Goat marketing decisions by smallholder farmers in Bikita District of Zimbabwe

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Abstract

Goats are an important source of livelihood for smallholder farmers domiciled in arid areas of Zimbabwe. Economic reforms such as liberalization of markets have opened up avenues for smallholder goat farmers to produce more diverse products and participate in high-end and rewarding markets. These markets include export and processing linked marketing channels. The main objective of the paper was to explore the factors affecting smallholder farmers' involvement in goat marketing and the intensity of goat sales in Bikita district. A representative sample of 392 goat farmers was proportionately selected from 5 wards. The double hurdle model was used to evaluate market participation and market participation intensity decisions guided by the probit model and censored tobit model respectively. Results show that the decision to participate in goat marketing was exclusively influenced by experience in goat farming while intensity of goat marketing was exclusively influenced by household labour, access to other sources of information and the market prices. Age of household head, access to credit and affiliation to marketing associations influences both decisions. These include the The study recommends that, central government and private sector companies should encourage and support more farmers to affiliate into marketing associations. This is a key strategy that can be used to promote market information dissemination among goat value chain stakeholders. Formation of marketing hubs can also increase goat marketing participation thorough increased access to decentralised marketing points. Opening up credit lines can also ultimately result in farmers commercially producing goats as they increase their herds.

Keywords: Double hurdle model, market participation, smallholder goat farmers, marketing associations

1. Introduction

Goats are an important source of livelihood among resource constrained small-holder farmers especially in the drier areas of Zimbabwe (Homann *et al*., 2007). Since the early 1980s, Zimbabwe has strategically put in place economic reform strategies such as structural adjustment programs. The aim was to sustain a more liberalized market-oriented economy which could accommodate smallholder farmers (Rukuni *et al*., 2006). To some extent, in the greater Africa, these initiatives provided space for small-scale farmers to produce a more diverse basket of products and participate in more rewarding markets for income security gains (Asfaw *et al*., 2010). Worryingly, regardless of all these initiatives, the visibility of smallholder goat farmers in the high-end markets is still limited across most countries in sub-Saharan Africa including Zimbabwe. This has led to further alienation of the goat enterprises from commercially oriented practices by most farmers. Other goat value chain actors have also not embraced goat meat and related products in their business portfolios and product lines (Rooyen and Homann-Kee Tui, 2009).

Strategies adopted for goat production and developing marketing systems and how they have been used in Zimbabwe over time still need to be realigned to the realities of an underperforming economy

(GOZ, 2013). This study was shaped in a way which speaks more directly to goat practices among smallholder farmers. Its particular focus is on marketing strategies and the associated possible reforms which can be embraced to re-acknowledge the importance of goat enterprises in economic development. The idea is to identify and unlock the production limitations and closely relate these with the marketing environment limitations faced by small-scale goat producers. This will give a clearer picture of possibilities going forward and present opportunities for tapping into the links within the conceptual framework which is guiding this study. A number of studies have been done to understand livestock marketing in southern Africa (e.g., Ndoro *et al*., 2015; Grobler *et al*., 2008; Musemwa *et al*., 2007; Chawatama, Mutisi and Mupawaenda, 2005). In Zimbabwe, there is limited research on the production-marketing dynamics for goat and goat products in multiple existing and emerging markets (Musara *et al*., 2013). It therefore becomes important to explore the drivers of markets and marketing participation decisions among the smallholder goat producers in semi-arid Zimbabwe. Once the determinants of their choice of rewarding marketing channels are explored, this forms a strong foundation for designing appropriate policy and farm level managerial strategies. These will then support the networks that exist or are currently untapped with other goat value chain stakeholders (Assan and Sibanda, 2014).

2. Methodology

2.1. Study site description

The study was done in Bikita district, a purposively selected area because of the high number of active smallholder goat farmers in the area. According to the ZimVAC (2018), out of the seven districts in Masvingo Province of Zimbabwe, a higher proportion of goat farmers accounting for 41.5 % are in Bikita district. The study site is located at coordinates -20.08422° N, 31.61382° E and is 86 kilometres East of Masvingo town, along Masvingo-Mutare highway and 349km Southeast of Harare. This location gives opportunities for producing and marketing goats due to the favourable climatic conditions and proximity to an active urban community.

2.2. Research design

The study adopted a positivist philosophy where quantitative methods were used for econometric estimation. Creswell (2012) postulates that, using and focusing on a single research method increases the quality of research outcomes. This study used an exploratory research design since it focused on understanding relatively unknown and unpredictable smallholder farmers' practices in goat marketing and their behaviour in goat markets. The study was conducted in 5 wards of Bikita district, namely ward 7, 19, 22, 31 and 32 and used multi-stage sampling to come up with the desirable sample size. The respondents orally consent to participate in the study. Based on statistics from records gathered from the district offices at Agritex and Veterinary Services, the five wards were purposively selected to represent the high and low goat producing areas. The blended approach of mixing the wards with high and low goat producing statistics was done in order to investigate the various factors that are influencing goat marketing in these heterogeneous areas. For objective analyses of marketing and volumes of sales patterns, the target households were those who have been into goat production for at least three (3) years.

According to the data obtained from the Veterinary services department offices, Bikita district has 19 600 registered smallholder goat farmers. The sample size was then determined from a known population guided by Slovin formula as:

$$n = \frac{N}{1 + N(e)^2}$$

where n = sample size; N = population size and e = confidence level (95 %).

$$n = \frac{19600}{1 + 19600(0.05)^2}$$

= 362 farmers[1]

Guided by Acharya (2010), a structured questionnaire was administered to selected smallholder goat farmers by ten trained enumerators at a rate of two enumerators per ward. The data collected included information on the prices of goats, volume of goat sales, sales concentration points, transaction costs, frequency and/or seasonality of sales, distances to markets, barriers to markets and marketing operations. The number of market channels and their importance, type of information that circulates, and how they are being perceived by farmers in terms of accessibility were also explored. Additional data were also collected on type of goats available based on the breeds and the goat production levels per household. Triangulation of data to ensure rigor of the findings through verification, refuting and supporting findings was done using the methods below:

- Key Informant Interviews - SMEs, Bikita Rural District Councillors, and goat marketing groups' chairpersons, Zimbabwe Farmers' Union (ZFU), NGOs, goat abattoirs, supermarkets. Agritex, Veterinary services department and Councillors.
- Focus Group Discussion made up of a group of 15 farmers made up of 7 male and 8 female smallholder goat farmers. The researcher was responsible for moderation and used communication skills such as probing and chatting for common ground to make sure that the discussion was balanced.

2.3. Empirical modelling

The double hurdle model was used for data analysis. This model was used to determine goat market participants' decision-making drivers in the smallholder farming sector, with the assumption that viable markets are key to unlocking local level economic growth. The trade theory has traditionally been used to measure market participation decisions. From the theory, the motivation is that farmers participate in selected markets so that they enjoy a variety of consumption bundles (Bernard and Spielman, 2009). However, the trade theory has had multiple pitfalls in that even though primary motives for farmers to participate in markets are stated, identification of the exact determinants of market participation are not clear.

Guided by, Aldana *et al.* (2011) and Burke, Myers and Jayne (2015), the double hurdle model with two equations captured the two stages of market participation and intensity of market participation by goat farmers. Informed by Goetz (1992), a probit model was used for the market participation decision. A censored tobit model was then used to explore the determinants of choosing the number of goats to sell in a particular market. With a goat farmer included in the study, the demand for market participation (MP^*), is modelled as:

$$MP_i^* = \beta' X_i + \mu_i \qquad (1)$$

where X = determinants of the decision as captured by the function, β = the parameter vector, and μ = the error term.

According to Ricker-Gilbert, Jayne and Chirwa (2011), an index function to represent the two possible states of participation and non-participation was then captured as:

$$MP_i = \begin{cases} 1 & if\ MP_i^* > 0 \\ 0 & if\ MP_i^* \leq 0 \end{cases} \qquad (2)$$

[1] The figure was rounded for convenience.

This implies that any goat farmer who is rational will only participate in a market given that there is a net positive utility from the decision made, i.e., $U_{p1} > U_{p0}$. Basing on Greene (2000), the study then modelled the variables influencing the goat farmer's decision to participate in a market and intensify the market participation as:

Hurdle one - market participation

$$MP_i^* = \theta z_i + \delta_i \quad (3)$$

To understand the determinants associated with the first decision (hurdle) which is to either participate in a market or not, a probit model was used.

Hurdle two - intensity of market participation

$$MPI_i^* = \alpha' g_i + \varphi_i \quad (4)$$

Using experiences from work by Shiferaw *et al*. (2015); Hoffman and Duncan (2009) and Hausman and Wise(1978), the study used a censored tobit model to explore the factors influencing the market participation intensity decision as the second stage (hurdle) which the goat farmer has to overcome.

2.3.1. Variables included in the model

Guided by a review of literature (e.g., Musara *et al*., 2018; Harmeling *et al*., 2017; Mmbando *et al*., 2016;. Barret, 2008) on market participation and intensity of market participation decisions, three categories of explanatory variables were used for the study. These were household characteristics, public goods available to the households and the transaction costs. The variables and the associated mean values are presented as in Table 1.

Table 1: Descriptive summary of variables in the model

Variable	Variable description	Units	Summary	
			Mean	Std.
Dependent variables				
GOAT_PARTIC	Whether a goat farmer participated in a market (no= 0; yes=1)	dummy	0.687	0.263
GOAT_INTENS	The number of goats sold by the farmer in a year	number	8.134	3.902
Independent variables				
LABOUR	Household productive labour units (16-55 years)	number	4.186	0.135
OTHER_INFO	Other sources of information besides membership to association (no= 0; yes=1)	number	0.619	0.017
RES_TRAIN	Household head ever participated in agricultural research programs (no= 0; yes=1)	dummy	0.136	0.438
EXT_TRAIN	Whether household received any training from extension agents (no= 0; yes=1)	number	0.102	0.199
MEMBERSHIP	Number of farmer associations to which household members belong	number	3.295	0.203
MKT_DIST	Average distance to the main goat market	km	5.056	0.865
HDAGE	Age of the household head	years	45.33	4.146
GENDER	Gender of household head (female= 0; male =1)	dummy	0.539	0.412
HHLDSZE	Number of household members	number	8.195	3.897
EXPERIENCE	Goat farming experience in years	number	16.91	10.38
CREDIT	Amount of agricultural credit accessed	US$	99.16	8.591
PRICE	Average goat price in the market	US$	39.33	8.169

Source: Generated by authors (2018).

About 69% of the sampled households participated in goat marketing and sold on average 8 goats in a calendar year. The results from Table 1 show that the average household size in the study area was 8

while the effective labour available per household was 4 units. The average goat price in the markets was 39US$ while farmers accessed on average 100US$ as credit from various sources.

3. Results and discussion

The first-stage probit model estimates the parameters for the decision to participate in a market. The second stage censored tobit estimates factors influencing the market participation intensity for a farmer as represented by the number of goats sold.

The output in Table 2 provides maximum likelihood estimation of both the probit market participation equation and the censored tobit goat sales equation.

Table 2: Estimates for the double-hurdle model

Variables	Hurdle 1 (Market participation)		Hurdle 2 (Intensity of market participation)	
	Coefficient	***p*-value**	**Coefficient**	***p*-value**
LABOUR	0.039 (0.127)	0.266	1.613**(0.517)	0.014
OTHER_INFO	1.850 (2.165)	0.114	2.446***(1.155)	0.002
RES_TRAIN	0.331 (0.489)	0.153	0.024(0.229)	0.142
EXT_TRAIN	0.056(1.402)	0.296	0.091(2.614)	0.179
MEMBERSHIP	1.098***(0.825)	0.002	1.663***(1.018)	0.007
MKT_DIST	-0.638**(0.499)	0.033	-0.448*(0.387)	0.054
HDAGE	1.628** (0.714)	0.015	0.956*** (1.136)	0.006
GENDER	0.013 (0.143)	0.968	0.123(0.108)	0.161
HHLDSZE	0.372 (1.236)	0.106	0.246(1.036)	0.127
EXPERIENCE	1.048**(0.885)	0.041	-0.039(0.412)	0.332
CREDIT	0.693**(0.372)	0.035	1.069***(0.198)	0.001
PRICE	0.122(0.295)	0.146	2.043***(0.617)	0.008

Source: Generated by authors (2020). ***; ** and * indicate *p*-values significant at 1%, 5% and 10% levels respectively.

3.1. Goat market participation choice

Results from the data show that, the age of principal decision maker in the household has a positive and significant relationship with the decision by a goat farmer to participate in a market. As the age of the decision maker in the household increases, the chances of market participation also increase. The intuition is that the older and more experienced farmers who have over time transacted with multiple and unreliable buyers are more likely going to participate in the available market outlets. These farmers are aware of the risks and opportunities associated with the various market outlets and have devised mechanisms to absorb the risks while making profits. Discussions with stakeholders in the study area show that younger farmers shun goat marketing due to the prices offered by buyers. These findings were also observed by Musara *et al.* (2018) who reported that farmer's age also positively and significantly influence the likelihood of marketing sorghum in a semi-arid area of Zimbabwe.

Harmeling *et al.* (2017) reported the advantages associated with group marketing strategies. Results show that, membership to a farmer association significantly and positively affects the market participating choice by small-scale goat farmers who were sampled in the study area. If the farmers

have access to for example pricing information, this will motivate them to participate more in goat markets because they are privy to the prevailing market conditions. This reduces the risks induced by information asymmetry that manifests in these markets such as price fluctuations and reduced activity at particular points in time. Farmers who are members of associations also benefit from economies of scale brought about by their numbers when they purchase production inputs and also during marketing of the goats. This finding has been reported by Assan and Sibanda (2014) in goat marketing by farmers in Matobo district of Zimbabwe and also supported by Chisango *et al.* (2015) in another goat marketing study in Zimbabwe. Komarek (2010) also made similar observations in a banana marketing study.

The experience of the farmer in goat farming is significantly and positively related to the market participation decision. There is evidence for the study which shows that as the years of goat farming experience for the decision maker increases, the chances that they will participate in markets increases. Key Informant Interviews noted the ability of farmers to absorb the effects of unfavourable experiences and relationships of farmers with multiple stakeholders in the goat value chain as being the major driver of this pattern in market behaviour. During discussions with key informant interviews, it was noted that over time, buyers in multiple markets have become so unreliable to the extent of duping farmers of their goats with the promise of paying them at a later date after re-selling in urban markets. These findings agree with observations made by Musara *et al*. (2013) in a goat production preferences study conducted in Bikita district of Zimbabwe. To counter these negatives, discussions during focus group meetings show that there are a number of smallholder farmers' initiatives targeting to improve fairness in markets through marketing capacity building. These initiatives have been widely supported by the government and other multiple non-state actors such as non-governmental organisations and private companies.

The amount of credit accessed by the farmer positively and significantly impacted on the chances ofa goat farmer to be involved in market participation. This implies that access to more credit increases the possibility of the smallholder goat farmers selling their goats. Having access to more credit increases the chances of goat market participation by 19%. Escobal (2015) argues that the credit can be used to access market information and also to facilitate networking arrangements with other stakeholders and cover some of the transaction costs as can be the case in the goat value chain in Bikita. According to the survey results, households consider distance when selling their goats in the market. The coefficient of distance to the nearest goat markets significantly and negatively influences goat market participation decisions by smallholder farmers. Farmers located far from markets are less likely to market their goats due to the prohibitive marketing related costs such as market access and search costs. As distance to the market increases, the transaction costs incurred by the farmer in getting their goats to the market also increase. This discourages the goat farmers since the profit margins will be reduced. Ouma *et al*. (2010) also reported similar findings in Rwanda and Burundi. In these studies, the probability of banana market participation decreased as the location of the farmer gets further away from the market. Rooyen and Homann-Kee Tui (2009) argue that it is therefore important to strengthen technology-based goat marketing strategies if reasonable profits are to be generated by the small scale farmers.

3.2. Intensity of goat market participation

Results from goat sales show that the age of principal decision maker is positively and significantly related to the number of goats sold in markets. This means that, increasing the age of the household also increases the number of goats they sale. The older household heads are most likely to be driven by the need to meet the household demands of food, school fees and medical bills from the sale of their goats. Rukuni *et al.* (2006) also reported a similar finding in Zimbabwe's smallholder farming areas. They argued that, since older household heads have on average larger family sizes, the need for more goat sales to get income increases. Results in Table 2 also show that, the labour force available in the household, as measured in adult equivalent units has a positive impact on the number of goats sold. Since the goat rearing and management tasks demand large amounts of labour, the households endowed with labour force have the capabilities to keep more goats and supply the surpluses to multiple markets. Similar findings were also reported by Scoones *et al.* (2011) as they analysed the effect of

labour of agricultural productivity, during the land reform programme era in Zimbabwe. They also reported the effect of distance to the market on the intensity of market participation.

Access to other sources of information has a significant influence on the intensity of market participation decision. During focus group discussion, it was revealed that the main sources of alternative information include cell phones, newspapers and radios. Further inquiry on why farmers are rarely getting goat marketing information from cell phones, revealed that most farmers (70%) do not own smart phones, but rather ordinary phones. Data costs also weigh in and discourage farmers from using internet sources for information. To mitigate this shortfall, in the study area, goat sales and associated price information is commonly distributed using more affordable options such as newspapers and local radio stations. In the rare cases when this is done through cell phones, the target markets are those which are not accessed by smallholder goat farmers in Bikita district. Alene *et al*. (2008) also observed similar patterns in a study on maize market participation which was conducted in Kenya.

The net returns generated from a transaction in markets are a critical determinant when farmers decide on the volumes of their produce to sell in a market (Chamberlin and Jayne, 2013; Birachi *et al*., 2013). The result of this study confirms the hypothesis that the prices of goats positively influence farmers to sell more of their goats in any given market *ceteris paribus*. As the prices of the goats in the markets increase, the likelihood of farmers selling more increases. This can be directly attributed to the fact that the smallholder goat farmers will increase their chances of getting meaningful returns from the enterprise if goat market prices are unfavourable (Homann *et al*., 2007). Farmers reported that currently, the prices of goats in the markets are variable and fluctuate throughout the marketing season. They argue that they usually sell more during the market windows and to traders whom they already know and trust. These traders, according to Key Informant Interviews are registered and pay in cash at the conclusion of the transaction.

4. Conclusions

In this study, the decision to participate in goat marketing was exclusively influenced by experience in goat farming while the intensity of goat marketing was exclusively influenced by the household labour, access to oter sources of information beside associations and the market prices. There are a number of factors which influence both the decisions. These include the age of household head, access to credit and affiliation to marketing associations. Generally, the factors affecting the market participation decision are the same as those affecting the intensity of goat marketing decision. However, there are other factors which need particular attention when designing strategies for targeting either market participation or intensity of market participation. Even though the use of ICT, such as radios and cell phones has not significantly assisted in goat marketing information dissemination in the rural areas,they argument the traditional farmer associations.

5. Policy recommendations

In view on the above findings, the study recommends That the government and private sector companies should consider supporting and encouraging more farmers to affiliate into marketing associations. These have proved to be one key strategy that can be used to promote goat market and marketing information dissemination. This can also ultimately result in farmers going into commercial goat production as they pool their resources together. This can also increase goat production through gained access to information and required production and marketing resources there by increasing the scope for market participation and intensive marketing of goats in multiple markets. There is potential to formalise and strengthen credit lines for the producer-consumer marketing channels through capacity building programmes which train farmers on how to efficiently utilise the credit. The skills gained may reduce exploitation of smallholder farmers by middlemen who are currently buying goats from farmers at lower prices.

6. Suggested areas for further studies

The researchers suggest that more work needs to be done to explore the governance issues related to the goat markets. This can cover the structure, conduct and performance of the various goat markets used by the smallholder farmers.

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Appendices 1: Household Questionnaire

Questionnaire: An analysis of the Goats structure conduct performance in Zimbabwe: A case of Bikita

Questionnaire Number_____ **Date** _____

Name of Enumerator_____

Household Demographics

Households head details

Sex	Age	Marital status	Level of education attained	Health status	Employment

Key
Sex: 1=Male 2= Female
Marital status: 1=Single (never married) 2= Married 3= Divorced 4= Widowed 5=Separated
Level of education: 1= No formal education 2= Primary 3= secondary 4 = College 5= Other (specify)
Health status: 1. Healthy 2= Chronically ill (but not bed ridden) 3= Bed ridden
Employment: 1= Not employed 2= informal employment 3= Formal employment

2 Household assets owned

	Asset	Number	Original purchase price ($)	If you are to sell it, how much would you sell it ($)	Total value ($)
	Ox plough				
	Wheel-barrow				
	Push cart				
	Sickle				
	Spade				
	Axe				
	Hoe				
	Knap-sack sprayer				
	Water pump				
	Cell-phone				
	Bicycle				
	Motor bike				
	Car				
	Tractor				

	TV				
	Radio				
	Chairs				

A. Land ownership

Total land owned (ha)	Total arable land owned (ha)	Crops grown and area									
		Maize		Sorghum		Pearl millet		Improved Fodder crop (Velvet beans)		Improved Fodder crop (Leucaena)	
		Yield (tonnes)	Area planted (ha)	Yield (tonnes)	Area planted (ha)	Yield (tonnes)	Area planted (ha)	Yield (tonnes)	Area planted (ha)	Yield (tonnes)	Area planted (ha)
2014/15 season											
2015/16 season											
2016/17 season											
2017/18 season											

B. Livestock Ownership

		Number in 2018	Number sold in 2018	Price	Distance to the market	Reasons for choosing the market
Goats	Mature female goats (does)					
	Mature male goats (bucks)					
	Young does					
	Young bucks					
Cattle	Cows					
	Heifers					
	Bulls					
	Trained oxen for ploughing					
	Calves					
Sheep	Mature female sheep					
	Mature male sheep (ewe)					
	Young female sheep					
	Young male sheep					
Indigenous chickens – Cocks						

Hens				

C. Access to Extension Services

Did any extension worker visit you to talk about:

1. **Goat rearing**

Yes ☐

No ☐

2. **Goat marketing last season?**

Yes ☐

No ☐

If yes please fill in the table below.

Provider/extension agent 1= Government 2= NGO 3=Neighbouring farmer 4= Private sector company 5= other (specify)	2018		
	Subject/ extension message.	Number of visits by ext. agent	Avg. time for each visit (hrs)

If extension workers did not visit you for advice on goat rearing did, you visit any extension worker/organization to seek for advice?

Yes ☐

No ☐

If yes, whom did you contact and what type of information did you look for?

Provider/extension agent 1= Government 2= NGO 3=Fellow farmer 4= Private sector Co 5= other (specify)	Subject/ extension message.	No. of visits to ext. agent	Avg. time for each visit made to ext. agent (hrs)

Apart from extension agents how else do you get information on production and marketing of goats?

Radio ☐ Neighbour ☐ Newspaper ☐

Family ☐ Cell Phone ☐

Other (specify)…….....

How do you rate adequacy of this information?

Very low ☐ Low ☐ Moderate ☐ High ☐

Very high ☐

Challenges being faced when marketing livestock

What challenges are you facing with regards to marketing goats	1) Low prices 2) Cheating by middleman 3) Late payment 4) poor roads 5) long distance to markets	
What challenges are you facing with regards to marketing cattle	1) Low prices 2) Cheating by middleman 3) Late payment 4) poor roads 5) long distance to markets	
What challenges are you facing with regards to marketing sheep	1) Low prices 2) Cheating by middleman 3) Late payment 4) poor roads 5) long distance to markets	
What challenges are you facing with regards to marketing indigenous chickens	1) Low prices 2) Cheating by middleman 3) Late payment 4) poor roads 5) long distance to markets	

What are the possible solutions to the challenges	Write responses here				
Low prices					
Cheating by middleman					
Late payment					
poor roads					
long distance to markets					
This season (2018) where did you sell your livestock	In the village	Growth point	Middlemen	Local Agro-dealers	Abattoirs /Distant Buyers
Goats					
Cattle					
Sheep					
Indigenous chickens					

E. Profile of the goat enterprise (household level)

Complete table below by circling all applicable

Project history (Year started)	**a) Reasons for engaging into goat enterprise (ticks applicable)**	**Source of initial capital**	**Level of operation**	**Affiliation to associations**
1. 5 years ago 2. 10 years ago 3. 15 years ago **4.** 20+ years ago	1. For household consumption 2. For Sale 3. For both household consumption and sale 4. Sign of wealth 5. Inherited from parents / relatives 6. Others (specify)	1. Own savings 2. Financial credit/ loan 3. Government 4. NGO *If from credit / loan, proceed to question 6*	1.Ordinanry producer 2. Aggregator 3. Contracted 4. Agent	1. Yes 2. No If Yes, what is the name the association (indicate below)

F. Access to credit details

Do you have access to any financial credit service?

Yes ☐ No ☐

If yes, what is the name of the financial institution (circle applicable) and what is the distance to the institution and how do you rate this facility? Indicate all applicable

Financial institution	**Distance** *(see key below)*	**Rate**
1 = CBZ		
2 = Agri bank		
3 = Virl Financial services		
4 = ISAL/SACCO		
5 = Other (specify)		

Key (distance to market): 1= less than 5km 2= 5 to 10 km 3 = 10 to 20km 4= 20 to 30 km 5 = 30 to 40km 6 = 40 to 50km 7 = more than 50km

Key (Rate of service) 1= Very poor 2= Poor 3= Moderate 4= Good 5= Very good

If you not have access to any financial credit service, what are the reasons why you failed to do so? Indicate all applicable

Unavailability of credit facilities ☐

High interest rate ☐

Unavailability of collateral attached to the credit facility ☐

Long distance to the credit facility ☐

General fear of getting a loan ☐

Complications attached to the credit process (such as bureaucracy, long process to get the loan cheating by the credit provider etc.) State the exact reason

_____

_____

G. Market Structure

Who are your goat buyers (indicate all applicable)

1. Neighbouring farmers_____
2. Institutions (state them)_____
3. Middlemen (state them)_____
4. Local Butcheries _____
5. Abattoirs (state them)_____
6. Others (State them)

Amongst the above buyers, who is your most preferred buyer? (And give reasons

_____
_____

How do you undertake the goats selling?

1. Alone ☐ 2. Partnership with others in the community ☐
   3. Organised goat market place ☐ 4. others (specify below)
   _____

What mode of transport do you use for transporting goats to the market?

On hooves ☐

Scotch cart ☐

Trucking ☐

If you use trucking, what type of vehicles do you use?

Small pick-up trucks ☐

Lorries ☐

Closed vans ☐

Are there any challenges that you face during transportation of goats to the market

1. Yes ☐ 2. No ☐

If yes, what are the challenges

1. Loss of gots through deaths ☐ 2. Loss of meat quality through injuries / bruises/stress ☐
2. Police and Vet clearance ☐ 4 Others (state them)

_____
_____

Are there any barriers to the goat market entry existing in this community? Circle applicable

1. Yes ☐ 2. No ☐

If yes, what barriers exists?

_____
_____
_____
_____

Is there a change in the goat meat (products) demand over the past five years? If so, state the kind of change (Circle applicable)

1. Increasing
2. Decreasing
3. No change

Have you received any information that goat meat is on demand abroad (outside Zimbabwe) (circle applicable)

1. Yes ☐ 2. No ☐

If Yes, from who did you get this information?_____
_____

H. Market Conduct

12. What factors do you consider when setting a price for your goats? Circle applicable-rank them

1. Size of the goats
2. Cost of producing the goats
3. The type of market available
4. Distance to market
5. Season of the year
6. Sex of the goat
7. Age of the goat
8. Weight of the goat
9. Price pegged by other local goat sellers
10. Others
(specify)_____
_____
_____
_____

13. What is the average price of goats in this community (state the price in USD) _____

14. At what time of the year do you get relatively high prices?

Jan –April ☐ May - Aug ☐ Sept -Dec ☐

State why the prices are higher at that time

_____

_____

In your own opinion, amongst all your buyers, who has more power to set the price of goats?

Institutions ☐ Middlemen ☐ Local Butcheries ☐ Abattoirs ☐

The market itself ☐

Other buyers (State them) ……..

15. Is there any value addition that you are doing before selling?

1. Yes ☐ 2. No ☐

16. If yes, what kind of value addition? List below:

_____

_____

_____

_____

_____

17. Does your household invest in any goat marketing research?

1. Yes ☐ 2. No ☐

18. If Yes, in what ways? State them below

_____

_____

_____

_____

_____

I. Cost of production

What costs do you incur and how much (per goat)

Type of cost	Quantity	Unit cost (USD)
Buying the goat		

Feed (up to marketing age)		
Vet drugs and treatment		
Goat shelter		
Labour cost		
Other costs		

Goat enterprise transaction costs

Type of cost	**Cost (USD)**
Communication (phone calls)	
Loading	
Off-loading	
Negotiating costs	
Market charges – e.g. clearance / movement permit	
Other costs	

Appendices 2: CHECKLIST FOR DISCUSSIONS WITH LIVESTOCK-TRADERS

1	**Name of Agro-Trader _____ Cell number_____** **Location of trading post: Ward_____Township_____** **Years of Trading_____Age_____Sex_____**	
2	**List of and volumes of livestock purchased annually (and current purchase price** (a) Goats _____ (Buying price $_____ Selling Price $_____) (b) Cattle _____ (BP_____SP_____) (c) Sheep_____ (BP_____SP_____) (d) Indigenous chickens _____ (BP_____SP_____) (e) Others :	
3	**Buying Strategy** (a) Do you roam around villages buying from farmers homesteads? _____ (b) Do you buy from temporary rotational trading post in different t/s? _____ (c) Do you buy from a fixed shop or buying point in the ward? _____ (d) Do you offer transport service when buying from distant farmers? _____ **(e)** How far do you (or farmers) travel to buy/ sell goats?_____km	
4	**Use of mobile phone** (a) Do you use mobile phone for making purchasing arrangements with farmers? ___ (b) What proportion of farmers (%) selling goats to you get paid by using ECOCASH? _____other mobile money _____CASH _____barter _____ (c) Do you use your phone to advertise buying prices of goats to farmer leaders/extension workers? _____ (d) Have you used your cell phone to access agric information from eco-farmer? ____ (e) Have you used your cellphone to access market price information? (Tick all applicable) from ZFU _____from AGRITEX _____ from AMA_____ECOFARMER_____others _____	**1=Yes** **2=No**

	(f) Have you used your mobile phone to search for potential buyers for goats after you have bought them from farmers? _____ **(g)** Do you sometimes travel to Masvingo or Mutare primarily to search for best buyers for your purchased goats? _____	
5	**Marketing Challenges and Strategies - indicate all applicable** (a) Lack of information about farmers with goats for sale (b) Price Challenge & Strategy used (c) High searching and transport cost to achieve desired volumes of goats (d) Low goat volumes in the area (e) Low/poor grades and quality of goats (f) Challenges with the multi-currency system (Ecocash, bank transfer, cash) Which system do farmers prefer? State reasons for that preference_____	
6	**Do you carry out any value addition to maintain product quality?** **If yes, please specify**	**1=Yes** **2=No** **1. Grading** **2. Slaughter and Packaging** **3. Other (specify)**
7	**How long does it take for you to re-sell the acquired goats?**	**1.Immediately** **2.Day** **3.Week** **4.Other (specify**
8	**Who sets the selling price**	**1.Myself** **2.Negotiations** **3.The buyers** **4.The market** **5.Other (specify)**
9	**What are the marketing costs incurred (Indicate percentages out of 100% in $)** Transport _____ Packaging _____	

	Loading/off-loading goats _____ Market charges _____ Permits _____	
10	**Are there any restrictions for entry and exit of the market**	**1=Yes** **2=No**
11.	**If Yes, what are the restrictions (state them below)** **1**_____ **2**_____ **3**_____ **4**_____	
12	**What do you think can be done to remove/minimize the restrictions** **1**_____ **2**_____ **3**_____ **4**_____	
13	**Do you offer any training and / or Financial support to farmers who sell goats to you (Tick all applicable)**	**1=Yes** **2= No**
14	**If yes, what type of training / Financial support do you offer?** 1. Goat production 2. Goat health management 3. Goat marketing 4. Financial Loans 5. Supply of vet drugs / livestock itself / livestock feed (indicate all applicable) **6.** Others (specify)	
15	**Can you supply any information that you think is relevant to your daily business as livestock trader (that has been left out in the above questions)** _____ _____	