

# AN ASSESSMENT OF ATTITUDE TOWARDS SELLING LIVESTOCK AMONG THE PASTORALISTS IN NGORONGORO DISTRICT OF TANZANIA

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## ABSTRACT

A study was done in Ngorongoro District in Tanzania to examine factors influencing the attitude of pastoralists towards selling livestock. Data were collected through questionnaire, key informant interviews, focus group discussions and direct observations. Descriptive statistics were generated and the Tobit model was employed for data analysis and interpretation. The findings show that 42.2% and 45.6% of respondents showed positive attitude towards selling, respectively cattle and goats. Tobit estimates gave significant ( $P < 0.05$ ) relationships between the attitude of respondents towards selling livestock and distance to livestock markets (-0.052), livestock price (0.604), household size (0.858) and sex of respondent (0.752). It is concluded that the predilection for selling livestock increases with short distances to markets, high livestock prices, large households and male-headed households. Existence of reliable livestock markets and market linkages between livestock producers and consumers could enhance commercial livestock production in the pastoral areas.

**Keywords:** livestock selling, attitudes, markets, pastoralists

## INTRODUCTION

Pastoralists are socio-economically and culturally a distinct group of people who are primarily involved in animal husbandry (Oksen, 2000). They are among the major traditional livestock producers and their cattle account for 14 per cent of the 19 million cattle population in Tanzania (URT, 2006). In recent years, the traditional pastoral livestock system has come under increasing social, cultural, economic and resource use pressures (Kimambo *et al.*, 2004; Mtenga *et al.*, 2004). Some of the challenges include long marketing chain with many actors, poor record keeping systems, low literacy levels and government restrictions on free range livestock production system. Others are conflicts between herders and farmers principally due to poor enforcement of regulations by local authorities. Thus the pastoral system is undergoing unprecedented changes, including engagement in income generating activities other than the traditional livestock keeping system (Amijee, 2007). However, limited information exists on propensity to sell and the broad purposes for which pastoralists are willing to part with their stocks. Such knowledge is important for the livestock sub-sector planning. The National plan for livestock sub-sector is to improve the quality of beef produced in the country by introduction of feedlots that will utilize animals from the pastoral and agro pastoral systems. However, it is not clear whether the pastoralists and agro pastoralists would be willing to sell the needed young steers for fattening. The objective of this study was therefore to determine the attitude and reasons for selling livestock by pastoralists and identify the factors that could influence such attitudes.

## METHODOLOGY

The study was done in Ngorongoro District in Arusha region, Tanzania employing a cross-sectional survey approach. One village in each ward within three administrative divisions (Ngorongoro, Sale and Loliondo) was purposively selected on account of its high percentage of pastoralists. From each village 30 respondents were randomly sampled, making a total of 90 respondents. Data were collected through a household questionnaire administered to the 90 respondents and three focus group discussions (FGDs) from each village, each comprising of at least 20 participants. Key informant interviews were undertaken, involving the village government leaders, community animal health workers, wards livestock extension officers, district veterinary officers and livestock traders in the auction markets. Attitude scores from respondents were obtained by asking each to react to a set of statements with regard to selling of livestock. The favourable statements, for instance keeping cattle is a business, were considered as positive attitude and assigned weighting points depending on the answer ('Agree' = 3 points, 'Neutral'= 2 points and 'Disagree'= 1 point). Unfavourable statements, for instance cattle are kept as a way of banking, were considered as negative attitude and given points in a reversed order ('Agree' = 1 point, 'Neutral'= 2 points and 'Disagree'= 3 points). A score below the median was regarded as negative attitude whereas median was considered as moderate and a score above the median was considered as positive attitude.

The collected data were analyzed using descriptive statistics. A Tobit model was applied to determine the factors influencing the attitude using the sales rate as dependent variable. The independent variables hypothesized to influence the sale of livestock were age, education, sex of the livestock owner, herd size, price of livestock in the market, distance to the livestock market and household size.

## FINDINGS AND DISCUSSION

### Household socio-economic characteristics

Majority of the respondents were aged between 20 and 40 years (Table 1). About 78% of the respondents were males and 90% of the households were headed by adult males. The average boma size was 3.7 household units, each with average of 11 persons. The main source of income for the households was livestock (87%).

**Table 1: Distribution of respondents according to socio-economic characteristics (n = 90)**

Socio-economic characteristics		Frequency	Percent
Age class (years)	21-40	51	56.6
	41-60	31	34.5
	Above 60	8	8.9
Sex	Male	70	77.8
	Female	20	22.2
Sex of the head of boma/household	Male (Adult)	81	90.0
	Male (Child)	3	3.3
	Female (Adult)	6	6.7
Main source of income	Livestock	78	86.7
	Salary	7	7.8
	Petty businesses	5	5.6

Table 2 shows that the key person in deciding on selling animals is the adult male. This is not surprising as he is perceived by 85-88% of the respondents as owner of cattle and goats (Table 3). The types of animals preferred to sell are steers aged three or more years and male goats of different age classes. Steers usually fetch higher price than other types of livestock. Only few respondents sell cows because they are kept for breeding and sold when are very old at low price. The sales of livestock in a year normally followed a seasonal pattern.

**Table 2: Distribution of respondents by gender on decision making in selling livestock**

<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>
Male - adult	76	84.4
Male - child	6	6.7
Female - adult	7	7.8
Husband and Wife	1	1.1

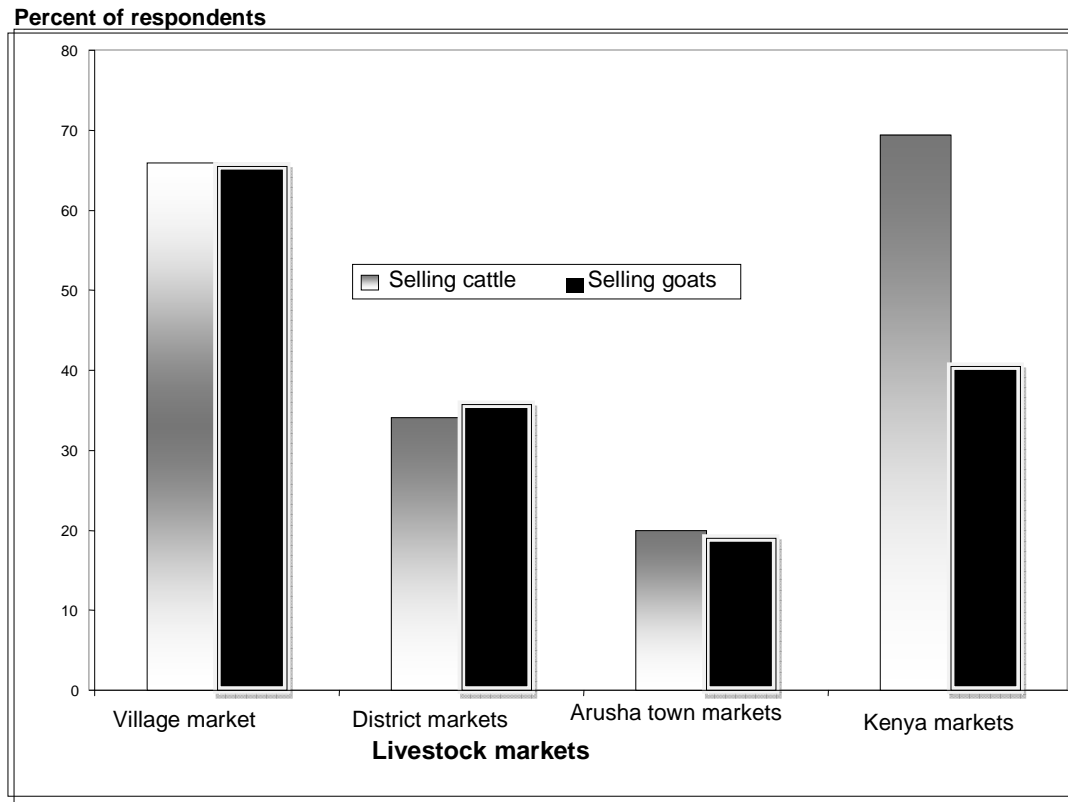
**Table 3: Distribution of respondents by gender according to livestock ownership (n = 90)**

<b>Type of livestock</b>	<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>
<b>Cattle</b>	Male – adult	79	87.8
	Male – child	3	3.3
	Female – adult	8	8.9
<b>Goats</b>	Male – adult	77	85.6
	Male – child	3	3.3
	Female – adult	9	10.0
	Don't have cattle	1	1.1

High sales are done towards the end of rainy season (June to August) when there is enough and high quality pastures and water for livestock, which make animals to have good body condition. During the dry season (September to November) the condition of animals deteriorates and the price goes down, thus few pastoralists sell livestock.

#### **Livestock market categories**

Results in Figure 1 show that majority of respondents sold their cattle in Kenya (69.4%) because they were motivated by relatively high prices and exchange rates at the border. Another market was the village auction market, where both cattle (65.9%) and goats were sold. It was found that 87% of the respondents were willing to sell livestock at feedlot centres believing that would fetch good price as they have learned that their fellow pastoralists in Kenya sell livestock to feedlot centres at relatively high prices.



**Figure 1: Markets which pastoralists in Ngorongoro district sell livestock**

#### **Attitude towards selling livestock**

On average 42.2% and 45.6% of respondents had positive attitude towards selling cattle and goats, respectively (Table 3). The observed positive attitude towards selling livestock implies that the mind-set of the pastoralists of keeping livestock for prestige or gaining status in the community by accumulating livestock as reported by IFAD (2004) is changing. On the other hand, the findings show some respondents who showed to be neutral (21% and 18%, respectively) and negative (37%) in selling cattle and goats, the reason for this trend is unclear.

The main reasons for selling cattle and goats were to get money to buy food (99%) paying school fees (85%), buying veterinary drugs (73%), paying for medical costs (70%) and buying young cattle for expansion of their herds (68%). There is also an element of changing consumption pattern among the pastoralists, for example increased use of mobile phones, television, permanent housing construction with solar energy sources, motorcycles, bikes, more travels and others, all of which necessitate selling livestock to meet such expenditures.

**Table 3: Attitude towards selling cattle and goats among the pastoralists (n = 90)**

	Category	Frequency	Percent
Selling cattle	Positive	38	42.2
	Neutral	19	21.1
	Negative	33	36.7
Selling goats	Positive	41	45.6
	Neutral	16	17.8
	Negative	33	36.7

Table 4 presents derived results on the factors influencing attitude towards selling livestock estimated using the Tobit model. The sex dummy is positive and significant ( $P < 0.05$ ), which implies that the attitude of livestock keepers in selling livestock would increase due to the influence of the sex of the household head. Among the Maasai, men hold key roles in livestock keeping and selling (Table 2) as also reported by FAO (2007). More specifically, men decide which animal to sell at what time and for what purpose as has also been observed by Ruhangawebare *et al.* (2007) and Devereux (2006). Household size was a significant ( $P < 0.05$ ) with a positive coefficient of 0.86, implying that the larger the household size the more animals are sold either to meet the family needs or more surplus disposal. Distance to markets was another factor found to significantly ( $P < 0.05$ ) influence attitude towards selling livestock. The attitude in selling livestock would increase with shorter distances, thus why most pastoralists tend to sell their livestock at the village markets (Figure 1) despite of the price being low. Distance to market influences several other hidden elements of livestock trading, including reduced cost of trekking and offers a chance of bringing home unsold stock at no added cost. The coefficient of price of livestock in the market was positive (0.60) and significant ( $P < 0.05$ ). This suggests that an increase in cattle price may influence livestock keepers to sell more cattle. This is attested by the fact that pastoralists in the study area sell cattle in Kenyan markets (Figure 1) that offer lucrative prices.

**Table 4: Tobit model estimates for the factors influencing attitude towards selling livestock**

Explanatory variable	Coefficient	Standard Error	t-statistic	P- value
Sex of livestock owner	0.752	0.476	1.58	0.02*
Age of livestock owner	-0.087	0.460	-0.19	0.46
Education level	0.127	1.060	0.12	0.90
Household size	0.858	0.554	1.55	0.03*
Herd size	-0.070	0.036	-1.95	0.06
Distance to the market	-0.052	0.024	-2.12	0.04*
Price of livestock	0.604	0.602	1.00	0.05*
Religion	0.140	0.425	0.33	0.34

Level of significance = 5%: Statistically significant ( $P < 0.05$ ), statistically not significant ( $P > 0.05$ )

## CONCLUSIONS

It is concluded that the mindset of the pastoralists towards selling animals is changing. Given the right policy on price of cattle and development of markets, animal off take from the pastoralists will increase. With promotion of feedlots, one could speculate the stratification of the beef production sub sector where the pastoralists will commercially produce young animals for feedlots.

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