Analysis on the Effect of Headsmen Crisis on the Growth of Poverty among the Small Holder Farmers in the Affected Villages of Numan, Demsa & Lamurde Local Government Area

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ABSTRACT

Poverty has remained prevalent in Nigeria, especially among farmers. This study identifies the effect of the headmen's crisis on the growth of poverty among smallholder farmers in Numan, Demsa, and Lamurde Local Government Areas of Adamawa State, Nigeria. A total of 138 respondents were randomly sampled from twelve communities in three LGAs of the area. Data were collected using questionnaires and analysed using descriptive statistics. A binary logit regression model was used to identify the effects of poverty in the area. The results reveal that the majority (34.7%) of the respondents are less than 50 years of age and are mostly educated (89.1%). And agriculture is their primary occupation (62.3%). About 43.5% of the respondents fall below the poverty line. The result of the binary logit model shows that household size, income affected as a result of the herder crisis, farm size, and access to farm land were significant factors in the growth of poverty in the study area. The study recommends that the government and its security agencies develop a multi-dimensional approach to mediating the herders and farmers conflict, such as being proactive in curtailing crises and making efforts to enhance the quality of lives of the people and their environment. There should be efforts to intensify civic education at grass-roots levels so that people will have a high sense of patriotism. The government should equip security personnel and their operatives to be technologically inclined and equipped, as this will help track the bad elements among the populace and in their hideouts.

Keywords: Headsmen, Poverty, Communities, subsidized, farm size, socio-economy

INTRODUCTION

Social and economic factors continue to provoke violent conflicts among the Fulani pastoralists and farmers. These changes have increased confrontations between farmers and herders, leading to violent conflict and crises, deaths, forced displacement and migration, the erosion of inter-communal relationships, as well as the destruction of agricultural products and livestock outputs, which have slowed down the income of the smallholder farmer in the study area. These conflicts have constituted serious threats to the means of survival and livelihoods of both the farmers and pastoralists, which both groups are tenaciously protecting (Ezemenaka, & Ekumaoko, 2018) Eze-Anaba (2010) observes that most forms of crisis directed specifically against herders in Nigeria seem to be met with silence, not only by the state but also by much of the human rights community. Small-holder farmers seem to be more affected by the protracted crisis between farmer and pastoralist communities, with many of them displaced and generally suffering economic, social, and psychological violence in several communities in the Numan local government area of Adamawa State.

The major causes of these clashes between herders and farmers are the scarcity of and competition for resources, mainly land, water, and pasture (Amnesty International, 2018). Available evidence shows that the cordial relationship that existed between the farmers and herders involved a long-established understanding

amongst these communities that during the farming season, the nomadic herders would leave farmlands and return after harvest season. More specifically, around the month of May, members of herder communities would leave areas used for farming and only return at the end of the year or the beginning of the next year. Both farmers and herders said this established traditional system worked. The problem began when the farmers started practicing dry-season farming because the specific timing could not be ascertained, which meant the grazing area for cattle started to diminish. Also, water bodies that the herders relied on for their cattle became contentious because the farmers needed them for irrigation. This was especially noticeable in Adamawa State. Farmers now also rear cows and not just draught oxen, meaning their cattle need grazing areas too, making the competition stiffer, according to Amnesty International (2018).

Adisa (2012) observed that the crop farmers' crisis has remained the most preponderant resource-use crisis in Nigeria. Social and economic factors continue to contribute to the violent crisis among the Fulani pastoralists and farmers. The intensity and variation of the crisis largely depend on the nature and type of user groups where the pastoralist grazes. The fight over access rights to farmland and cattle routes has become ubiquitous and seems to have defied solutions (Abbas, 2009). However, Coser (2000) has noted that the inevitability of a crisis in the claim for scarce resources is considered the bane of struggles over the inestimable value of land and its resources, with the claim for ownership and the claim for its position as a common resource. Historical tensions between pastoralists and settled indigenous crop farmers have intensified in recent years, with dwindling natural resources and land availability greatly contributing to the ongoing, escalating crisis in the country (Okello*et al.*, 2014). The herdsmen-crop It was observed by Momale (2003) that while some crises arise between the same resource user groups, others occur between different user groups, such as herders and farmers. (Basil 2017), the herdsmen-crop farmers' crisis is now so rampant that almost every settlement that contains both herders and crop farmers is facing it. This paper provides a deeper understanding on the theeffect of headsmen crisis on the growth of poverty among the small holder farmers in the affected villages in the three LGA of Adamawa state. Consequently, this study aimed at achieving the following research objectives: (i) analyzed the respondents' socioeconomic factor (ii) determined the respondents' level of poverty (iii) determine how the harder crisis has affected the respondents' economic activity in the study area, and (iv) determine how harder crisis affects farmers productivity.

REVIEW OF RELATED LITERATURE

CONCEPTUAL ISSUES

Pastoralism in Nigeria

The Fulbe people, also known as Fulani, are a mass population widely dispersed in all of Africa, but most predominant in West Africa. The Fulani people are descendants of people from the Middle East and North Africa. However, the history of the Fulani origins began with the Berbers of North Africa around the 8th or 11th century AD (Anter, 2015). Over a millennium ago, from AD 900–1900, they spread to most parts of West Africa and to some areas of Central Africa (Anter, 2015). Although these uprisings began as holy wars (jihads), after their triumph, they followed the basic standard of Fulani ethnic dominance in most West African states. Most of the Fulani people are nomadic by nature, herding sheep, goats, and cattle across the dry grasslands of their environs, making them the main pastoral nomadic group in the world. The main Fulani subgroups in Nigeria are: FulbeGombe, Fulbe Adamawa, FulbeSokoto, FulbeMbororo, and FulbeBorgu (Kasarachi, 2016).

Causes of Herder-Crop Farmer Crisis

The conflicts between herders and farmers have existed since the beginning of agriculture and have

increased or decreased in intensity and frequency depending on economic, environmental, and other factors. For example, increases in the herd sizes due to improved conditions compelled the herders to seek out more pastures beyond their limited range. Climate change has constituted a great threat by putting great pressure on the land and thus provoking conflicts between them. However, improvements in human health and population have enhanced a much greater pressure on land. Since the 1980s, there has been a marked expansion of cultivation in the *fadama*(riverine and valley-bottom) areas. This means that both the farmers and herders have engaged in fierce struggles for access to such valuable lands, which, more often than not, result in increased conflicts and violence (Enwelu et al (2015).

Herding System

Having raised livestock for centuries, the Fulani have evolved a herding system that withstands time, weather, social change, and government intervention. The movement of the Fulani over the years has led to a pastoral calendar in which the location and the grazing habits of the Fulani can be predicted (Iro, 1994). The name Fulani has become synonymous with grazing and cattle ownership. The *Fulbeness, pulaaku*, is determined by the extent of Fulani involvement in herding. The primary occupation of the Fulani is herding, followed by farming. Less than a tenth of the Fulani have jobs other than herding or farming.

Land Use and Migration

Accounts of Fulani pastoralists moving southwards into Nigeria's sub-humid "Middle Belt" zone appear as early as the 1820s; however, tsetse flies and the associated trypanosomiasis disease necessitated a return northwards into the semi-arid zone during the rainy season. This gradual southern movement has been attributed to the creation of dairy markets by Hausa traders and the relative security of the British colonial period, when violence related to the trans-Saharan slave trade was curtailed. Migration was also seen as a way to avoid the hated *jangali*(cattle tax) imposed by the British, and the introduction of trypanocidal drugs further enabled pastoralist cattle herds to access the high-quality grazing land in the southern sub-humid zone (Blench, 1994).

Nigeria's Grazing Reserve Act of 1964.

The Nigerian Grazing Reserve Act of 1964 was passed as an initial attempt to improve Fulani access to grazing land for their cattle while simultaneously encouraging sedentarization in order to address existing conflicts between farming and grazing communities and improve the provision of essential amenities to pastoralist families. In a broader sense, it was expected that the policy would help address some of the wider constraints facing livestock development in Nigeria at the time, such as disease control and market supply (Ingawa*et al*., 1989).

Empirical studies

In the study by Ofuoku (2009) on the role of community development committees in farmer-herder conflicts in the central agricultural zone of Delta State, Nigeria, Statistics from their field survey showed that destruction of crops consistently ranked highest as the major conflict source, with a mean of 2.75 over the cut-off. Similarly, a more recent descriptive survey by Usman et al. (2017) revealed that 100% of farmers in the study stated grazing of crops and crop residues as their major source of strife with herders. Similar findings are recorded by Kehinde (2014) in their study in Kogi state, Nzeh (2015) in Enugu state, and Adelakun et al. (2015) in their study in Oyo state. (GTI); the Council on Foreign Relations (CFR); Ameh (2018); Duru (2016); and Egbuta (2018) all note that over 10,000 lives have been lost in the past decade to the conflict.

MATERIALS AND METHODS

The study was conducted in the affected villages of Numan, Lamurde and DemsaLocal Government Areas of Adamawa State. The study area lies between Latitude 9^{o} 27?, 9^{o} 36' 9^{o} 25'N and Longitude 12^{o} 01?, 11^{o} 47', 12^{o} 8' E respectivelyof the Greenwich Meridian (Adebayo,&Tukur, 1999). The areas fall at the site of the confluence of the Benue and Gongola Rivers and have an average temperature of 34 degrees centigrade. The areas witnesses two major seasons, which are the dry and the rainy seasons, with an average humidity level of 18 percent. The areas are bounded byTaraba, and Gombe State (Adebayo, &Tukur, 1999). The areas have an estimated population of about 381,120 people, predominantly fishermen, and farmers (National Population Commission, 2006).

The instrument for data collection was structured questionnaire developed by the researchers. The purposeful selection was used because the sample area consists of villages where small holder farmers' and cattle herders' crises occur. The selected villages for the study were Dong, Gon, Bulki, Zumusu, Yanka, Gamadiyo, Tunga-Ladan, Bwei, Salti, Lawani, and Bolong. A total of 80 small holder farmers and 70 cattle herders from twelve (12) villages in the local government area were chosen randomly, giving a total of 150small holder farmers and herder farmers. Primary data was collected randomly from one hundred and fifty (150) farmers and cattle harder's, while 138 were considered suitable and successfully returned for analysis after retrieving the questionnaire from the respondents.A binary logit regression model was used to identify the effect on farmers' and herders' crises on the growth of poverty among the respondents in the study area. The growth in poverty status of the respondents was used as a dependent variable, while their socio-economic variable as well as other indicator variables were used as independent variables. The model is specified explicitly as:

$y^{*}=\sum x_i\beta_j + u$

Where

$Y= \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 +\beta_7X_7 + \beta_8X_8 + \beta_9X_9 + U$

Where: Y= Growth on Poverty Status (GPS) (1=Non-poor: 0=poor);

β 0 =Constant;

X_1 = Age of the household head

X_2=Gender of the household head

X_3=Marital status of the household head

X_4 = Household size (Number)

X_5= Educational status of the household head

X_6 =Farm Size (Ha);

X_7 =income affected as a result of herder crisis

X_8= herder crisis decrease in productivity

X_9 = access to land deprived

X_{10}= herder crisis destroyed economic activities

U= Error term

B_4, β_6, β_7…. B_{10} are the behavioral parameters measure the rate of growth of poverty as a result of the effect of variable on the small holder farmer.

A Priori Expectations

β_4, β_6, β_7, β_8, β_{10}> 0 and β_9, < 0: are the a-priori expectations of the signs of the parameters of the model. Therefore, the variable under consideration and their parameter exhibition of a priori signs have been summarize below. The above a priori is guarded by these criteria.

When $\beta > 0$ = conform.

When $\beta < 0$ = not conform.

RESULTS AND DISCUSSION

Table 1: Frequency distribution of the farmers according totheir socio-economic characteristics (N=138)

Variable	Frequency	Percentage
Age (Year)		
20-29	30	21.7
30-39	33	23.9
40-49	48	34.7
50-59	19	13.8
59 and above	8	5.8
Gender		
Male	98	71.0
Female	40	29.0
Marital Status		
Single	11	7.9
Married	104	75.4
Divorce	6	4.4
Widowed	17	
House hold size		12.3
1-456		40.6
5-862		44.9
20		14.8

Educational Status		
Non formal education	14	10.1
Primary	35	25.4
Secondary	54	39.1
Tertiary	35	25.3
Primary Occupation		
Farmer	86	62.3
Cattle harder	52	37.7
Farm Size (Hectares)		
46		33.3
1-2	83	60.1
49		6.5

Source: Field Survey (2023)

Respondents' socio-economic characteristics

Respondents' socio-economic characteristics are presented in Table 1. Majority (80.3%) of the respondents are less than 50 years of age. This indicate that majority of the respondents are economically active. Male household heads constituted majority (about 71.0%) of the respondents due to homogeneity in their cultural and religious practices. There are more married household heads (about 75%) than those divorced/widowed (16.7%). The household size of the respondents is relatively large having about 5-8 people (44.9%). Meanwhile, distribution of education reveals that majority of them had one form of education or the other (89.8%). most of the respondents were primarily into farming (about 62.3%) and they cultivate an average farm size of about 1-2 hectares representing (60.1%).

Table 2: Farm size and weeklyattack/destructionof farm land and total expenditure per farm

Farm size (Hectares)	**Frequency of attack/destruction**	**No. of farmers**	**Percentage of population**	**Total expenditure on farmland**
< 1	**57**	**46**	**33.3**	143,500
1-3	**91**	**83**	**60.1**	196,600
4	**19**	**9**	**6.5**	221,500
		138		**560,500**

Source: Field Survey (2023)

The household weekly attack/destruction of farmland and their total expenditure was used to establish the growth of poverty in the study area. A total expenditure of 560,500 naira on farm size indicated that, the house hold who's primary occupation is farming is losing a source of it income this increases the growth of poverty in study area.

Table 3: Frequency of distribution of respondents according to the growth of poverty status

Status	**Frequency**	**Percentage**
Non-poor	**78**	**56.5**
Poor	**60**	**43.5**
Total	**138**	

Source: Field Survey (2023)

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Poverty status of the respondents

Majority of the households surveyed (about 56.5%) are found to be non-poor this is because peace has returned to some areas of study and socio-economic activities is moving accordingly. while about 43.5% are poor this may be as a result of pockets of attacks in some areas bordering the state with other neighboring state Like Taraba and Gombe. The result shows that a reasonable proportion of the population requires the necessary support such as increased level of security to overcome the growth of poverty.

Overall Model Fit for

The overall fit for this model is performed to ascertain the 'health' of the model for all the dependent Growth of Poverty Status (GPS) and predictors (X_1, X_2, X_3…….X_{14}) ranging from a p-value at 1 percentto 10 percent as shown table 4

Table 4 *Model fit information*

Model	Log likelihood	Chi	DF	Significance
Intercept	-159.50152			
Final	-159.50152	22.97	14	0.0000

Source: Researcher's computation using spss 23

Number of obs: 138

The maximum likelihood estimates for the logit model are presented in Table 4. The result of the analysis shows that the Chi square of the regression is 22.97 found to be statistically significant at 1% level. The model has a high negative Log likelihood of -159.50152; describing a model displaying a good fit, this shows that the explanatory variables in the estimated logit model significantly explain the determinant of growth of poverty in the study areas.

Table 4: Parameter estimates of determinants of poverty in the study area

No. of variable	**Coefficient**	**P-value**	**Odd ratio**
Household size (Number)	0.504 (1.238)	0.034	0.655
Farm Size (Ha)	**0.321** **(0.023)**	**0.124**	**1.821**
income affected as a result of herder crisis	**0.393** **(0.021)**	**0.021**	0.513
herder crisis decrease in productivity	**-1.123** **(0.213)**	**0.003**	0.721

access to farm land deprived	-1.268 (0.288)	0.000	0.484-
herder crisis destroyed economic activities	**0.120** **(0.010)**	**0.323**	0.623
Pseudo R^2	**0.83**		

Source: Researcher's computation using SPSS 23

Our objective is to assess this change in terms of the probability that affects the growth of poverty within the study area, given the variables estimated. This is the justification for using marginal effects. We show the binary logit estimates for growth of poverty, table as a basis for estimating our marginal effect, which determines the effects of the predictors on income level of the study area.The probability of house hold size is significant at 10 percent, with positive coefficient of 0.504. The result also shows that the odd of house hold size is estimated to be about 2 (1/0.655) times higher than the time when the house hold size is small. The odd ratio for house hold size was the effect of 1 percent increase in number of children and decreases the income of the house hold by an estimated -34%[-34%=100(0.655-1)]. This indicates that as of the time of crisis house hold size decreases by -34% as express above.

Probability of Farm Size (Ha) is significant at 5 percent, with a coefficient of 0.321. The result shows that the odd of farm size is estimated to be at 0.5 (1/1.821) times higher than the time when the farm size is small. The odd ration is the effect of 1 percent increase in farm size and decrease in the number of hectares per land by an estimated -54%[-54%=100(0.451-1)

Income affected as a result of herder crisis, is statistically significantly at 5 percent with a coefficient of 0.393. The result shows that the odd of effect in income as a result of herder crisis is estimated to be 2(1/0.513) times higher than the time when the income is not affected. The odd ration is the effect of 1 percent increase in income and decrease in the number of source of income by an estimated -48%=-48% [100(0.513-1)]

The probability of herder crisis decrease productivity is statistically significant at 10 percent with a coefficient of -1.123. The result shows that the odd of the herder crisis decrease productivity is estimated to be 1 (1/0.721) times higher than the time when the productivity is stable. The odd ration is the effect of 1 percent increase in herder crisis decrease productivity and decrease in farm land by an estimated -28 %=-28% [100(0.721-1)]

The result shows the odd of access to farm land deprived is estimated to be 2 (1/0.484) times higher than the time when there were access to far m. the probability shows a statistically significant at 5 percent with coefficient of -1.268. The odd ration is the effect of 1 percent increase in access to farm land and decrease in the number of source of farm land by an estimated -52%=-52% [100(0.484-1)]

The probability of herder crisis destroyed economic activities is statistically significant at 1 percent with coefficient of 0.120. The result shows that the odd of herder crisis destroyed is estimated to be 1(1/0.623) times higher than the time when they were no destruction in the study area. The odd ration is the effect of 1 percent herder crisis destroyed economic activities and decrease in the number of economic activities in the study area by an estimated -38%[-38%=100(0.623-1)]

CONCLUSION

The factors identified in the study, including education level, farm size, membership in groups, access to basic social amenities, and credit, have a significant influence on the growth of poverty in the study area. The findings indicated that poverty is prevalent in the area, with about 43.5% of the population still living in poverty. The ability of the respondents to reduce poverty is constrained by some factors, notably a lack of or inadequate security in the area where the crisis occurs, a lack of access to farm land as a result of a fair number of unknown attackers, and their inability to access modern farm inputs.

RECOMMENDATION

1. In order to resolve the Herders and farmers conflict, the government, and it security service should adopt a multifaceted strategy, including being proactive in averting crises and working to improve the standard of living for both the populace and the environment.
2. Settling herders and farmers Conflict of whatever type should be addressed from its infancy and also improved in emergency responses.
3. In order to increase people's sense of patriotism, effort should be made to expand civic education on farmers and herder's crisis at the grassroots level.
4. Herder crisis needs to be resolve from the beginning, and emergency response times should be boosted. The government should provide modern equipment and training for security officers and their operatives.

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