



SOCIO – ECONOMIC FACTORS INFLUENCING INSURGENCY ON COWPEA PRODUCTION IN SELECTED LGA'S OF YOBE STATE, NIGERIA

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ABSTRACT

The study examined the effect of insurgency on cowpea production in Geidam and Gujba Local Government Areas, in Yobe State, Nigeria. A multi-stage sampling techniques was used to select 169 cowpea farmers. Data were collected using structured questionnaire and analysed using both descriptive and inferential statistics. The result revealed that the mean age of cowpea farmers was 38 years. Most (93.0% and 91.7%) of the farmers were male and married with an average household size of 8 persons. The result also showed that the cowpea farmers had average farming experience of 9 years with a mean farm size of 3 hectares. Furthermore, the result showed that mean annual income before and during insurgency were ₦489,053.00 and ₦257,278.00 respectively. The result also showed that 40.2% of the cowpea farmers had never attended formal education. The result revealed that Almost all (96.4%) and majority 72.8% of the farmers confirmed that *boko-haram* and Kidnappings were the serious forms of insurgency. The major causes of insurgency include: unemployment (91.1%), poor education (82.8%) and poverty (66.3%) among others. The result of regression showed that income during insurgency (-1.763E-6) and sex (-1.117) had negative coefficient and significant ($P<0.05$ and $P<0.01$) respectively in influence insurgency. Also, farm size, household size, output during insurgency and farming experience had positive coefficient and significant ($P<0.05$) in influencing insurgency. The result further disclosed that R – square was 0.631 and this was justified by F – value of 3.278 which was significant at $P<0.01$. The study concluded that, insurgency had adversely affected the livelihood of the farmers in both Local Government Areas. The study recommends that employment opportunities should be given to the youths, credit facilities and grants by government/NGOs, in order to boost the production of cowpea and living standard of the farmers in the study area.

Keywords: *Boko-Haram*, Conflict, Cowpea, Insurgency, Violence

INTRODUCTION

Cowpea (*Vigna unguiculata* (L.) Walp) have two likely places of origination which are East and West Africa. There are quite number of species, but the important ones are three; *Vigna unguiculata*, *Vigna sesquipedalis* and *Vigna catjan*. The term cowpea is a common name for *Vigna unguiculata*, an annual crop of the pea family *Fabaceae* (*Leguminosea*), which is mainly planted for its edible beans, which are taking both dry and in the green pods by both humans and livestock. Cowpea is widely grown as subsistence crop for home and for exports, usually in many African countries South of Sahara. Also it is grown extensively in Latin America and South East Asia. The major producing countries are Nigeria, India and Tanzania (Agwu and Anyanwu, 2015). It is estimated that more than 90% of the world cowpea grain production of 5.7 million tonnes is produced in about 10 million hectares in Africa (FAOSTAT, 2015). The crop is most important in the semi-arid and hot areas of Africa (Gwathmey and Hall, 2016). Among the top six major world cowpea producers, five are located in Africa and include Nigeria, Niger, Burkina Faso, Senegal and Mali (Bawa, 2017). Cowpea is the most



important food grain legume which serves as a very cheap source of protein (Bawa, 2017). Insurgencies may affect Cowpea production, processing as well as its marketing pattern. Farmers are scared to go to their farms because of fear of possible clash between the insurgents and Nigerian army which most of the times result in the death of so many innocent civilians.

Insurgencies of different nature and causes prevail in many parts of the African continent. Some of these conflicts have sadly led to a massive loss of lives and property and to environmental destruction with dire consequences for agricultural production and food shortages. The impacts of *Boko-haram* insurgency are so numerous and cut across all aspects of life especially in the north eastern part of Nigeria (Beatrice, 2015). Many rural areas in the epicenter of the *Boko-haram* insurgency namely Borno, Yobe and Adamawa States have been rendered unsafe for human habitation, pushing hundreds of thousands of farmers out of their lands. It should be noted that, bulk of the farmers in northern Nigeria are rural dwellers and rural areas happened to be the hardest hit areas by the *Boko-haram* insurgency. Recent estimates put the number of people killed and displaced by the conflict as approximately 17, 000 and 2.5 million respectively. This had seriously affected all forms of livelihood activities including agricultural production. In a region known for its debilitating poverty, aridity and periodic cycle of drought and famine, the *Boko-haram* insurgency has further sown the seeds of famine (Shetimma, 2016).

As result of insurgency, most of the commercial and agricultural activities were significantly crippled, especially the production and processing of cowpea (Salihu *et al.*, 2017). Since the first attack on Damaturu the capital city of Yobe State by the *Boko-haram* group in November, 2011, insurgent attacks became daily occurrences in many towns across the State especially in agricultural stronghold areas of Gujba, Geidam, Potiskum, and Gulani Local Government Areas of Yobe State leading to devastating drawbacks in agricultural practices especially cowpea production. Over the past years (2012 – 2014), farmers in Yobe State and in many parts of the North Eastern parts of Nigeria, particularly Adamawa and Borno States were no longer able to farm for security reasons especially for fear of attacks by the dreaded *Boko-haram* sect who continued to unleash untold havoc in the part of this country. This insurgent activity has in turn affected food production and consequently raised prices of foods that are cultivated in these places like maize, sorghum, cowpea, peanut, pepper, tomatoes and onions. Besides, it is noteworthy that this same part of the country has been known for mass rearing of cattle, which made meat available to other part of the nation but today, the story is not the same Rabi *et al.* (2022). The gravity of the crisis has brought about decline in productivity which in turn led to escalation in the prices of Agricultural output and reduced the per capita income of the farmers. Therefore, this research provides the necessity to study on the insight that leads to the low productivity of cowpea production as a results of *Boko-haram* insurgency and other nature of insurgency in the area. The study was carried out to describe the socio-economic characteristic of cowpea farmers, identify various forms and causes of insurgency and examine the socio-economic variables influencing insurgency in the study area.

MATERIALS AND METHODS

The Study Area

This study was conducted in two Local Government Areas (LGAs) of Yobe State namely; Geidam and Gujba LGAs. Geidam is one of the 17 Local Government Areas in Yobe State with its capital at Ngazargamu. It lies in the northwestern part of the State at longitude 12°53'49" to North and latitude 11°55'49" to East occupying an area of 4,357 Km² with a 419 meters' elevation above the sea level and a population of 380,120 (NBS, 2020) using a growth of 3.2%. It lies mainly in the dry Sahelian belt where conditions are hot and dry for most of the

year. However, the area has a relatively thicker vegetation cover compared to many other parts of the State. The hottest months being March, April and May when temperatures range between 28°C – 45°C. Rainy season is usually short and lasts 210 days from April - October and annual rainfall range is normally 500 – 600mm. Yobe State Diary, (2016).

Gujba has its capital at Buni Yadi. It lies in the southwestern part of the state at longitude 11°29'52" to North and latitude 11°55'51" East, occupying an area of 3,239 Km² with a 456 meters' elevation above the sea level and has a projected population of 316, 824 (NBS, 2020) using a growth rate of 3.2%. The hottest months being March, April and May when temperatures range between 30°C – 42°C. Rainy season is usually short and lasts 120 days from June – September and annual rainfall range is normally 500 – 1000mm. Both LGA's economic activities are Crop production, rearing of small and large ruminants as well as marketing of agricultural products. Yobe State Diary, (2016). The map of Yobe State showing locations of sampled areas is presented in Figure 1.

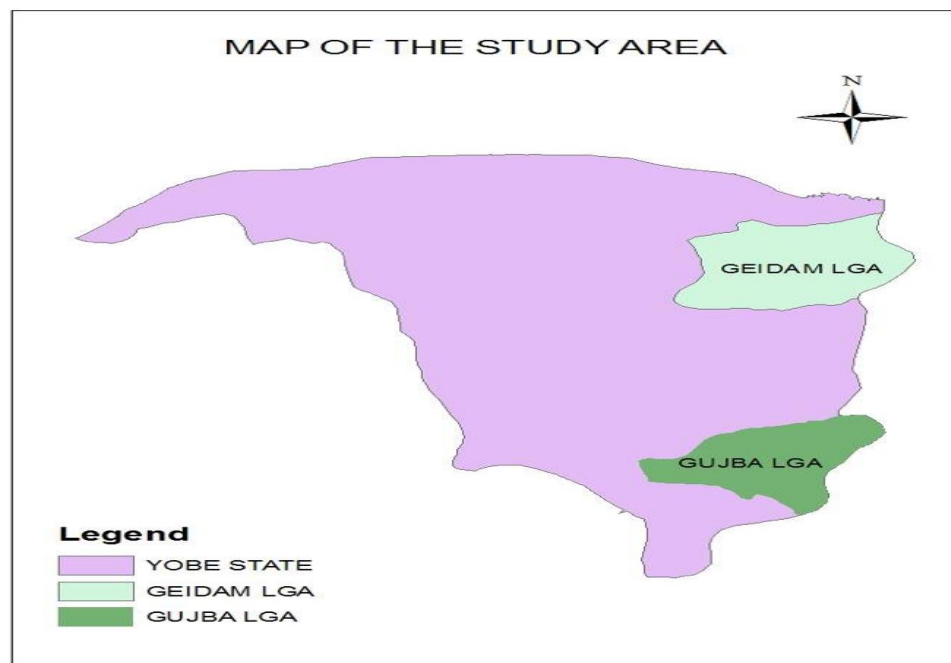


Figure 1: *Map of the study area*
Source: Reconnaissance survey (2021)

Sampling Techniques and Sample Size

A multi stage sampling procedure was employed in the selection of 169 respondents in the study area. In the first stage, two (2) Local Government Areas (LGAs) Geidam and Gujba were purposive selected. In the second stage, two (2) districts were randomly selected from each LGA making a total of four districts. In the third stage, (2) villages were randomly selected from each of the four districts making a total of eight (8) villages. In the final stage, 169 respondents were proportionately (20%) and randomly selected from the sampling. The sampling procedure is presented in Table 1.

Table 1: Sampling Procedure and Sample size

S/No	LGA	Districts	Villages	Sample Frame	Sample Size @ 20%
1	Geidam	Geidam	Abachari	130	26
			Kelluri	114	23
		Hausari	Dagambi	110	22
			Asheikri	80	16
2	Gujba	Buni Yadi	Kasaisa	125	25
			Wagir	90	18
		Katarko	Goniri	119	24
			Mutai	75	15
Total				843	169

Source: Field Survey, 2021

Methods of Data Collection

The study used structured questionnaire to collect primary data from the selected cowpea farmers in the study area. The questionnaires were administered to the respondents who were affected by the insurgency in the study area.

Methods of Data Analysis

The study used both descriptive and inferential statistics to achieve its objectives. Descriptive statistics such as; frequency, distribution, percentages, mean was used to achieve objectives i and ii while Inferential statistics such as multiple regression was used to achieve objective iii, that is to determine the socio-economic factors influencing insurgency on cowpea farmers in the study area.

Also, data analysis was performed using SPSS version 23. In order to achieve the specific objectives of the study.

Multiple Regression

The model is specified as:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + e$$

Where;

Y = Insurgency (Number of causes of insurgency)

X₁ = Age (Years)

X₂ = Sex (Male = 1, Female = 0)

X₃ = Income (₦)

X₄ = Education (Years of formal education)

X₅ = Farm size (ha)

X₆ = Household size (Number of persons)

X₇ = Cowpea output (Kg)

X₈ = Access to credit (Access = 1, No Access = 0)

X₉ = Farming experience (Years)

RESULTS AND DISCUSSION

Quantitative Socio-economic Characteristics of Cowpea Farmers

The result in Table 2 revealed that minimum, maximum and mean ages of the respondents were 23, 72, and 38.2 years respectively with a standard error of 0.7676. This implies farmers were in their productive age and are more likely to participate in all farming activities in order to achieve breakthrough that will help the family become financially independent. This result is closely similar with the findings of Pur *et al.* (2016) that, majority of the respondents interviewed were between the ages of 35 and below which is a clear



indication that farmers were very active. Also, the result showed the minimum, maximum and mean farm land 1.0, 15.0 and 3.0 respectively with a standard error of 0.1652. This implies that farmers were operating on small scale level. Also, farm lands in most traditional societies are not communally owned and this leads to fragmentation, leaving farmers with small farm land. This result agrees with the results of Anjikwi *et al.* (2021), farm holdings in Nigeria fall into three broad categories, namely: small scale, medium scale and large scale. The result also shows minimum, maximum and mean of the farming experience of the cowpea farmers of 1.0, 30.0 and 9.5 years respectively with a standard error of 0.4899. Ume and Ochiaka (2016) cited in (Jare and Bunu, 2021) reported that 29.14% of the respondents had between 16 – 20 years farming experience. This indicates that the farmers had farming experience that can help them improve their productivity on the farm by knowing the correct practices. This agrees with the finding of Adebisi *et al.* (2017) that long number of years of farming equip farmers in making rational decision in among others efficient resource use for high farm productivity and increased income.

Furthermore, the result showed that minimum, maximum and average income before insurgency of the cowpea farmers were ₦150,000.0, ₦980,000.0 and ₦489,053.254 respectively, with a standard error of ₦15,734.0541. While result on minimum, maximum and mean on the income during insurgency were ₦60,000.0, ₦72,000.0 and ₦25,728.10 respectively with a standard error of ₦12,354.46. This indicates that insurgency had effect on their productivity thereby reducing the farmer's earnings in the study area. As a result of the decrease of farmer's income caused by the insurgency, many farmers left farming activities as a result of restrictions from cultivating farm lands. This result corroborate with the findings of Sunday *et al.* (2017) who reported that mean annual farm income of farmer's in Hawul LGA of Borno State was ₦165,000.00 after the insurgency and conflicts indicating increase in income. Salkida (2012) reported that insurgency in the north has had a devastating effect on families and livelihood of many economic groups which has resulted to the bringing down of incomes and increasing poverty levels.

Table 2: Socio-Economic Characteristics of Cowpea Farmers in the Study Area (n=169)

Variables	Minimum	Maximum	Mean	Std. Error
Age (years)	23.0	72.0	38.219	.7676
Farm size (hectares)	1.0	15.0	3.041	0.1652
Farming experience (years)	1.0	30.0	9.586	0.4899
Income before insurgency (₦)	150000.0	980000.0	489053.254	15734.0541
Income during the insurgency (₦)	60000.0	720000.0	257278.107	12354.4612

Source: Field Survey, 2021

Various Drivers and Forms of Conflict and Insurgency

The various forms of insurgency in the study areas are presented in Tables 3. The result revealed that (96.4%) of cowpea farmers confirmed that *Boko-haram* insurgency was the most serious form of insurgency that affects farmers and farming activities in the study area. While 72.8% of the respondent's state that kidnappings by the insurgents group was major form of insurgency which leads to restriction of farmer's movement to their respective farm land. About 45.6% of the respondents confirmed that socio-economic drivers of conflict and insurgency were also form of insurgency and was as a result of poverty. This result is in agreement with that of Adebayo (2014) that poverty contributes significantly to the spread of the sect's activities in Northern Nigeria. Poverty is characterized by lack of enough to feed on



and clothe a family, not having a school or clinic to go to; not having the land on which to grow one's food or a job to earn one's living, not having access to credit. It means insecurity, powerlessness and exclusion of individuals, households and communities Adebayo (2014).

In view of this, they may join any violence groups as majority of them are ill-informed politically, socially, religiously, economically and educationally. According to Onuoha (2012) with the reference to factors influencing the activities of *Boko-Haram* in Nigeria, 89.7% of the respondents were of the opinion that poor governance in the country influences the activities of *Boko-haram* in Nigeria. Also, Orhero (2015) reported that 79.4% of the respondents believe that porous internal borders in the country influences the activities of *Boko-haram* in Nigeria. However, Adekoya (2014) had contrary result that only 20.6% of the respondents disbelieve that porous internal borders in the country influences the activities of *Boko-haram* in Nigeria.

Table 3: Distribution of Cowpea Farmers according to the Drivers and Forms of Conflict and Insurgency (n=169)

Drivers and Forms of conflict and insurgency	*Frequency	Percentage
Socio-economic drivers of conflict and insurgency	77	45.6
Socio-cultural drivers of conflict and insurgency	73	43.2
Socio-political drivers of conflict and insurgency	27	16.0
Environmental drivers of conflict and insurgency	55	32.5
<i>Boko-haram</i>	163	96.4
Kidnappings	123	72.8

Source: Field Survey, 2021

*Multiple Response were recorded

Causes of Insurgency

Table 4 reveals that most (91.1%) of the respondents confirmed that insurgency is caused by unemployment, and 82.8% mentioned inadequate education is a major factor to the advent of insurgency. Also, 66.3% of the respondents mentioned that insurgency was as a result of poverty. According to Charas *et al.* (2015), were other reasons why people engage in criminal activities, it cannot be ruled out the fact that activities resulting from unemployment are indirect consequences of insecurity and corruption. Corruption leads to unemployment, unemployment leads to conflicts and conflicts lead to insecurity. Also, Awoyemi (2012) stated that education is key to development whereas illiteracy is one of the major causes of insurgency and inadequate education is a very strong factor leading people to social vices. Accordingly, when a young man is poor, illiterate and unemployed he becomes a clean slate for any kind of brainwashing which is more potent when it comes from religion aided by culture. Because this category of people do not have the intellectual power to question logically or critique what they are told. Also, the activity component of the brainwashing given to them provides a quasi-equivalent of employment.

Table 4: Distribution of Cowpea Farmers According to Causes of Insurgency (n=169)

Causes of insurgency	*Frequency	Percentage
Insurgency is caused by poverty	112	66.3
Poor administration and government policy	74	43.8
Unemployment as major factor	154	91.1
Political instability	56	33.1
Inadequate education and illiteracy	140	82.8

Source: Field Survey, 2021

*Multiple Response were recorded



SOCIO-ECONOMIC FACTORS INFLUENCING INSURGENCY ON COWPEA FARMERS

As expected socioeconomic characteristics of the farmer had effect on insurgency. The factors included in the model were Age, Sex, Income during the insurgency, Educational level, Farm Size, Household size, Output during insurgency, Access to credit and Farming and experience. The result in Table 5 showed that income during insurgency has negative coefficient and significant at $P < 0.05$. This implies that as insurgency increases the income of the farmers is decrease. This could be due to the fact that farmers cannot carry out economic activities thereby affecting their income. Also, farm size had positive coefficient and significant at $P < 0.05$. The implication is that as insurgency increases, more farm size were left uncultivated due to insecurity in the area. Similarly, the coefficients of household size were significant and positive at $P < 0.05$. While the coefficient of output during insurgency was positive and significant at $P < 0.05$. This result was not as prior expectation, if there are more causes of insurgency there will be decreased in output all things been equal. Furthermore, the coefficient of sex was found negative and significant at $P < 0.01$. This implies that as causes of insurgency increases, it leads to decrease of male farmers since most of the farmers migrated to other places to obtain food and income for livelihood. While in some situations the male farmers have been killed by *Boko-Haram*. Also, farming experience has positive coefficient and significant at $P < 0.05$. The result further disclosed that R^2 – square was 0.631. This implies that about 63% of the variation in insurgency was influenced by socio-economic factors included in the model and this was justified by F – value of 3.278 which was significant at $P < 0.01$. This result, agreed with the findings of Bawa (2017) who reported that R^2 value of 0.74, implying that, 74% of variation on output was as a result of independent variables included in the model and it was confirmed by F - statistic (22.251) and significant at $P < 0.01$.

Table 5: Socio-Economic Variables Influencing Insurgency on Cowpea Production

Variables	Coefficients	Std. Error	t-value	Prob. level
Constant	4.954	0.426	6.183***	0.000
Age (X_1)	-0.012	0.016	-0.760 ^{NS}	0.448
Sex (X_2)	-1.117	0.352	-3.172***	0.002
Income during insurgency (₦) (X_3)	-1.763E-6	0.000	-2.581***	0.011
Education level (X_4)	0.035	0.079	3.263***	0.000
Farm size (X_5)	0.216	0.013	2.378**	0.011
Household size (X_6)	0.047	1.301	2.767**	0.017
Output during insurgency (X_7)	0.018	0.008	2.196**	0.030
Access to credit (X_8)	0.095	0.191	0.499 ^{NS}	0.618
Farming experience (X_9)	0.055	0.023	2.333**	0.021
R^2	0.631			
F- Value	3.278***			

Source: Field survey, 2021

Note: *** $P < 0.01$, ** $P < 0.05$ ^{NS} not significant

CONCLUSION AND RECOMMENDATIONS

The study concluded that, insurgency had affected both output and income of the cowpea farmers which reduced drastically and had dwindling effects on livelihood in the study area. The major factors that influence insurgency activities of *Boko-haram* in the study area were poverty, unemployment, illiteracy, insecurity, poor governance amongst others leading to loss of lives on during farms activities as a result of attack by *Boko-haram* making the victims vulnerable to poverty and other social vices. The study recommends that government should create more job opportunities for the youths in the study area. Good governance will create good economic policies and good economic policies will create job opportunities and



man-power development for the youths. Cowpea producers should be given credit facilities and grants by government/NGOs in order to boost the production and processing of cowpea in order to improve living standard and should be encouraging to source farm inputs from certified agro-dealers such as of farm inputs such as fertilizer, improved seeds, herbicides, insecticides among others.

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