability in sales prices	24	8.3
High transport costs	22	7.6
Variability in purchase	21	7.3
Poor transport facilities	20	6.9
Low sales prices	16	5.6
Lack of storage facilities	15	5.2
Poor access to purchase markets	9	3.1
Low consumer demand	8	2.8
Competition from the large-scale sector	7	2.4
Processor skills/knowledge/behaviour	7	2.4
Trader skills/knowledge/behaviour	5	1.7
Level of fees paid to government	5	1.7
Poor access to sales markets	5	1.7
Poor access to market information	4	1.4
Farmer skills/knowledge/behaviour	3	1.0
Animal diseases	3	1.0
Total	288	100

Note: Figures in parentheses are percentages for categorical variables.

4.1.17 Challenges facing women and youth in market participation

Figure 20 shows challenges facing women and youth in market participation. The results show that majority of respondents pointed out that the main issues hindering women and youth to participate in the market are social norms and low esteem.

Figure 20: Challenges facing women and youth in market participation.



4.1.18 Opportunities for women and youth to participate in the market

Figure 21 depicts the opportunities that the market can present to ensure women and youth participate in the market. These include women and youth being empowered to participate in the market, women/youth already being present in the market, better access to markets, transparent negotiations, provision of safety and available price information. These are very crucial opportunities that can help women and youth to participate in the market and the red meat value chain.

Figure 21: Opportunities for women and youth to participate in the market.

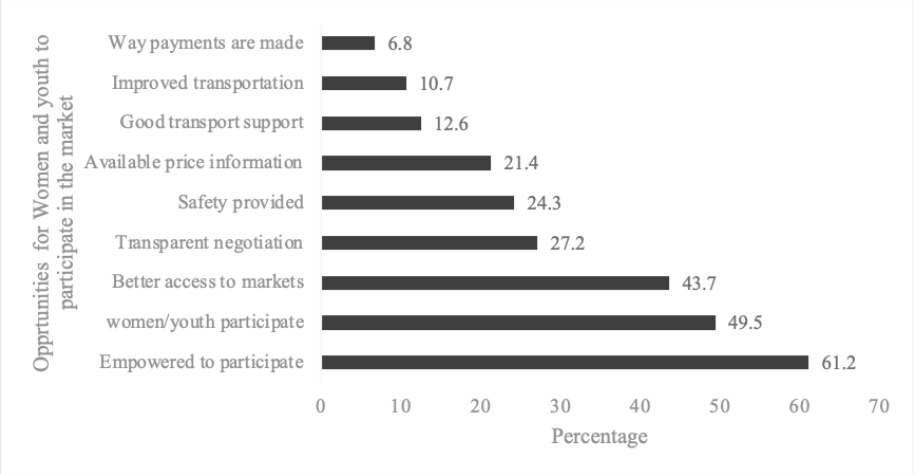
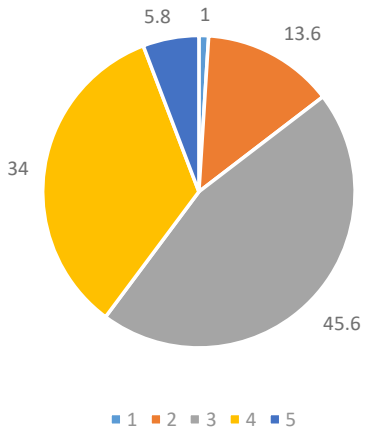


Figure 22 contains the results when responses were asked to rate the role of off-takers in the red meat value chain markets from 1 to 5. The results show that majority of respondents rate off-takers' involvement in the markets as 3 (45.6%), which is medium involvement, followed by 4 (34%), which is high involvement. This implies that off takers play a significant role in the red meat value chain.

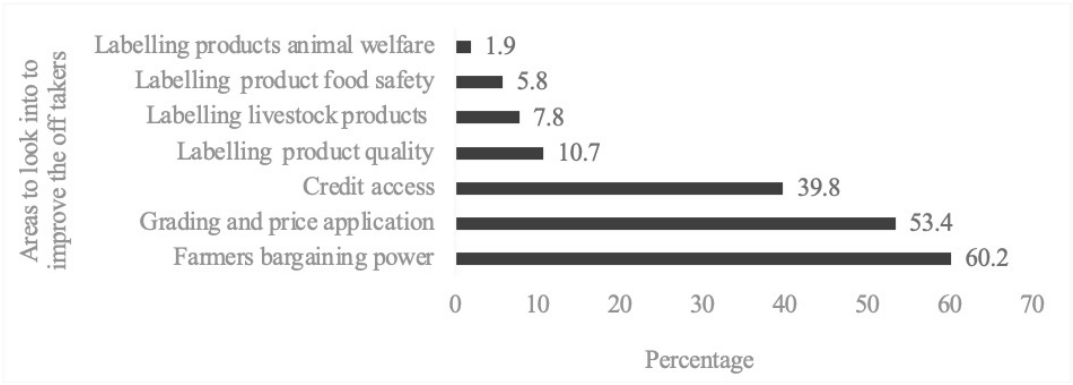
Figure 22: Rating of the role of off-takers in the red meat value chain markets.



4.1.19 Areas to improve off-takers

Figure 23 shows that respondents indicated farmers' bargaining power, grading and price application, and access to credit are crucial factors needed to improve off-taker participation in red meat value chain markets.

Figure 23: Areas to improve the participation of off-takers.



4.2 Consumer survey results

On the types of markets that are highly patronized by consumers, Table 26 shows that the majority patronize rural growth points followed by fast-growing secondary markets. 43.3% of respondents sampled patronize rural growth points, 42.3% patronize towns/fast-growing secondary cities, and 14.4% patronize urban markets/major cities.

Table 26: Market type patronized by gender of respondent

	Gender of respondent		
Market type	Female	Male	Overall
Rural growth points	73 (43.7)	8 (40.0)	81 (43.3)
Towns/fast-growing secondary cities	73 (43.7)	6 (30.0)	79 (42.3)
Urban markets, major cities	21 (12.6)	6 (30.0)	27 (14.4)
Total	167 (100.0)	20 (100.0)	187 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

Table 27 shows the results for the level of income of consumers in Balaka, Blantyre and Chikwawa. Among these, the majority are low-income earners, at 64.7%; high-income earners are 35.3%. A large sample was sampled in Balaka and Chikwawa where the level of productive economic endeavours is low.

Table 27: Consumer type by gender of respondent

	Gender of respondent		
Consumer type	Female	Male	Overall
High income	59 (35.3)	9 (45.0)	68 (36.4)
Low income	108 (64.7)	11 (55.0)	119 (63.6)
Total	167 (100.0)	20 (100.0)	187 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

Irrespective of gender, results in Table 28 show that majority of respondents are married. Among the female respondents, 73.6% are married; among the male respondents, 85%. This implies that the majority of consumers are married regardless of gender, and this means that they work hard to provide for their families.

Table 28: Marital status of respondents by gender

	Gender of respondent		
Marital status	Female	Male	Overall
Divorced	13 (7.8)	1 (5.0)	14 (7.5)
Married	123 (73.6)	17 (85.0)	140 (74.9)
Single	16 (9.6)	2 (10.0)	18 (9.6)
Spouse absent	2 (1.2)	0 (0.0)	2 (1.1)
Widow(er)	13 (7.8)	0 (0.0)	13 (6.9)
Total	167 (100.0)	20 (100.0)	187 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

The education level of the respondents is show in Table 29, as follows: 41.7% attended secondary; 40.1% attended primary; 13.9% attended post-secondary; and 4.3% did not attend any education. This shows that the majority of respondents attended secondary, primary and post-secondary education, which helps them to make proper decisions when purchasing market products.

Table 29: Education level of respondents by gender

	Gender of respondent		
Education level	Female	Male	Pooled
No schooling	8 (4.8)	0 (0.0)	8 (4.3)
Primary	67 (40.1)	8 (40.0)	75 (40.1)
Secondary	71 (42.5)	7 (35.0)	78 (41.7)
Post-secondary	21 (12.6)	5 (25.0)	26 (13.9)
Total	167 (100.0)	20 (100.0)	187 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

Table 30 shows that respondents' average age is 35 years for both women and youth, and they have lived in the districts for 22 years on average. This implies that almost all the respondents in these districts are young and economically active.

Table 30: Respondents' age and period of living in the district

District	Age (years)	Period of stay (years)
Balaka	36 (12)	22 (18)
Blantyre	36 (8)	17 (9)
Chikwawa	34 (9)	26 (14)
Overall	35.3 (9.8)	21.7 (14.5)

Note: Figures in parentheses are standard deviation for continuous variables.

4.2.1 Food types frequently consumed by respondents

Consumers frequently consume vegetables and legumes in addition to red meat products like goat and beef offal, which are reasonably cheap in both rural and urban areas. Households spend income on red meat value chain products on a monthly basis, in addition to other food types, as shown in Table 31. The results show that households spend the most on goat products followed by beef. This is because goat meat or offal are relatively cheaper compared to other red meat value chain products like sheep. Besides, goat value chain products (meat and offal) are readily available in rural areas compared to other red meat value chain products.

Table 31: Respondents' monthly expenditures on different food types

Food type	Respondents' expenditures (MWK)	% of monthly income
Goat meat	7,311.5 (6,342.96)	7.2 (4.7)
Goat offal	4,962.57 (3,361.5)	3.9 (3.5)
Sheep meat	3,189.84 (2,764.51)	3.7 (3.5)
Beef meat	6,356.15 (4,655.81)	3.5 (3.3)
Beef offal	5,526.74 (4,813.38)	2.1 (1.9)

Note: N=187. Figures in parentheses are standard deviation for continuous variables.

On which food types constitute a balanced diet, Table 32 shows that 96.3% of respondents acknowledged the red meat value chain is key in the constitution of a balanced diet. This implies that red meat value chains are very crucial to be promoted in the districts to contribute towards a balanced diet.

Table 32: Food types making a balanced diet

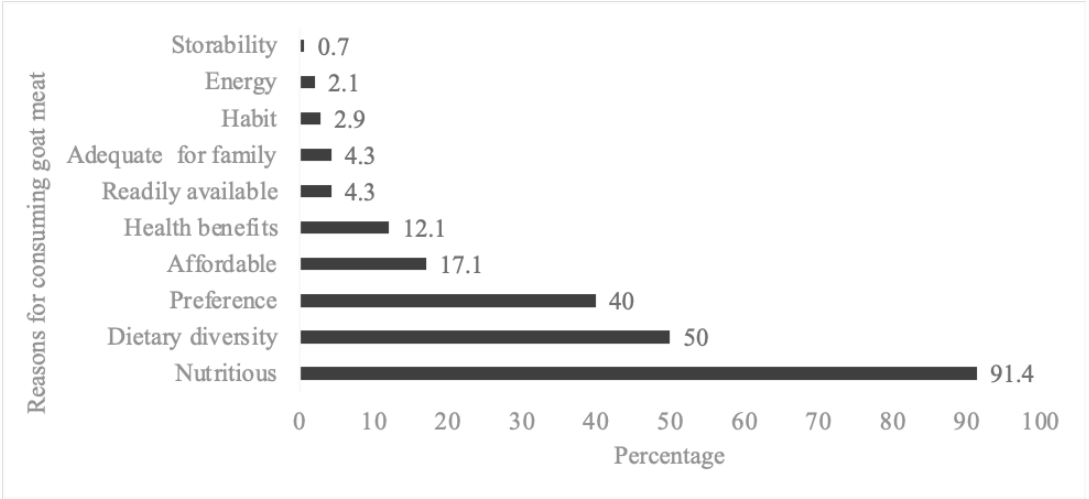
	Food type makes a balanced diet	
Type	Yes	No
Fruits	152 (81.3)	35 (18.7)
Legumes	170 (90.9)	17 (9.1)
Staples	175 (93.6)	12 (6.4)
Livestock-based foods	180 (96.3)	7 (3.7)

Note: Figures in parentheses are percentages for categorical variables.

4.2.2 Reasons for consuming different food types

Figure 24 shows that the majority of respondents consume goat meat for nutrition, dietary diversity and preference, while very few respondents choose goat meat for storability reasons. Knowledge on nutrition is likely to lead many respondents to consume goat meat.

Figure 24: Reasons for consuming goat meat.



On why respondents consume goat offal, Figure 25 shows that a majority of respondents consume goat offal for reasons of affordability, nutrition and preference. Goat offal is commonly found in both urban and rural areas.

Figure 25: Reasons for consuming goat offal.

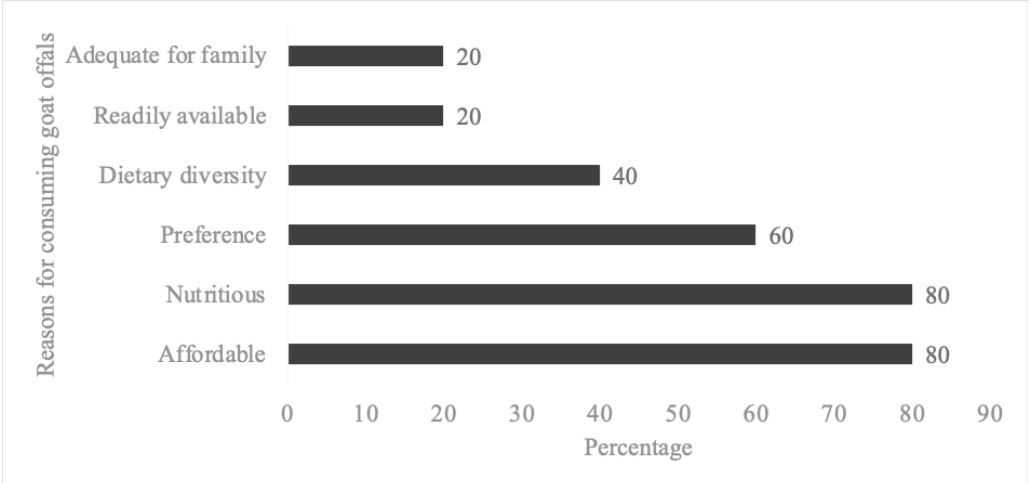


Figure 26 shows that 100% of the respondents sampled consume sheep meat because it is nutritious, and also based on preference. 33.3% of respondents sampled consume sheep meat for reasons of dietary diversity.

Figure 26: Reasons for consuming sheep meat.

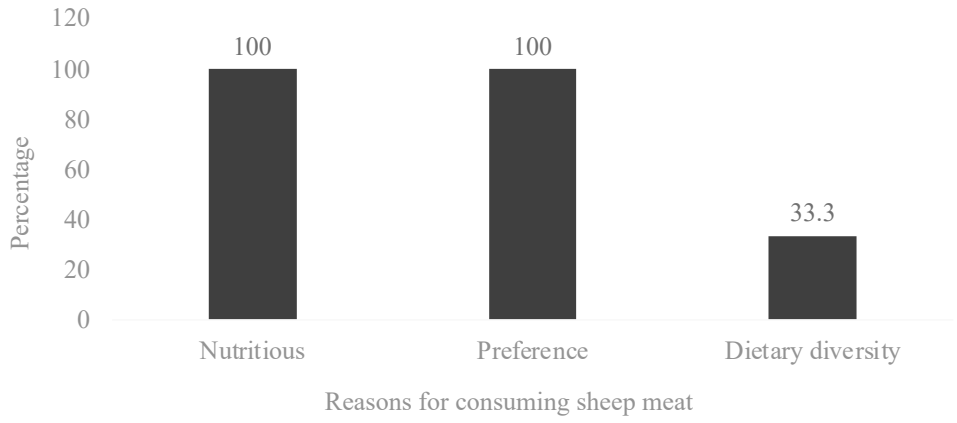
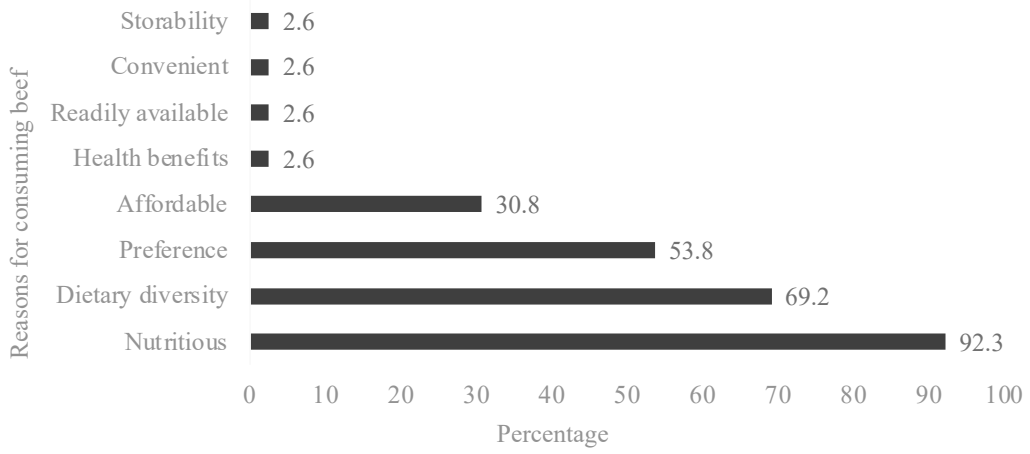


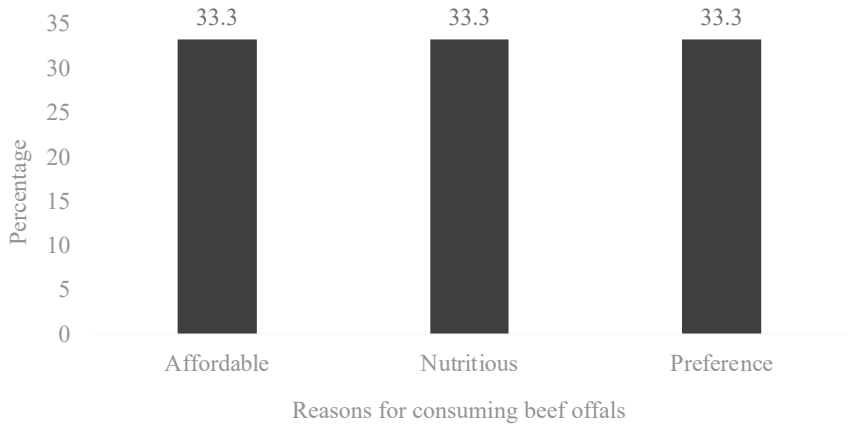
Figure 27 shows that respondents in the majority consume beef for reasons of nutrition, dietary diversity and preference, while few respondents consume beef for reasons of storability, convenience, ready availability or its health benefits regardless of high prices compared to other food types.

Figure 27: Reasons for consuming beef.



On the reasons why respondents consume beef offal, Figure 28 shows that 33.3% of respondents in each case consume it because beef offal is preferred, affordable and nutritious. Beef offal are cheap for both rural and urban consumers.

Figure 28: Reasons for consuming beef offal.



4.2.3 Constraints when buying different food types

Figure 29 shows that the majority of the respondents reported that the main constraint against consuming goat meat is affordability. This is because of high prices in both rural and urban markets.

Figure 29: Constraints when buying goat meat.

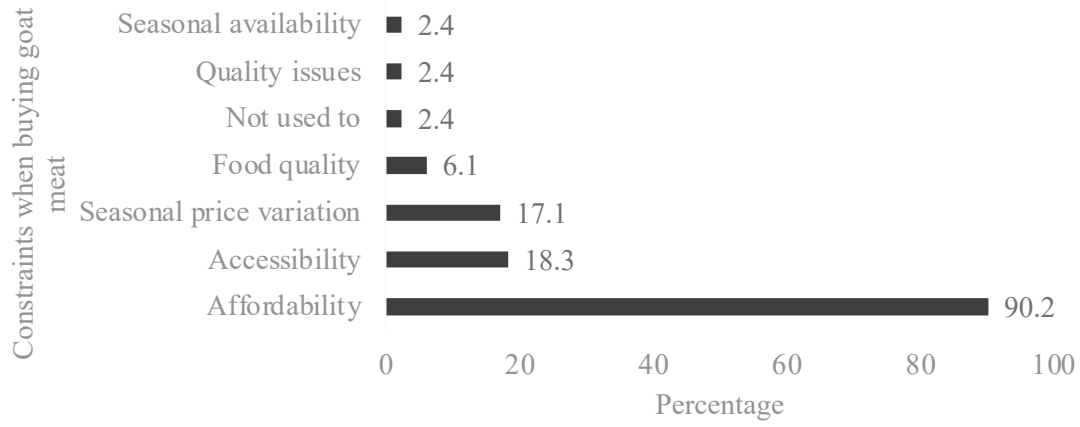


Figure 30 shows that all the respondents complained about the affordability and accessibility of goat offal as reasons for failing to consume goat offal. This is the case because respondents buy goat offal from traders who are in business and raise the price of goat offal to make a profit.

Figure 30: Constraints when buying goat offal.

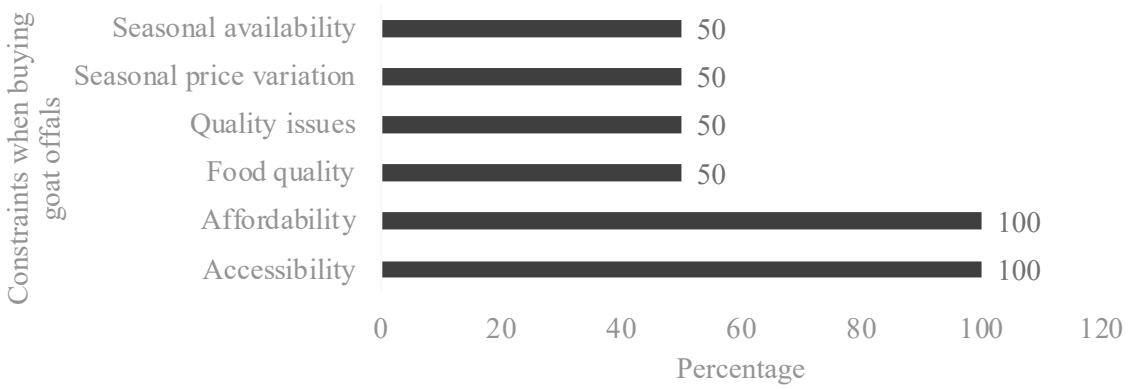


Figure 31 shows that many respondents complained about the affordability and seasonal availability of sheep meat. This is because sheep production is not as popular as goat, and therefore sheep meat is scarce and not commonly available.

Figure 31: Constraints when buying sheep meat.

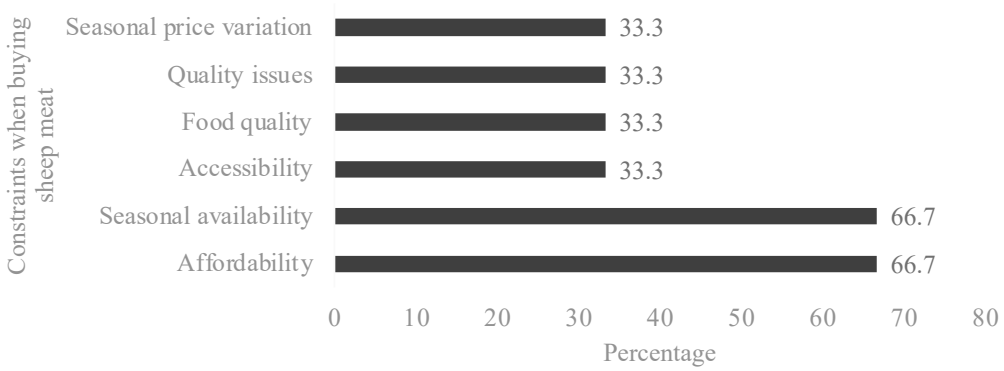


Figure 32 shows that most respondents complained about the affordability of beef, followed by the accessibility of beef. It is shown that 94.4% are constrained by affordability and 33.3% complained about the accessibility of beef. This is the case because respondents buy beef from traders who are in business and raise the price of beef to make a profit.

Figure 32: Constraints when buying beef.

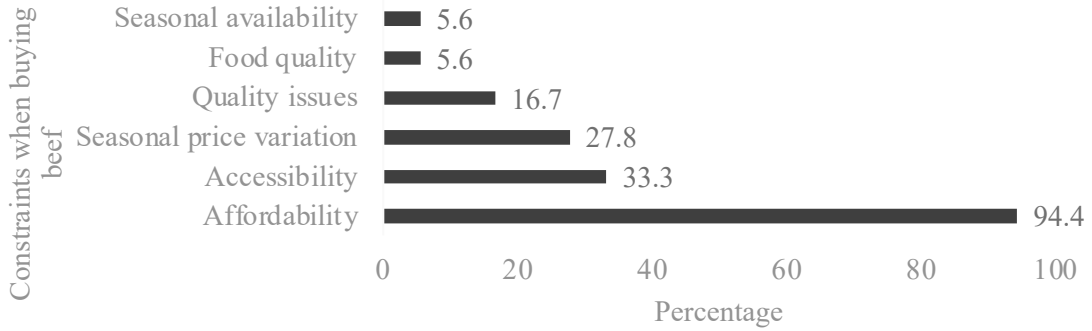
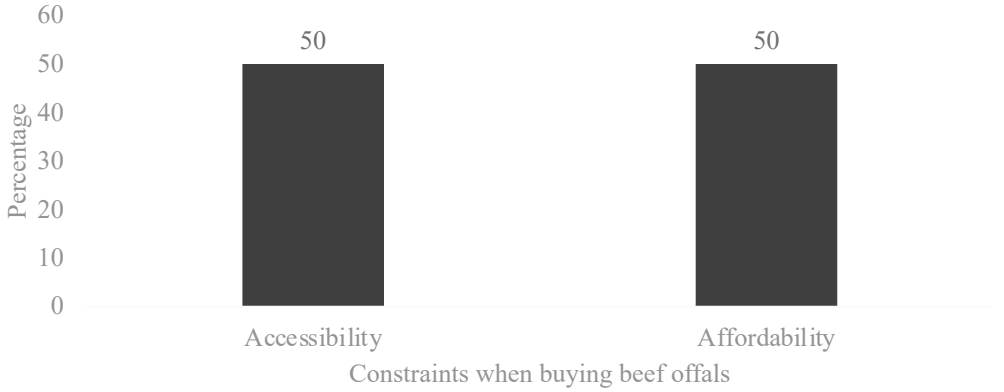


Figure 33 shows that many respondents also complained about the affordability and accessibility of beef offal. Beef offal has a high price compared to other food types.

Figure 33: Constraints when buying beef offal.



On the characteristics that consumers look for when buying various types of foodstuffs, a majority of respondents said what matters is food quality, followed by cleanliness, appearance, affordability and freshness. Table 33 reveals that 100% of consumers buy sheep meat and goat offal due to quality. A majority of the consumers are very mindful of the attributes of the foods that they buy, as they concentrate on value for their money. The results have also revealed that most of the respondents know about good nutrition.

Table 33: Characteristics of interest when buying different food types

	Characteristics									
Food type	Appearance	Size	Weight	Affordability	Cleanliness	Freshness	Quality	Ripeness	Bone to meat	None
Goat meat	71 (50.7)	4 (2.9)	11 (7.9)	23 (16.4)	24 (17.1)	90 (64.3)	119 (85.0)	0 (0.0)	26 (18.6)	1 (0.7)
Goat offal	5 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (20.0)	3 (60.0)	5 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)
Sheep meat	2 (66.7)	0 (0.0)	0 (0.0)	2 (66.7)	1 (33.3)	1 (33.3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)
Beef	22 (56.4)	0 (0.0)	2 (5.1)	10 (25.6)	7 (17.9)	31 (79.5)	33 (84.6)	0 (0.0)	9 (23.1)	0 (0.0)
Beef offal	0 (0.0)	0 (0.0)	0 (0.0)	1 (33.3)	1 (33.3)	0 (0.0)	1 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)

Note: Figures in parentheses are percentages for categorical variables.

On food substitutes consumed by respondents, Table 34 shows that consumers often substitute for goat meat and offal, sheep meat, beef and beef offal. The results show that consumers are substituting for a lot of animal products, which can be attributed to the high cost of living. Most respondents sampled are low-income earners who may at times be unable to buy foodstuffs whose prices are higher compared to the substitutes.

Table 34: Substitution of food types

	Substitutes of food types			
Food types	Soya chunks	Sugar beans	Cowpeas	Other foods
Goat meat	57 (40.7)	80 (57.1)	67 (47.9)	95 (67.9)
Goat offal	4 (80.0)	3 (60.0)	3 (60.0)	2 (40.0)
Sheep meat	2 (25.0)	2 (25.0)	2 (25.0)	2 (25.0)
Beef	17 (43.6)	24 (61.5)	18 (46.2)	21 (53.8)
Beef offal	1 (50.0)	1 (50.0)	0 (0.0)	0 (0.0)

Note: Figures in parentheses are percentages for categorical variables.

Table 35 shows that the majority of consumers buy different red meat value chain products mainly for nutrition value, followed by affordability. The respondents value the nutritive contents of food they consume and do not want to buy foodstuffs exorbitantly.

Table 35: Motives for buying red meat value chain products

	Motives			
Food types	Survival	Nutrition value	Affordable	Food safety
Goat meat	3 (2.1)	134 (95.7)	32 (22.9)	27 (19.3)
Goat offal	0 (0.0)	5 (83.3)	1 (16.7)	0 (0.0)
Sheep meat	0 (0.0)	3 (75.0)	1 (25.0)	0 (0.0)
Beef	0 (0.0)	39 (100.0)	16 (41.0)	0 (0.0)
Beef offal	0 (0.0)	1 (50.0)	1 (50.0)	0 (0.0)

Note: Figures in parentheses are percentages for categorical variables.

Regarding where consumers acquire foodstuffs, Table 36 reveals that respondents in the majority purchase food from undefined markets followed by rural markets and vendors. The results reveal that most consumers are not directly involved in the production and that they usually buy foodstuffs from their localities.

Table 36: Markets where food types are acquired

	Markets to acquire food types						
Type	Undefined market	City market	Own prod-uction	Rural market	Super-market	Vendor	Whole-saler
Goat	56 (29.9)	19 (10.2)	0 (0.0)	93 (49.7)	0 (0.0)	19 (10.2)	0 (0.0)
Beef	155 (81.2)	7 (3.7)	0 (0.0)	14 (7.5)	11 (5.8)	3 (1.6)	0 (0.0)

Note: Figures in parentheses are percentages for categorical variables.

Table 37 shows that many respondents were unable to define the reasons for choosing markets to buy foodstuffs. The next largest groups stated the reasons that the market offers good quality foodstuffs and the market is convenient.

Table 37: Reasons for choosing the market type

	Reasons				
Food product	Undefined	Convenient	Good quality	Low price	Trust the source
Fish	81 (43.3)	71 (38.0)	22 (11.8)	7 (3.7)	6 (3.2)
Poultry	31 (16.6)	108 (57.8)	28 (15.0)	11 (5.9)	9 (4.8)
Goat meat	47 (25.1)	83 (44.4)	44 (23.5)	3 (1.6)	10 (5.3)
Beef	148 (79.1)	17 (9.1)	19 (10.2)	2 (1.1)	1 (0.5)

Note: Figures in parentheses are percentages for categorical variables.

Table 38 shows that the largest group of respondents were unable to disclose challenges that come with food products when they are being sold. This was followed by those not facing any challenges, and those facing high selling prices. Further, Table 38 shows that 23.5% buy goat meat at higher prices when food products are being sold to them. This follows the fact that consumers buy from traders who sell at a raised price over the cost incurred during operations.

Table 38: Challenges with food products as they are sold

	Challenges						
Food product	Undefined	High prices	No chal-lenges	Quality	Scarc-ity	Unstable prices	Stor-age
Goat meat	47 (25.1)	44 (23.5)	83 (44.4)	5 (2.7)	0 (0.0)	0 (0.0)	8 (4.3)
Beef	148 (79.1)	12 (6.4)	20 (10.7)	5 (2.7)	0 (0.0)	0 (0.0)	2 (1.1)

Note: Figures in parentheses are percentages for categorical variables.

4.3 Value chain and off-takers survey results

4.3.1 Business registration

Table 39 shows results on whether a business entity is registered for each respondent. 31.2% of the respondents sampled in Balaka registered their businesses while 37.5% did not; 6.2% of respondents in Blantyre registered their businesses while 12.5% did not; and 62.5% in Chikwawa registered their businesses while 50% did not.

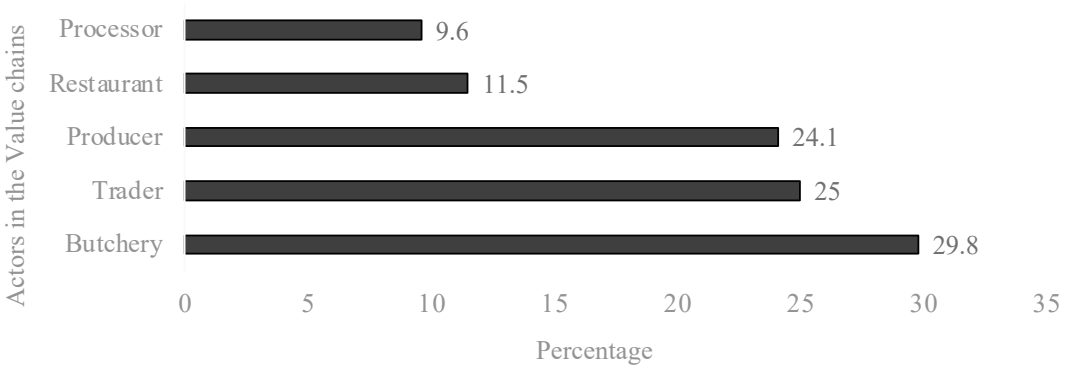
Table 39: Business registration

	Is the establishment officially registered?	
District	Yes	No
Balaka	10 (31.2)	27 (37.5)
Blantyre	2 (6.2)	9 (12.5)
Chikwawa	20 (62.5)	36 (50.0)
Total	32 (100.0)	72 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

On the actors in the value chains involved in this study, Figure 34 shows that 9.6% of respondents are processors, 11.5% are those who operate restaurants, 24.1% are producers, 25% are traders and 29.8% of respondents sampled operate butcheries.

Figure 34: Actors in the value chain.



4.3.2 Value chain involved

On the type of value chains that respondents sampled are involved in, Table 40 shows that 43.5% of respondents sampled in Balaka are involved in the beef value chain and 34.4% are involved in the goat value chain. Table 40 goes on to show that 47.8% of respondents sampled in Chikwawa are involved in the beef value chain and 55.7% are involved in goats.

Table 40: Value chains of actor involvement

	What are the value chains you are involved in?		
District	Beef	Goat	Sheep
Balaka	10 (43.5)	21 (34.4)	0 (0)
Blantyre	2 (8.7)	6 (9.8)	0 (0)
Chikwawa	11 (47.8)	34 (55.7)	0 (0)
Total	22 (100.0)	61 (100.0)	0 (0)

Note: Figures in parentheses are percentages for categorical variables.

Table 41 shows that for the respondents sampled from Balaka, 35% buy live animals in the value chains they are involved in, 42.2% sell live animals, 18.2% buy animal products and 31.3% sell animal products. For the sample from Chikwawa, 53.3% buy and sell live animals, 45.5% buy animal products and 55.2% sell animal products.

Table 41: Main activity for getting involved in the value chains

	For the value chain you are involved in, what is the main activity for your business?			
District	Buy live animals	Sell live animals	Buy animal products	Sell animal products
Balaka	21 (35.0)	19 (42.2)	2 (18.2)	21 (31.3)
Blantyre	7 (11.7)	2 (4.4)	4 (36.4)	9 (13.4)
Chikwawa	32 (53.3)	24 (53.3)	5 (45.5)	37 (55.2)
Total	60 (100.0)	45 (100.0)	11 (100.0)	67 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

4.3.3 The cattle value chain

On the types of cattle that respondents involved in the value chain, Figure 35 shows that the majority of the respondents sampled buy mixed live animals, followed by intact adult males. This is because mixed live animals can be exchanged for other types. If a young female animal is bought, this can be exchanged for an adult male animal.

Figure 35: Types of cattle bought in the value chain.

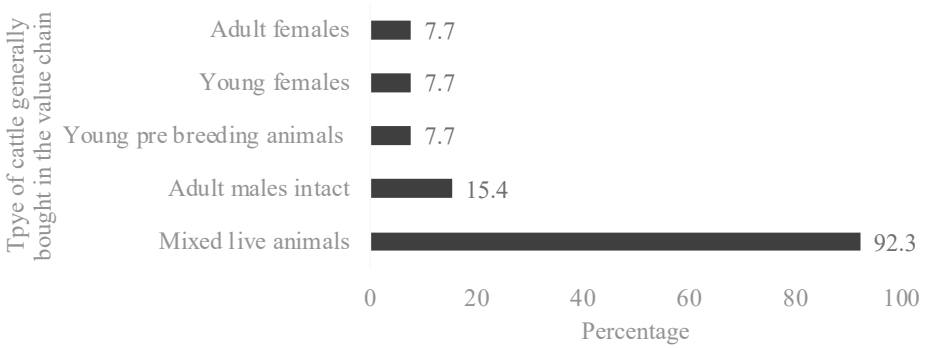


Table 42 shows that 54.5% of respondents sampled from Balaka have been involved in buying cattle for 5 years, while the corresponding group was only 9.1% of respondents in Blantyre. In addition, 36.4% of respondents from Chikwawa have been involved in buying cattle for over 5 years.

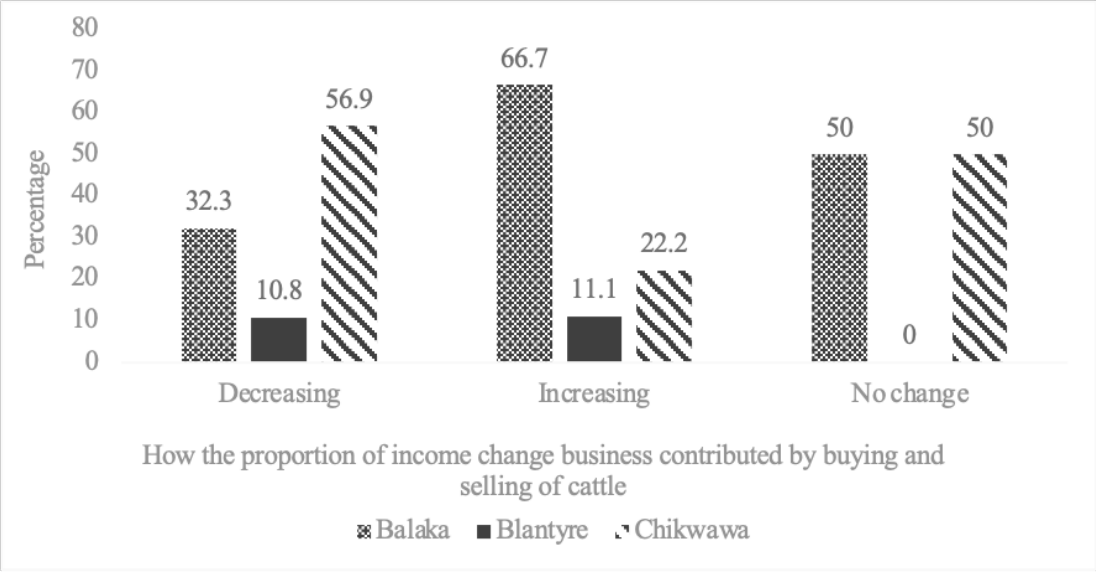
Table 42: Involvement in the cattle value chain in the past 5 years

	Were you involved in the business of buying cattle over 5 years ago?	
District	Yes	No
Balaka	6 (54.5)	31 (33.7)
Blantyre	1 (9.1)	10 (90.9)
Chikwawa	4 (36.4)	51 (55.4)
Total	12 (100.0)	92 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

Figure 36 shows that of the respondents sampled in Balaka, 66.7% said that the proportion of income that buying cattle contributes to their business is increasing. 32.2% have a decreasing proportion of income to their business from buying cattle, and 50% said there is no change in the proportion of income contributed to their business. Of the respondents sampled in Chikwawa, only 22.2% reported an increasing proportion of income from cattle, while 59.6% have a decreasing proportion and 50% said there is no change in the proportion of income contributed to their business by buying cattle.

Figure 36: Change in income contributed by buying cattle.



On the types of cattle that respondents involved in the value chain sell, Figure 37 shows that the majority of respondents are involved in mixed live animal types.

Figure 37: Cattle sold in the value chain.

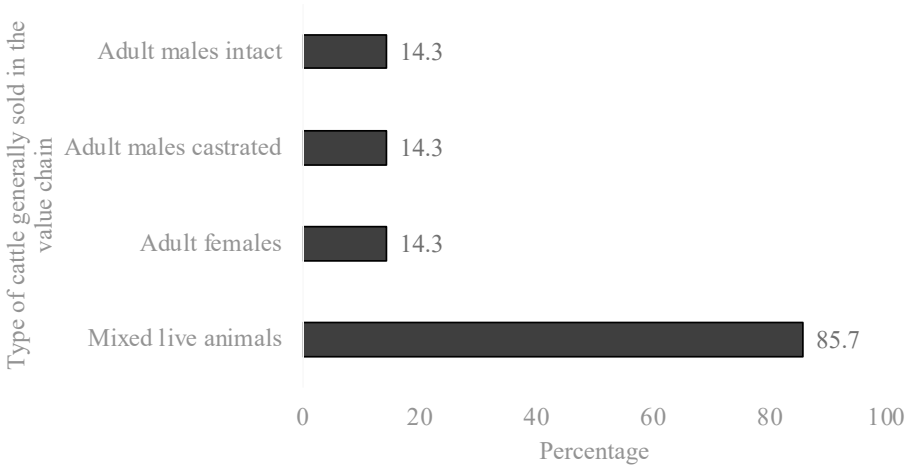
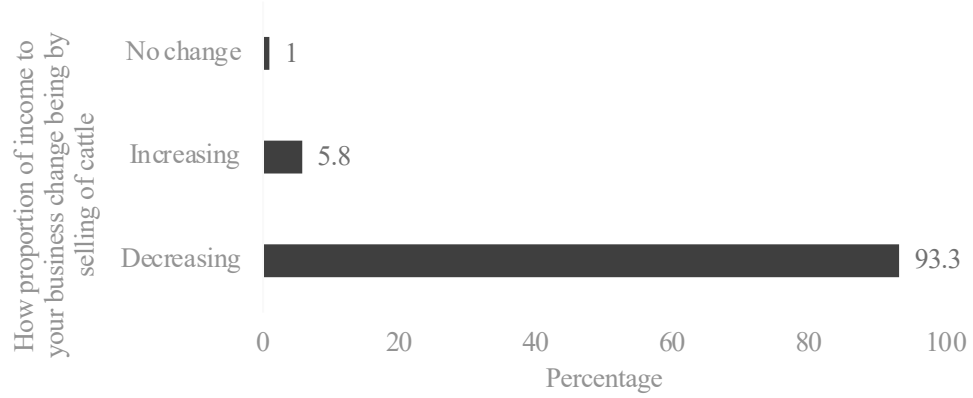


Figure 38 shows that the majority of respondents reported that the change of income contributed by selling cattle is decreasing because cattle are scarce in districts like Balaka.

Figure 38: Change in income contributed by selling cattle.



On the types of beef products that are generally sold by the respondents, Figure 39 shows that 64.7% of respondents sampled sell carcasses, 35.3% sell processed meat and 5.9% sell legs.

Figure 39: Beef products sold in the value chain.

Figure 40 shows that there is a reported decrease in business income from selling beef products, since beef products are scarce, particularly in rural areas. For example, in Chikwawa, a rural market, beef is rarely sold because customers believe that the cattle died due to disease.

Figure 40: Change in income contributed by selling beef products.

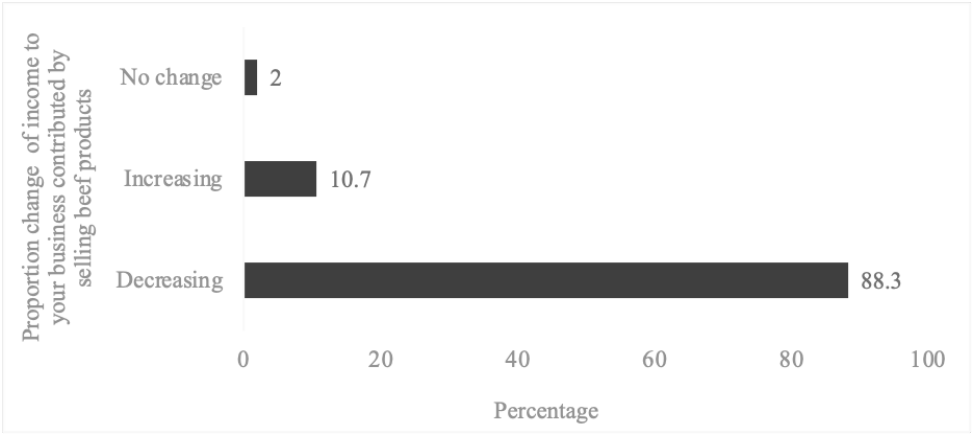


Figure 41 shows that more respondents are involved in selling and buying live cattle than in beef or beef products. Because slaughtering cattle in rural areas creates a challenge to sell due to lack of cold storage, many prefer to buy and sell live cattle.

Figure 41: Cattle and beef products contributing to business income.

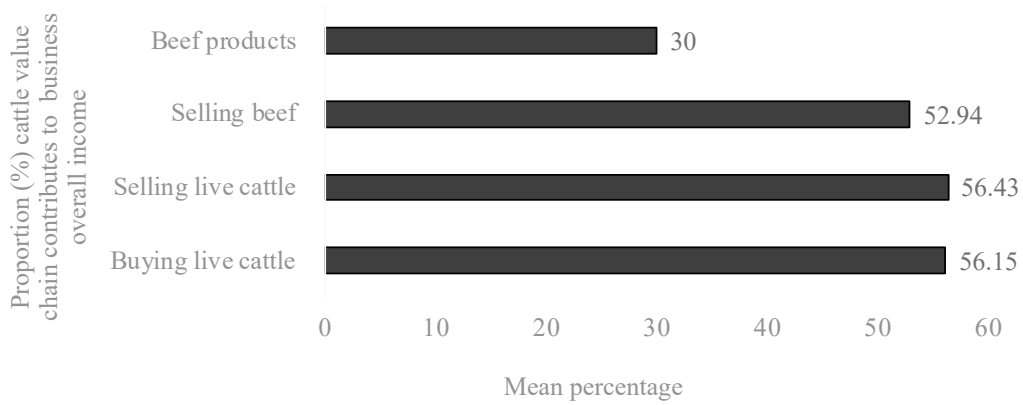


Table 43 shows the results on terms of payment for the suppliers in the cattle value chain. The majority of respondents reported that the preferred term of payment is cash on delivery regardless of the type of supplier. No respondents preferred advance payment.

Table 43: Terms of payment in the cattle value chain

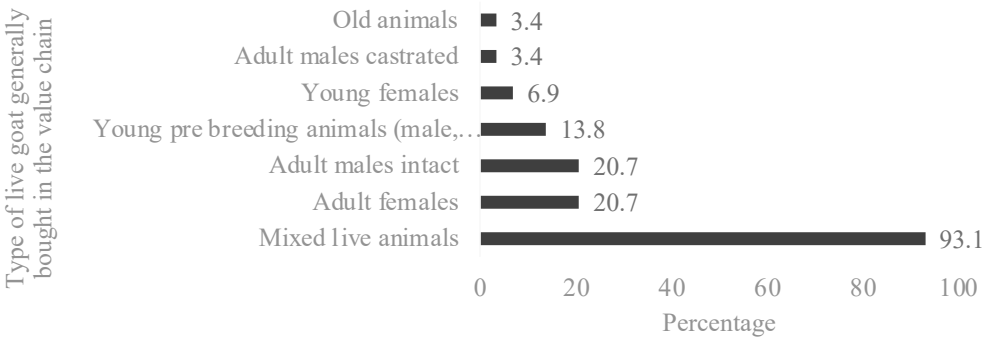
	On delivery		Advance		Delayed	
Suppliers	Yes	No	Yes	No	Yes	No
Small-scale farmers	91 (87.5)	13 (12.5)	0 (0)	104 (100.0)	3 (2.9)	101 (97.1)
Large-scale farmers	103 (99.0)	1 (1.0)	0 (0)	104 (100.0)	0 (0.0)	104 (100.0)
Small traders	100 (96.2)	4 (3.8)	0 (0)	104 (100.0)	1 (1.0)	103 (99.0)

Note: Figures in parentheses are percentages for categorical variables.

4.3.4 The goat value chain

Figure 42 shows that the majority of respondents sampled buy mixed live animals, regardless of district.

Figure 42:Types of live goats bought in the value chain.



On the types of live goats that are generally sold in the value chain, Figure 43 shows that respondents mainly sell mixed live animals, as in other red meat value chains.

Figure 43:Types of live goats sold in the value chain.

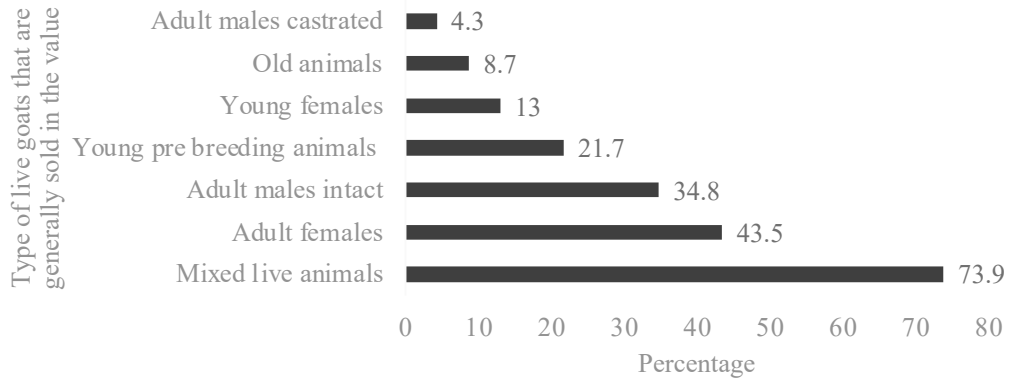


Figure 44 shows that majority of respondents have experienced a decrease in income contributed by selling live goats. This is because of the high cost of production of goats, which results in high farm gate prices, reducing the marginal profits for the vendors.

Figure 44: Change in income contributed by selling live goats.

Figure 45 shows that 60.9% of respondents sampled sell carcasses of goats and 43.5% sell processed goat meat. Carcasses are sold by butchers either in open spaces or roofed houses. The processed meat is normally sold either at restaurants or as pachiwaya (fried in a deep pan in open spaces).

Figure 45: Goat products sold in the value chain.

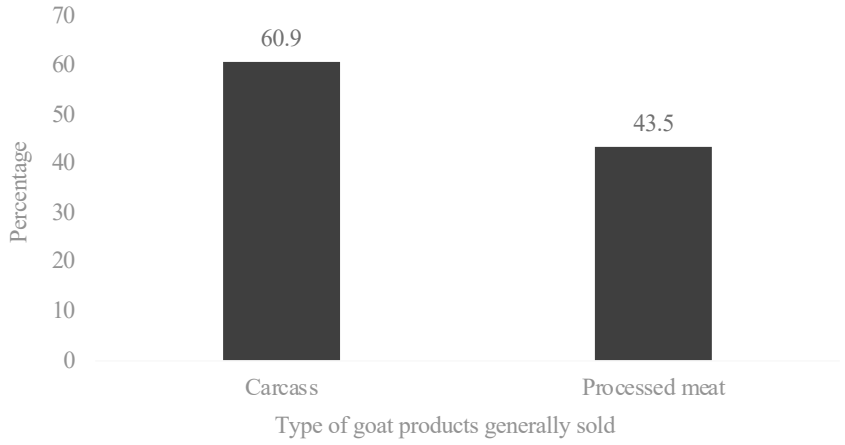


Figure 46 shows that the majority of respondents prefer to buy carcasses, since they cook at their homestead, rather than processed meat that they believe is of poor hygiene.

Figure 46: Goat products bought in the value chain.

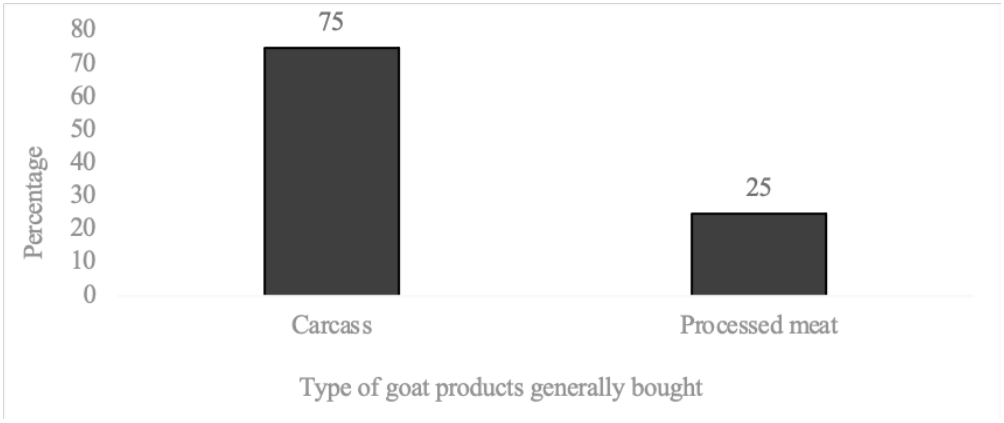


Figure 47 shows the majority of respondents reported that the proportion of income in their businesses contributed by goat products is decreasing. This is because of the scarcity of goats in rural areas.

Figure 47: Change in income contributed by goat products.

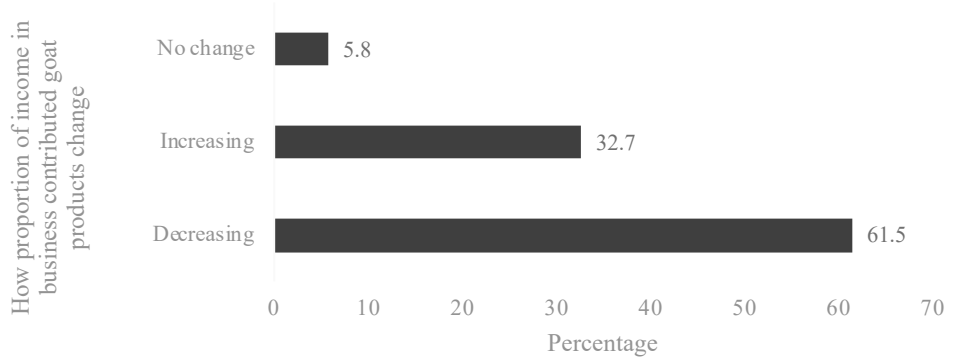


Table 44 shows that majority of respondents were not involved in the goat value chain 5 years ago. This is because there was a scarcity of goats in these districts, but now they are common after being promoted by the Government of Malawi through subsidies and by NGOs through different projects.

Table 44: Involvement in the goat value chain in the past 5 years

	Were you involved 5 years ago?	
Name of district	Yes	No
Balaka	7 (28.0)	30 (38.0)
Blantyre	3 (12.0)	8 (10.1)
Chikwawa	15 (60.0)	41 (51.9)
Total	25 (100.0)	79 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

Figure 48 shows that 50.6 percent of respondents get business income from selling goat meat, 59.1 percent get business income from selling live goats, 59.3 percent get business income from buying live goats and 60.5 percent get business income from either buying or selling goat products.

Figure 48: Goat products contributing to business income.

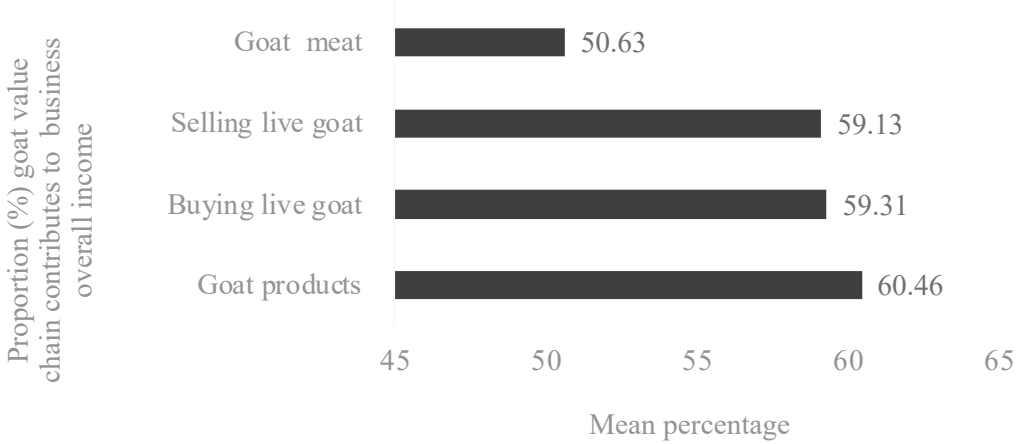


Table 45 shows the results on terms of payment for the suppliers in the goat value chain. The common mode of payment is on delivery regardless of the type of supplier.

Table 45: Terms of payment in the goat value chain

	On delivery		Advance		Delayed	
Suppliers	Yes	No	Yes	No	Yes	No
Small-scale farmers	25 (24.0)	79 (76.0)	3 (2.9)	101 (97.1)	3 (2.9)	101 (97.1)
Large-scale farmers	3 (2.9)	101 (97.1)	1 (1.0)	103 (99.0)	0 (0.0)	104 (100.0)
Small traders	15 (14.4)	89 (85.6)	2 (1.9)	102 (98.1)	3 (2.9)	101 (97.1)

Note: Figures in parentheses are percentages for categorical variables.

On the involvement of respondents in direct production, Table 46 shows that a majority of respondents are not directly involved in the production of the red meat value chain.

Table 46: Respondents' involvement in production

	Is the enterprise involved in producing the following?	
Products	Yes	No
Cattle	7 (6.7)	97 (93.3)
Goats	20 (19.2)	84 (80.8)
Sheep	0 (0)	0 (0)

Note: Figures in parentheses are percentages for categorical variables.

Table 47 shows that respondents from Balaka have an average monthly turnover of 140,257 Malawian kwacha (MWK), monthly costs of MWK 33,946, travel an average distance of 43 kilometres to collect animals, and travel an average distance of 10 kilometres to deliver their products to consumers. Table 47 also shows that respondents sampled from Blantyre have an average monthly turnover of MWK 154,636, average monthly costs of MWK 57,782, travel an average distance of 21 kilometres to collect animals, and travel an average distance of 12 kilometres to deliver their products to consumers. Lastly, Table 47 shows that respondents from Chikwawa have an average monthly turnover of MWK 195,955, average monthly costs of MWK 63,018, travel an average distance of 11 kilometres to collect animals, and travel an average distance of 7 kilometres to deliver their products to consumers.

Table 47: Monthly turnover, monthly costs, collection distance and delivery distance

District	Turnover (MWK)	Cost (MWK)	Own collection (km)	Delivery (km)
Balaka	140,257 (138,299)	33,946 (22,727)	43 (30)	10 (7)
Blantyre	154,636 (17,158)	57,782 (37,465)	21 (18)	12 (9)
Chikwawa	195,955 (130,218)	63,018 (52,268)	11 (9)	7 (4)

Note: Figures in parentheses are standard deviation for continuous variables.

Figure 49 shows that the main cost components reported by respondents include transport, labour, raw materials, feed, rent as well as electricity.

Figure 49: Main cost components.

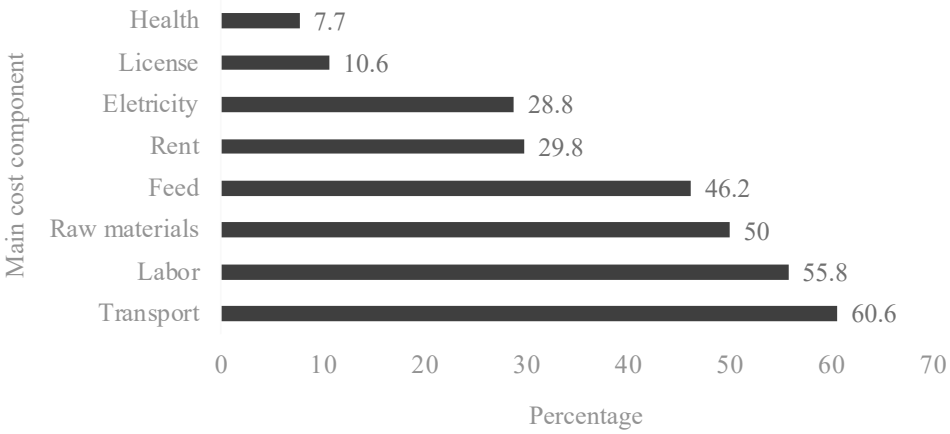
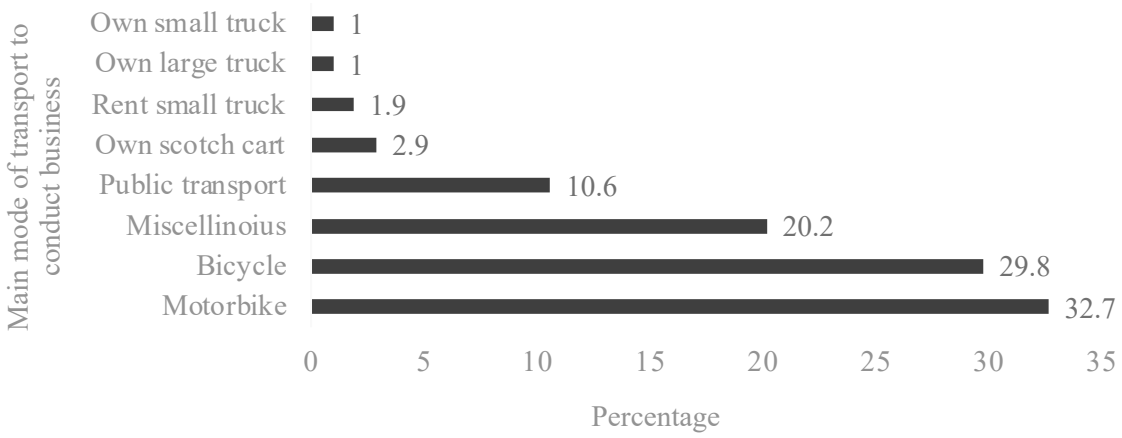


Figure 50 shows the main modes of transportation used to conduct business, which include motorbikes and bicycles. These need to be taken into consideration to boost business capacity.

Figure 50: Main modes of transportation to conduct business.



On how raw materials and products are delivered in the value chains, Table 48 shows that the majority of respondents answered "miscellaneous". This is because an actor can use different methods depending on the needs of the customer.

Table 48: Method of delivering raw materials and products in the value chains

	Items for delivery	
Modes	Raw materials	Products
Delivery by seller	2 (1.9)	4 (3.8)
Own collection	9 (8.7)	7 (6.7)
Miscellaneous	93 (89.4)	93 (89.4)
Total	104 (100.0)	104 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

On whether respondents are members of an association or not, Table 49 shows that in Balaka the majority of respondents are members of an association, because the main associations are located in the district, while in Chikwawa the majority are not members of any association, since few associations are available here for red meat value chains.

Table 49: Association membership

	Are you a member of an association or group?	
District	Yes	No
Balaka	14 (66.7)	23 (27.7)
Blantyre	0 (0.0)	11 (13.3)
Chikwawa	7 (33.3)	49 (59.0)
Total	21 (100.0)	83 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

The results in Table 50 show that the majority of respondents who have ever used contracts to buy products are from Chikwawa. In Chikwawa there are many red meat value chain players, and many urban buyers contract with local buyers to buy livestock on a contract basis from farmers.

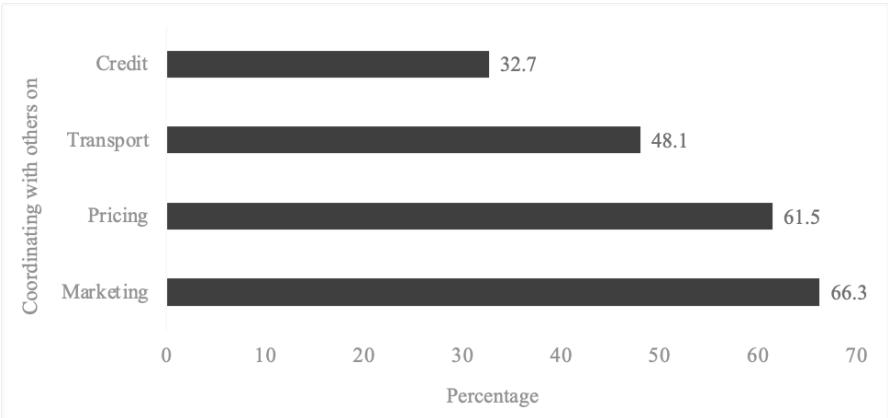
Table 50: Contracts

	Have you ever used contracts to buy products?	
District	Yes	No
Balaka	3 (23.1)	34 (37.4)
Blantyre	1 (7.7)	10 (11.0)
Chikwawa	9 (69.2)	47 (51.6)
Total	13 (100.0)	91 (100.0)

Note: Figures in parentheses are percentages for categorical variables.

On whether respondents ever coordinated with others when conducting business, Figure 51 shows that most respondents coordinate with others, especially on pricing and marketing. On pricing, this is because they agree on the minimum price that they will offer for a product.

Figure 51: Coordinating with others.



5 Recommendations for improving participation in livestock markets

Following the overall objective of the project, which is to develop sustainable, inclusive and transformative red meat value chains for the most vulnerable smallholders in the project areas (Balaka and Chikwawa districts) in Malawi and policies governing livestock in Malawi. With results similar to the results of a market situation analysis study in Zimbabwe that exposed the need for participation in that livestock market. Investment in inclusive market-oriented development and more efficient livestock value chains:

- exposes farmers to knowledge and market information;
- stimulates more market-oriented behaviour;
- raises income from livestock to improve household food security and nutrition; and
- builds capacity to afford inputs that elevate livestock productivity and profitability.

Such investment is, therefore, a critical pathway to improving income and nutrition in Malawi. There is high potential for impact, especially in areas like Balaka and Chikwawa where a dry climate and poor soil conditions inhibit the productivity of the cropping sector, and as a result, farmers have remained net buyers of grain.

5.1 Entry points for value chain improvement

5.1.1 Enhanced livestock productivity

Given low productivity and off-take, limiting the supply and quality of livestock to markets, it is critical for interventions to concurrently address feed gaps, animal health control and improved husbandry, enhancing and not compromising the vitality of existing livestock breeds. This can also involve the introduction of new technology like the Solidaridad model of cattle grading to ensure farmers and other stakeholders can improve the quality of red meat through knowledge gain. Livestock production better integrated into farming systems supports efficient resource use, and reduces losses, wastage and mortality.

5.1.2 Functional market structure

Structured markets and market information are the critical levers to ensure that price and quality information translates to farmers. Especially in rural areas, and notably for goats and cattle, there is a need to revitalize existing market infrastructure like the Goat Auction sale pen initiated by the CLIMM project in Balaka to ensure transparent operations and price/quality systems. Based on the CLIMM project report, it is clear that there is a lack of clear ownership and management structures for goat auctions; hence, the project needs to build up what CLIMM started in Balaka, and consider supporting the development of such an initiative in Chikwawa where many livestock are sold. This should see women and youth fully participating and taking a lead role in managing these market infrastructures to empower them. Urban markets provide good examples for ensuring quality, food safety, animal welfare and theft

control. Collaborative arrangements between farmer organizations, the private sector and support services are needed to ensure the implementation of quality and pricing mechanisms.

5.1.3 Market-oriented behaviour

For farmers and other stakeholders to change behaviour in a risk-prone environment, access to essential inputs and market information must be guaranteed. Knowledge building on gross margin analyses for business planning also underpins the shift to investments and self-organization. Linking markets with technologies can then lead to increased productivity, quality products and off-take. There is a further need to invest in the provision of knowledge to encourage women and youth to engage in sustainable marketing of livestock by formulating locally based farmers' organizations that act as learning hubs on marketing and related issues that deter proper market participation.

5.1.4 Inclusive financial support

The market study identified existing farmers' groups and value chain actors like butchers and traders that are willing to progress in their activities. They also have some activities ongoing and have identified what needs to be done for them to move forward. There is a need to develop a model with value chain actors to encourage women and youth to participate, including sharing of costs with value chain actors in a loan form that can be repaid in a specific period.

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