

Factors affecting Entrepreneurship in Livestock Production among Rural Households in Osun State, Nigeria

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Abstract

Livestock production is a major national asset considering its populations and in terms of generating livelihoods for rural populace, and a renewable resource that could be sustained for future development. The study examined the entrepreneurship among two hundred and seven rural livestock farmers in Osun State, Nigeria. Descriptive statistics, Principal Component Analysis (PCA) and tobit regression were used in analyzing the data. Four entrepreneur goals were ranked very high: economic motivation with mean score ($\bar{x} = 3.61$); result assessment ($\bar{x} = 3.58$); achievement motivation ($\bar{x} = 3.27$) and risk orientation, ($\bar{x} = 3.0$). Using PCA regression, profit motive (PCA=0.782) and employment (PCA=0.521) were loaded on economic factor, an indication that the quest to be self-fulfilled and financially independent were the major driving forces of engaging in livestock production. Results further showed that asset and wealth creation (PCA=0.821), consumption motive (PCA=0.806) and cultural value (PCA=0.754) were strongly loaded on achievement/result. Evidence from the tobit regression model showed that four variables: age ($P > 0.05$), livestock experience ($P < 0.05$), level of education ($P < 0.10$) and amount invested in livestock ($P < 0.01$) were determinants of entrepreneurship in livestock production among rural farmers. The signs of all the four statistically significant estimated parameters conformed to the a priori expectations with the exception of level of education that carried a negative sign. To improve entrepreneurial skills and competencies, training, seminars, and workshops on livestock farming and formal education were recommended. There is need for training of rural livestock farmers on market orientation and input-output negotiations to enhance better bargaining ability of livestock farmers on both input acquisition and product sales.

Key Words: Assessment, entrepreneurship, index, livestock farmers, risk orientation

INTRODUCTION

Livestock refers to domesticated animals such as cattle, goats, sheep, pig, rabbits and poultry birds of economic value to man as source of meat, milk, eggs, hide and skin (WHO, 2006, NAERLS, 2011). It plays a significant role in sustaining their livelihood of rural farming households. It cushioning protein shortage experienced by the households, settle domestic obligations, and buy back some inputs needed for farming operations, and as a means of bridging the animal protein demand-supply gap among Nigerians (Oladimeji et al., 2017a & b). Livestock contributes to the production of organic fertilizer and fuel and in the use of marginal nutritional resources which are not directly accessible to mankind and represents an important safety-net during the period of needs among rural folds (Adefalu et al., 2013).

According to Winrock (1992), if non-monetized contributions (draught power and manure) were to be included, reflecting the importance of integrated crop-livestock farming systems in Nigeria, the contribution of livestock to agricultural GDP would increase by 50 percent, bringing the livestock component of agricultural GDP to about 35 percent. Within the rural agricultural economy as in sub-Saharan Africa, livestock remains closely associated with the social fabric and welfare of

rural households. Livestock plays a cushioning role, adding to stability of farm incomes, food security, and farming systems. Furthermore, livestock is kept as a form of insurance and a means of storing savings (Otte and Chilonda, 2002). According to Schwartz and Schwartz (1985), the main functions of livestock production in pastoral households are to provide milk, blood and meat, to meet social obligations such as bride price, stock alliances and stock patronages) and to insure against disaster: drought, epidemics and raids.

Thus, livestock production is a major national asset considering its populations and in terms of generating livelihoods for rural populace, and a renewable resource that could be sustained for future development (NAERLS, 2011), it has remained the poor-step child of petroleum and crop production in terms of its contribution to Gross Domestic Product (GDP) and export. The findings from Central Bank of Nigeria and Federal Office Statistics/National Bureau of Statistic records for two decades (1992-2011) showed that Nigeria's livestock contribution to total GDP has been peanuts ranging from 5.2% in 1992 to 2.04% in 2003 with annual average of about 4.38% and standard deviation of 1.20.

Statement of the Research Problem

Nigeria hosts more than 45% of the poultry in the West Africa sub-region (WHO, 2006: Oladimeji et al., 2017a) and its livestock resources consists of resources consist of 201, 928, 991 chicken, 16, 722, 190 cattle, 57, 937, 176 goats, 36, 372, 233 sheep and 7, 770, 599 pigs (National Bureau of Statistic, NBS, 2016). By contrast, Nigeria has been adjudged as one of the world's fastest growing human populations, with a rate of increase of 2.6 percent per annum (FAO, 2016). Statistical surveys have shown that Nigeria is largely an animal protein deficient nation with annual total expenditure on food import of \$3 billion in 2009 (Oladimeji, 2017). This is coupled with the lowest average annual per capita consumption of livestock products of 11.0 kg of meat and 27.2 kg of milk, compared with the developing world average of 26.4 kg for meat and 48.6 kg for milk (Otte and Chilonda, 2002). Yet, Nigeria per capita meat consumption showed slight increment from 8.6 kg/person in 2002 to paltry of 8.8 kg per person in 2009 (FAO, . Growth in livestock production in Nigeria has not kept pace with the growth in demand for food of animal origin, and per capita production is either declining or only marginally increasing (NAERLS, 2011, Oladimeji et al., 2016). While expansion of the livestock population can contribute to the necessary increase in output, improvement in the supply of meat and milk also depends critically on increase in livestock productivity, which is generally poor across the region's various production systems (Otte and Chilonda, 2002). However, some factors limit the development of the livestock sub-sector of agriculture in Nigeria. These limiting factors vary from vary from area to area, and species to species viz. social barriers, economic barriers, regulations, access to finance and information, and entrepreneur managerial capacity to cope with risks and changes and to seize opportunities. Entrepreneurship is one of the key limiting factors for the survival of small scale farming in an ever-changing and increasingly complex global economy. Farmer-entrepreneurship can be defined as the process of using personal initiatives to transform a farm business concept into a new venture or to grow and diversify an existing venture or enterprise with high growth potential (Abdulrahman et al., 2017) as a means of earning profits. A farm entrepreneur must be passionate about his business and be willing to take calculated risks to make his farms profitable and make businesses grow. But beyond this, successful farmer-entrepreneurs are

technically competent, innovative and plan ahead so they can steer their farm businesses through the stages of enterprise development from establishment and survival to rapid growth and maturity (David, 2012).

It suffices to note that promoting small businesses is increasingly seen as a means of generating meaningful income and sustainable employment opportunities, particularly for those at the margins of the economy such as rural population. According to Nippierd (2002), enterprise development and particularly the promotion of small and medium enterprises have been adopted as a strategy for job creation and economic growth in a large number of countries. Wenneker and Thurik (1999) described a model of entrepreneurship which identifies three levels at which entrepreneurship may be viewed, the individual, the firm, and the region. They also identify three dimensions of entrepreneurship: the condition which leads to entrepreneurship, the attributes and the impacts of entrepreneurship. With regards to individuals, the conditions for entrepreneurship are culture and incentives, elements are attitudes, skills and creativity and the impacts are self-realization and income (Wennekers and Thurik, 1999).

Agricultural entrepreneurship is not transferable as it is farm-specific, location-specific and product-specific. Consequently, a growing literature is now emerging on rural entrepreneurship and, in particular, on the role of business enterprise characteristics and the range of skills deemed critical to the success of farm ventures (Vesala and Vesala, 2010, Oladimeji et al., 2016; Abdulrahman et al., 2017; Oladimeji et al., 2017b). It pertinent to note that the vital reason of focusing on rural livestock farmers' entrepreneurial competence and characteristics lies in making the farm owner aware of his/her own competence level, identifying the importance of specific competencies to farm success, and in providing direction and guidance in goals, competence and skill development. Therefore, the objectives of the study were threefold: First, to describe socio-economic characteristic of rural livestock farmers, Second, to determine the farmers' perception on selected components of entrepreneurial skills and competencies on livestock production and; Third, to estimate the factors affecting entrepreneurship in livestock Production among rural households in Osun state, Nigeria.

The Research Methods

The Study Area and Data collection

The study was conducted among rural farming households in Osun State, Nigeria. The primary data were collected through interview method using structured questionnaire.

Sampling Procedure and Sampling Size

The multistage sampling procedure was used to select the representative of rural livestock farming households. Three Local Government Areas, one each from three zones of Osun State Agricultural Development Programme (OSSADEP) were randomly selected from the list of LGAs that were predominantly involved in livestock farming. The three LGAs were Ejigbo, Orolu, and Atakunmosa west LGAs. A Cluster sampling was used to select villages with the highest concentration of livestock farmers in the 3 LGAs. Then, two villages each from the three LGA were randomly selected. The villages were Ika, Songbe (Ejigbo LGA); Asalu, Molufon, (Orolu LGA); and Ibodi, Okebode (Atakunmosa west LGA). The list of livestock farmers was sought for in the 6 villages. The size of minimum respondents that could be sampled was

determined using a slovia formula adopted by Abdulrahman et al. (2017) for calculating sample size based on the assumption of 5% expected margins of error, 95% confidence interval and applying the finite population correction factor. The formula is expressed as follows:

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

Where: n is the required sample size; N is the sample frame which implies the number of livestock farmers in target population (429) and α is the precision level at 5%. The minimum sample size that was selected from the statistical analysis was approximated to 207 respondents which amount to about 48% of the sample frame. It is pertinent to note that the 6 villages chosen also included surrounded settlements/hamlets that are embedded in the villages.

Analytical Techniques

Descriptive statistics such as frequency counts, percentage, mean and standard deviation were used to assess the socio-economic characteristics of rural livestock farmers. Data on entrepreneur qualities were collated and assessed through a 4-point Likert scale method namely high entrepreneur ability, medium, low and lack of

entrepreneur ability, which were assigned scores of 4, 3, 2 and 1 respectively. Thereafter, the weighted scores were calculated to obtain the mean score ($\bar{x}$) and percentage mean score which was used to rank the entrepreneur characteristics. The ranking was ranged by percentage mean score such as:

75% - 100% Very high entrepreneur ability (2)

74% - 60% High entrepreneur ability (3)

59% - 50% Moderate entrepreneur ability and (4)

< 50% Low entrepreneur ability (5)

Additionally, it suffices to note that several researchers (Lans et al., 2010) have used a self-assessment approach (perception) to assess the entrepreneurial competency of farmers in the horticulture and agri-food sectors of Belgium and the Netherlands.

Based on the factors rated above, the Principal Component Analysis (PCA) through SPSS package was used in naming the factors that were strongly loaded (important) on variables provided. This was based on the application of Kaiser Normalization using rotation method. A rotation method unlike extraction method gets factors that are as different from each other as possible and helps to interpret the factors by putting each variable primarily on one of the factors (Abdi and Williams, 2010). In SPSS a convenient option to

factor principal component is Kaiser-Meyer-Olkin measure of sampling adequacy (KMO-test). Kaiser developed a rule of thumb, that the sample is adequate if the value of KMO is greater than 0.5, that is a minimum loading weight or cut-off value, and the desirable value of 0.8 or higher which a factor can have before it can be isolated as being positive to the attribute in question.

The factor model was expressed mathematically as:

$$\bar{X} = \lambda_0 + \lambda_{11}F_1 + \lambda_{12}F_2 + \dots + \lambda_{15}F_5 + u_i \quad (6)$$

Where:

λ_i = parameters or loadings, λ_{11} to λ_{15} were the loading of variable $\bar{X}$ on factors F_1 to F_5 .

F_1 = Economic factor, F_2 = Social factor, F_3 = Resourcefulness, F_4 = Achievement / result & F_5 = Market

The tobit regression model was used to obtain the entrepreneurship determinants:

$$\text{Tobit}(\bar{y}/X_i, W_i) = \psi(\beta_1 X_i + \alpha_i W_i + u_i) \quad (7)$$

This was achieved by regressing socio-economic and institutional characteristics of rural livestock farmers against entrepreneurship determinants. The dependent variable ($\tilde{y}$) was the vector of the variables indicates indexing of the share of entrepreneurship from total entrepreneur characteristics considered. It is left censored at zero for respondents who lacked all the skills and competencies. β_i and α_i were regression coefficients that explain the entrepreneurship

determinants of the livestock entrepreneurs and u_i is the error term. X_i represents a vector of household head characteristics including a constant and comprises the variables age, sex, livestock experience and education. W_i represents a vector of institutional characteristics including household size, years of cooperative membership, the amount invested and credit utilized for livestock production.

The tobit model was expressed explicitly as:

$$\tilde{y} = \beta_0 + \beta_1\chi_1 + \beta_1\chi_2 + \beta_1\chi_3 + \beta_1\chi_4 + \beta_1\chi_5 + \beta_1\chi_6 + \beta_1\chi_7 + \beta_1\chi_8 + u_i \quad (8)$$

Where: The explanatory variables represented by χ_i were:

χ_1 = Age (years); χ_2 = Sex (male = 0, female = 1); χ_3 = Livestock rearing experience (years); χ_4 = Level of education (years); χ_5 = Household size (total number of persons); χ_6 = Cooperative membership (years); χ_7 = Amount invested (₦); χ_8 = Credit access for livestock production (₦).

RESULTS AND DISCUSSION

Socio-economic characteristics of livestock farmers

Summary statistics of the results reported in Table 1 revealed the mean age of the respondents farmers was 49.8 years, while the most widespread age group was 50 years and above (34.3%) and the lowest age group range was 20-29 years (15.5%). Despite this, it could be inferred from the results that the age distributions were largely tilted towards active and productive age as 65.7% of the respondents were below 50 years. Hence, livestock entrepreneurial activities in the study area were dominated by the active investors considered to be energetic and receptive to agricultural innovations and hence could develop efficient production routines and practices, and possess the wisdom to cope with livestock farming challenges (Fakoya and Daramola, 2005; Nwibo and Okorie, 2013).

Results also indicated that a majority of livestock farmers (75.4%) were females and 91.3% of the sample respondents were married. This result is in line with Abdulrahman et al. (2017) who reported that women are also key players in agriculture and in informal businesses. The estimated mean years of schooling of the sampled livestock farmers was 7.9 years with minimum and maximum of zero and 15 years respectively. The average years of formal education was largely skewed towards non-formal education which corroborates the findings of Oladimeji et al. (2017) that posited that lack of formal education by farming households may result in their inability to

embrace improved technologies and practices, notably supplement feed and water, inoculations, automated battery cage system, concentrate and roughages, intensive cattle production, vaccine, antibiotics, anti-stress among others.

Results of statistical analysis also showed that the mean adjusted household size was 7.2 with 6-10 persons as the modal class (64.3%) and minimum of 1 and maximum of 16 persons per households. The implications of large family size in subsistence agriculture particularly livestock production hinges on the availability of labour to assist in the nomadic ruminant grazing expedition, processing, distribution and marketing of the products.

However, several studies: Ladipo et al. (1992), Oladimeji et al. (2013) and Sidi et al. (2014) demonstrated that the excessive uses of labour resource in rural areas tend to be a common occurrence due to rather low opportunity cost for the input. Family labour cannot sensibly be 'laid off'. For instance, in agricultural activities even when it is making a negative contribution because it still has to be catered for whether it is employed or not. Besides, the existence of disguised unemployment and under-employment of labour in rural areas of the country necessarily promote excess labour in agriculture and livestock enterprises.

Table 1: Socio-economic characteristics of livestock farmers

Variables	Distribution	F	%	Mean	Min.	Max.	Stdev
Age (years)	20-29	32	15.5	49.8	20	73	5.08
	30-39	64	30.9				
	40-49	40	19.3				
	-	71	34.3				
Sex	Male	51	24.6	-	-	-	-
	Female	156	75.4				
Livestock experience (years)	1-10	83	40.1	13.7	2	49	9.62
	11-20	62	29.9				
	21-30	19	9.2				
	>30	43	20.8				
Marital status	Married	189	91.3	-	-	-	-
	Single	18	8.7				
Level of educated (years)	0	58	28.0	6.4	0	18	2.0
	6	63	30.4				
	12	54	26.1				
	>12	32	15.5				
Household size	1-5	29	14.0	7.2	1	16	2.3
	6-10	133	64.3				
	>10	45	21.7				
Cooperative society (years)	1-9	137	66.2	9.5	0	34	5.0
	10-19	51	24.6				
	≥20	19	9.2				
	Nil	113	54.6				
					10,000	350,000	7,982
	5,000-100,000	69	33.3				
	100,001-200,000	17	8.2				
	>200,000	8	3.9				

Field survey, 2016 denote only those that access credit;

The result of membership of cooperative, which reflects the number of years of engaging in farming association, is also presented in Table 1. The result showed that the bulk of livestock farmers (66.2%) had been in cooperative for less than 10 years and only 3.9% of the respondents had at least 20 years of cooperative membership. Membership of cooperative societies as observed by Olaoye et al. (2012) and Oladimeji et al. (2013) is sine qua non to entrepreneurship development and factor which influences greatly the adoption to improve livestock farming techniques, handle issues of capacity building of livestock, training and economy of scale, linkage with input and output dealers, negotiation with credit institutions and various tiers of government and interested non-governmental organization.

The result of the analysis on livestock farmers'

credit also in Table 1 showed that more than half of the sampled farmers (54.6%) had no access to credit and only 4% of the respondents could access at most ₦200,000 and above. This result was supported by Olaoye et al. (2012) and Oladimeji et al. (2013) that observed non-availability of a credit scheme or near absence of farm credit to livestock farming households taking into full consideration the peculiar circumstance of their small-scale, militates against capital-intensive expansion.

Livestock farmers' perception of importance of selected entrepreneur goals and skills

The mean rankings against each of the entrepreneur feature deemed most applicable by the livestock farmers sampled are shown in Table 2.

Table 2: Livestock farmers' perception of the importance of selected entrepreneurial goals

Entrepreneur Management Skills	Weighted scores				WS	MS $\bar{\kappa}$	MS (%)	Conclusion
	SA	A	D	SD				
Economic motivation	568	156	20	3	747	3.61	90.25	Very high
Achievement motivation	392	219	58	7	676	3.27	81.75	Very high
Social motivation	76	75	138	94	383	1.85	46.25	Low
Risk orientation	276	255	76	15	622	3.00	75.00	Very high
Resourcefulness	196	228	56	54	534	2.58	64.50	High
Negotiating	96	93	126	89	404	1.95	48.75	Low
Result assessment	528	201	10	3	742	3.58	89.50	Very high
Learning orientation	288	177	98	27	590	2.85	71.25	High
Human resource management	268	129	174	10	581	2.81	70.25	High
Market assessment	84	57	104	115	360	1.74	43.5	Low
Leadership	208	87	86	83	464	2.24	56.00	Moderate
Team work	284	138	70	55	547	2.64	66.00	High
Vision	232	192	102	34	560	2.71	67.75	High
Planning	260	210	138	3	611	2.95	73.75	High
Records keeping and accountability	48	51		135				Low
			86		320	1.55	37.50	

Source: Field survey, 2016;

Likert-type scale: Very high strong ability (VSA) =4, High ability (HA) =3, Low ability (LA) =2, Lack entrepreneur ability =1. WS= Weighted Score, MS = Mean Score

Four entrepreneur goals were ranked very high and these include: economic motivation (3.61), result assessment (3.58), achievement motivation (3.27) and risk orientation, (3.0). This is in agreement with the studies of Abdulrahman et al. (2017), Oladimeji et al. (2017a & b) and postulate economic theory that opined that profit motivation embedded in achievement, result and risk are the primary goals of farm enterprise. This couple with the fact that small businesses are increasingly seen as a means of generating meaningful income and sustainable employment opportunities, particularly for those at the margins of the

economy such as rural population. In addition, high mean values were recorded for planning (2.95); Learning orientation (2.85); vision (2.71); team work (2.64) and resourcefulness (2.58). Of slightly less significance to the respondents were negotiation (1.95); social motivation (1.85) and market assessment (1.74). Of least importance was the record keeping and accountability awareness (1.55) although, as many of the sampled farmers are households' livestock farms, the anticipated roles of record keeping and accountability goals were unlikely to be deemed relevant by them.

Factors determining the engagement in livestock entrepreneurship by the respondents

The analysis of the factors determining the engagement in livestock entrepreneurship among rural livestock farmers is depicted in Table 3.

Table 3: PCA Varimax Rotation with Kaiser Normalization component transformation matrix of reasons for engaging in livestock production

Reasons	Factor Loadings				
	Economic	Social	Resourcefulness	Achievement/Result	Market
Consumption motive	0.107	0.047	0.097	0.806	0.032
Profit motive	0.782	-0.106	0.231	0.101	0.203
Employment	0.521	0.254	0.020	0.106	-0.086
Festivities	-0.103	0.621	-0.232	0.389	-0.321
Asset & wealth creation	0.393	-0.105	0.209	0.821	0.519
Security motive	-0.204	0.354	-0.084	0.421	-0.209
Cultural value	-0.096	0.099	0.228	0.754	0.207
Prestige	0.078	0.473	0.100	0.176	-0.201

Source: Data analysis, 2016

Profit motive (PCA=0.782) and employment (PCA=0.521) were loaded on economic factor showed that the quest to be self-fulfilled and financially independent as one of the major driving forces for engaging in livestock production. This finding is in line with work of Nwibo and Okorie, (2013) who observed that some entrepreneurs opted to be entrepreneurs to avoid being unemployed. Festivities (PCA=0.621) was loaded

on social component factor which implies that some farmers embarked on livestock production to cater for their needs during festivities such as naming and wedding ceremonies and other occasions. Results further showed that asset and wealth creation (0.821), consumption motive (PCA=0.806) and cultural value (PCA=0.754) were strongly loaded on achievement and or result.

Determinants of entrepreneurship in livestock production

Tobit model in Table 4 was used to consider how a particular variable affects the extent of entrepreneurship in rural livestock production. The

tobit regression result of the determinant of entrepreneurship among the rural livestock production household is shown in Table 4.

Table 4: Determinant of entrepreneurship in livestock Production

Variable	Parameter	Coefficients	Standard Error	t-value
Constant	β_0	0.219	0.105	2.09**
Age	β_1	0.396	0.191	2.07**
Sex	β_2	-0.021	0.016	-1.32
Livestock experience	β_3	0.409	0.177	2.31**
Level of education	β_4	- 0.108	0.054	-1.99*
Household size	β_5	0.200	0.187	1.07
Cooperative membership	β_6	-0.307	0.334	-0.92
Amount invested	β_7	0.531	0.135	3.93***
Credit access	β_8	-0.098	0.098	-1.00
Diagnostic characteristics				
No. of observations	207			
Log likelihood	-71.06			
LR χ^2	19.70			
Prob. > χ^2	0.0000			
Efron. R^2	0.578			
Pseudo R^2	0.539			
Sensitivity analysis				
Actual correctly predicted (%)	83.90			
Failure (%)	16.03			

***, **, * denote statistically significant at 1%, 5% and 10% respectively

An additional insight was also provided by estimating the log-likelihood value to be -71.06, the Adjusted R-2 of 0.509 and the LR (Chi-square) of 19.70, was statistically significant at 1% level (Prob.> χ^2 =0.000). These imply that the overall model was well fitted and the explanatory variables used in the model were collectively able to explain the correlates of entrepreneurship in rural livestock production, about 53.9% of the total variation in entrepreneurship pattern among the rural livestock households.

The results depict those variables: Age ($P>0.05$), Livestock experience ($P<0.05$), Level of education ($P<0.10$) and Amount invested in

livestock ($P<0.01$) were the determinants of entrepreneurship in livestock production among rural farmers. The signs of all the four statistically significant estimated parameters conformed to the a priori expectations with the exception of level of the education that carried a negative sign. The positive regression coefficient for Age (0.396) implies that age has a direct influence on the decision of an individual to be an entrepreneur, as an increase in age of an entrepreneur increases his skills and competencies in entrepreneurship in line with studies of Le Deist and Winterton, (2005).

This finding also conforms to several studies who inferred that increasing quest of an individual to be

an entrepreneur stems from the general need of older individuals to earn additional income to support the cost of living and to minimize the income fluctuation during off-farm season/drought or, to supplement the working capital for their primary occupation through purchase of farm inputs and foster education of their wards and family health care (Oladimeji et al., 2015).

The coefficient of livestock experience (0.409) was positive thus implying that as entrepreneur gathers more experience over time, their efficiency increased and their livestock management and skills level also increased. This ensured the transfer of skills, knowledge and sharing of experiences which is necessary for the growth and development of livestock industry. This affirms the finding of Bosma et al. (2009), who deduced that having had experience in farm-firm business increases the probabilities of becoming an entrepreneur of self-owned business. Amount invested in livestock (0.531) implies that a unit its.

increase in this variable would improve entrepreneurship skills and invariably livestock production by 0.531 units. This is because production credits enable farmers to procure necessary equipment and facilities as well as embarks on better management practices which could lead to increase in livestock production. Oladimeji et al. (2015) opined that credit is expected to ease the financial constraint in farming; enhance the acquisition of input and, improve revenue and, subsequently improve the standard of living. In contrast, the negative on coefficient of level of education (-0.108) implies that low level of education could deter livestock farmers from adopting improved livestock management practices. Low level of education and social status such as weak cooperative membership of the farmers were some of the constraints to their output levels and indeed their development (Kareem et al., 2013).

CONCLUSION AND RECOMMENDATION

Based on the findings of this study, livestock farmers perceived economic, result assessment, achievement and risk orientation as the most critical goals of the livestock enterprise. The study also pins down consumption motive, asset/wealth creation and cultural value as the most loaded factor component for achievement/result, and profit motive for economic factor component. In addition, age, livestock experience, level of education and amount invested in livestock were the determinants of entrepreneurship in livestock production among rural farmers in the study area. Based on the findings, the following recommendations were advanced: (i). Training, seminars, and workshops on livestock farming and

formal education should be evolved and promoted via relevant ministry and research institutes among these farmers.

(ii). There is the need assessment for livestock farmers to enhance bargaining ability on both input acquisition and product sales.

(iii) The greater percentage of sampled livestock farmers were women. Therefore, it was recommended that government through relevant organs (such as the ministries of women affair and agriculture), non-governmental organizations and other developmental agencies should focus also on women-livestock farming by providing required infrastructural facilities and other necessary training.

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