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DETERMINANTS OF WOMEN PARTICIPATION IN LIVESTOCK PRODUCTION IN MANGU LOCAL GOVERNMENT AREA OF PLATEAU STATE, NIGERIA

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Abstract

This paper determined women participation in livestock Production in Mangu local government area of Plateau State, Nigeria. Simple random sampling was used to select 90 women livestock farmers. Descriptive statistics, Participation Index and Multiple Regression Analysis were employed to analyse the data. The regression results revealed that extension contact was significant ($p<0.01$) and positive, while age and education ($p<0.01$) and years of experience ($p<.0.05$) were significant factors influencing women participation in livestock production although negative. Poultry, swine and goat production raked first, second and third respectively. The result further shows that the coefficient of multiple determinations (R^2) was 0.554, this indicates that 55.4% of the variation in women participation is accounted for by the explanatory variables included in the model. The study recommends that the women should be more capacitated in terms of support through engaging them more meaningfully on economic activities of not only the family but in decision making on matters affecting women. Also the training need of women participation in livestock production should be identified and also soft capital should be provided at the affordable and right time.

Key words**:** *assessment, determinants, livestock production, participation, women*

INTRODUCTION

The role of women in livestock production has either been ignored or underestimated (IFAD 2007) [4]. In the livestock sub sector in particular, men have always been the target of the extension agents despite the indispensable labour provided by the womenfolk. Men operating homestead livestock farms would be saddled with more work than they can handle. Even though there is no consensus on quantifying the role of women in livestock production, there is clear indication that their contribution is quite significant (Jothilakshmi *et al.,* 2009) [5], however, this contribution go unrecognized. Women seem to be relegated to the level of housewives, a situation where women restricted to staying at home tendering the livestock mostly owned by the men. While the men look for white collar jobs, the women are mostly engage in farm work which includes livestock.

It is amazing to note that these women are across the ages of teenagers, middle to old age implying that, this is a general trend within the study area. With most women engaging in this venture, it is clear that most of them don't own the farms, which is not unlikely due to traditional ownership of land and lack of education. More so, women are called upon to perform men's livestock responsibilities much more often than the reverse, with a corresponding increase in their work load (IFAD, 1994) [3].The essential point is that women usually do a great deal of work in livestock management initiatives frequently ignore or underestimated. The economic contribution by women have not only been underestimated and unrecognized but very little has actually been written and known about what women do in different sectors of the economy and particularly in agricultural sector (World Bank 2003) [9].It is from this background that the following research questions emanated.

Improved income of women is a parameter of security in the area of food, good nutrition, education and health care of children in the family. Studies in Africa, Asia and Latin America have shown that women income are

more strongly associated with improvement in children health and nutritional status are men's income (Quisumbing *et al;* 1995) [8].The men in contrast, retain discretionary control over a higher proportion of their own incomes for personal expenditures. Female income share has been shown to have a positive and significant association with household caloric availability, household budget shares of medical care and child's schooling. The evaluation of women farmer in livestock production with the aim to identify factors that enhance productivity and challenges is imperative.

Objectives of the paper have been the following ones: (i)to identify the types of livestock kept by women livestock farmers, and (ii) to identify the determinants of women participation in Livestock production

MATERIALS AND METHODS

The study area. The research was carried out in Mangu Local Government Area, Plateau State, Nigeria. Mangu is a semi-urban settlement with a huge farming population and is located in Plateau Central Senatorial at 9°31′ N 9°06′E and has a population of 294,931 people and covered a total area of 1,653km^2 (638 sq miles) (NPC, 2006) [6]. It is about 77 km south of the state capital (Jos) and comprised of nine (9) districts namely; Ampang, Gindiri, Kerang, Kombum, Langai, Mangun, Mangu, Panyam, and Pushit. The climate and soil conditions of the area are suitable for growing varieties of crops such as; acha, guinea corn, maize, millet, rice, wheat, and tuber crops such as cassava, Irish potatoes, sweet potatoes, yam, etc. The Local Government Area is located within the Northern Guinea Savannah and the climate is near temperate and could be compared to the weather found in Jos, with an average temperature of between 18^o and 22 °C. The coldest weather is between December and February, while the warmest temperatures usually occur in the dry season months of March and April. The mean annual rainfall varies from 131.75 cm (52 in) in the southern part to 146 cm (57 in) on the Plateau. The highest rainfall is recorded during the wet season months of July and August. The major languages spoken in the area include, Mwaghavul and Pyem (Plateau State Information and Communication Development Agency, PSICDA, 2015) [7].

Sampling and sample selection. A total of ninety (90) livestock women farmers were selected for the research. Primary data was generated using structured questionnaire that was administered to the respondents. Multi-stage sampling technique was adopted. In the first stage, one village from each of the nine administrative districts was selected and this gives like nine (9) villages. The second stage involves purposive selection of 10 livestock farmers from each of the selected villages to give a total sample size of ninety (90) and this formed the sample for the research.

Data Analysis. Simple descriptive statistics and multiple regression analysis (ordinary least square) were employed and used in order to achieve the two objectives. The model is specified as below:

$Y = a + b_1X_1 + b_2X_2 + b_3+X_3 + b_4X_4 + U$

Y = Participation Index of women livestock farmers

X_1 = Age (years)

X_2 = Years of experience in livestock production (years)

X_3 = Level of education

X_4 = Extension visit (No of contact/years)

$b_1 – b_4$ = Regression coefficients

a = Constant term

U = error term

RESULTS AND DISCUSSIONS

Distribution of respondent according to types of livestock kept. The various types of livestock kept by the respondent in the study area are captured in Table 1. The result reveals that majority of the women in livestock production kept poultry as their major livestock enterprise. This was followed by swine and goat production. This finding tallies with that of Ayoade *et al*, (2009) [1] and Beth (2001) [2] who explain that women claims smaller species of animals such as poultry, sheep, goat are cheaper to raise and requires lesser initial cost of investment that the larger ruminants, namely; cattle, camel or

buffalo. Though, the profit from the preferred enterprises are smaller when compared to the larger animals, but the rate of growth/multiplication is faster and also, some of the animals may give birth to up to four (4) young one at a point and if compared to the larger ruminant which is costlier in-terms of initial capital requirement and management. The returns associated with the larger ruminants are always higher than those from the small ruminants but equally, the variable cost associated is as well higher than those of small ruminants. These possibly may be the reason for much interest of the women in the chosen enterprise of small ruminants. In most cases, men are not likely to interfere with those enterprises and hence may have little or no influence on it.

Table 1. Types of Livestock kept by women livestock farmers

Livestock Types	Frequency	Percentage	Rank
Cattle	20	10.53	4th
Sheep	20	10.53	4th
Goat	37	19.47	3rd
Swine	43	22.67	2nd
Poultry	70	36.84	1st
Total	90	100	

Source: Field Survey, 2013

Factors affecting women participation in livestock production. The study revealed that there was positive and significant relationship between women involvement in livestock production and extension contact and age. Extension contact was significant ($p<0.01$) and positive which means that the more the women have access to extension contact the more tendency for them to participate in livestock production.

This finding disagrees with that of Ayoade *et al*, (2009) [1]. who explain that access to extension contact will not increase the participation of women in livestock production.

Age is another factor influencing women Participation ($p<0.01$) that is the more the women advance in age the more they participation in livestock production. Years of experience and education were also significant although negative.

Education was significant ($p<0.01$) and negative, this indicates that the more the women are educated the less participation in livestock production this might be as a result of educated women are more interested in white-collar jobs. The result further shows that the coefficient of multiple determinations (R^2) was 0.554. This indicates that 55.4% of the variation in the women participation is accounted for by the explanatory variables included in the model.

Table 2. Socioeconomic affecting women participation in livestock production

Variables	**Regression coefficient**	**Standard error**	**T -value**
Constant	2.251	0.404	5.572
Age ($X_{1)}$	0.10	1.828	1.572*
Years of experience(X_2	-.063	0.30	1.828**
Education ($X_{3)}$	-.246	.132	-2.862*
Extension contact (X_4)	-150	.049	3.093***
$R^2 = 0.554$			

Source: Field Survey, 2013 $R^2 = 0.554$. *** Significant 1%. ** Significant 5%. * Significant 10%

CONCLUSIONS

Women's involvement in agricultural operations varies from location to location due to the change in social setup of every society. Participation of the women in poultry, swine and goat production raked first, second and third respectively.

The major factors affecting their participation were age, experience, education and extension contacts which were found to be significant at different levels.

There is need to identify the training needs of women participation in livestock production. Women should be linked with micro finance banks in other to have access to capital which can be used to improve their participation and expand enterprises for greater income.

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