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## Effect of Communal Clash on Agricultural Production in Awka North Local Government Area of Anambra State

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### Abstract

The manifest communal clashes in the State necessitated this study to investigate the effect of communal clash on Agricultural production, using Awka North Local Government Area as a yardstick. A survey research design was employed in the study. The population of the study consisted of 927 Cooperative farmer members in Awka North and the sample size was 101 using Taro Yamane formula. Questionnaire was used in collecting data. Data were analyzed using Multiple Regression at 5% level of significance. Findings showed that there is a statistical significant relationship between communal clash and agricultural output ( $r = 0.19$ ,  $R^2 = 0.22$ ,  $F = 0.0001$ ,  $p\text{-value} < 0.05$ ) and that boundary dispute has inverse relationship with agricultural output ( $r = 0.03$ ,  $R^2 = 0.07$ ,  $F = 0.1137$ ,  $p\text{-value} > 0.05$ ). Consequently, the study concluded that communal clash has altered agricultural production in Awka North Local Government Area. Therefore, the study recommended among other things that Anambra State government need to make policies that would enhance peaceful coexistence among the communities in Awka North local Government Area to enable farmers in the area attain their full potential in agricultural production. Anambra State Ministry of Agriculture needs to intensify efforts in the provision agricultural inputs such as fertilizers so as to enhance soil manure for increased agricultural production

**Keywords:** Communal clash, Agricultural output, Awka North, boundary dispute

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### 1. Introduction

The fact that agriculture is irreplaceable in the lives of Africans and in African development requires a better understanding of all the conditions and factors that determine and shape its functioning. This ideological stance in approaching this extremely important issue stems from the fact that agriculture, like all other human activities, functions in situated social conditions that affect it individually and collectively, in varieties of ways. The competition for scarce resources, especially land and water, often causes or exacerbates communal conflicts. Groups with permanent or semi-permanent armed militias are involved in local conflicts, but no government troops are involved. However, it can escalate to involve government forces, as in the massacres in Darfur, Rwanda and Burundi. These conflicts can escalate into civil war if the government is perceived as tacit or otherwise, one municipal group at the expense of the other. The use of these scarce resources for the diverse, complex and competing socio-economic

activities of the people often leads to conflicts over the access and management of these resources. (Kughur, Daudu & Iornenege, 2017)

Communal conflicts correlate with food security and in most cases depress the production and income of crops and livestock. These reductions in output and income have serious food security implications by reducing the coping capacity of those who depend on food resources for a living. We are experiencing several conflicts in Nigeria today, most of these conflicts have their roots either remote or directly in the nature of the land policies applied. For example, the crises in the states of Taraba, Benue and Nasarawa, Osun State (Modakeke / Ife), Anambra State (Umuleri-Aguleri), Delta State (Ijaw / Itsekir) can be linked to land acquisition. In all of these crises, the common man is hit hardest. Such a situation has serious implications for the security of the country in terms of sufficient food production. (Abah, Ochoche, & Stephen, 2021)

Over the years, conflicts in many parts of the Nigeria and Anambra State in particular, have been the main problems that devastated people's economies and many factors contribute to conflicts that have little or no relation to the environment, natural resources and rural development. These include political, religious, ethnic, economic, land ownership systems, and historical fends. Also, if environmental and natural resource management issues are important, they are generally just one factor that is not the only cause of tension. In many parts of Africa there were local disputes over pastureland and rain-fed agricultural land. In the absence of demographic and environmental change, such conflicts have generally been viewed as a social, political or economic problem. However, environmental problems such as desertification, land degradation and climate change are becoming major drivers of these conflicts. (Ani, Chikaire, Ogueri, & Orusha, 2015)

Nevertheless, Nigeria, has seen a significant increase in intercommunal conflicts characterized by: (i) the interdependence and intercommunal relationships between two or more communities, (ii) the proximity of each community to the other, making them one sharing a common boundary, (iii) the existence of scarce resources for each of the communities to claim, and (iv) the prioritization of a win-lose perspective in which the goal of each party is to be a winner who takes full advantage. (Oladipo, Busari, Daudu, & Selesi, 2020)

### **Statement of the problem**

For centuries, most wars over land ownership have been waged, and everywhere the average man lives in close contact with the soils, fields, forests and fishing grounds that feed him. These land conflicts arise because ownership or control of land is indicative of economic power and social standing. The issue of control over agricultural land and even pastoral resources is a major issue and armed clashes between groups have resulted in the loss of human life. In addition, land ownership systems change at different speeds, more or less profoundly, and probably not in a single direction. Conflicts have social, political, cultural and legal dimensions. This places serious demands on society's ability to resolve or manage conflicts. (Kughur et al, 2017).

However, there may not be a known study of the influence of communal conflict on agricultural production in Awka North L.G.A. in Anambra State; It is therefore necessary that this study fill this research gap. Land conflicts are a recurring decimal place in Awka North LGA and

have a negative impact on economic activities in the area (including agriculture); hence, this study will provide rigorous empirical evidence of the influence on agricultural production.

### **Objective of the study**

The broad objective of this study is to investigate influence of communal clash on agricultural production. The specific objectives are to:

1. Examine the effect of boundary dispute of the communities on agricultural output in the area.
2. Evaluate the effect of climate change on agricultural output in the area.

### **Hypotheses of the study**

1. Ho: Boundary dispute has no significant effect on agricultural output in the area.
2. Ho: Climate change has no significant effect on agricultural output in the area.

## **2. Conceptual Review and theoretical framework**

### **2.1 Communal Conflict**

People in Africa have historically been divided into ethnic and communal groups, and interactions between these communal groups have not always been peaceful. Communal conflict is frequently related with conflicts of interest between or among distinct communal groups. Communal conflict occurs when violence is done along ethnic lines and victims are chosen based on their ethnic group affiliation. (Ukpai, 2021). There is debate concerning the causes of conflict, with one main point of contention being whether conflict is produced by economic or noneconomic forces. The nature of the conflict will determine whether it is triggered by economic or noneconomic issues. The majority of conflicts were fought over land, and the average man lives in close proximity to the soils, crops, forests, and fishing areas that provided him with subsistence. Land ownership and control is a sign of economic strength and social position, which leads to conflicts over land. Control of agricultural land and even pastoral resources is a key issue, and armed battles between factions have resulted in human deaths. (Kughur et. al 2017)

Communal conflict must be linked to any sort of incompatibility, struggle, dispute, violence, or attacks that are fueled by communal attitudes or attachments in one way or another. When people no longer enjoy peace in their communities, it is said that communal conflict has arisen. Community conflict occurs amongst various groups, demonstrating that communal conflict is a cross-group issue. It might happen between villages, between kindred, or between other communal groups. Many of Nigeria's community confrontations are caused by competition for access to and control of socially valued environmental and economic items including land, water resources, and economic trees. (Ukpai, 2021).

### **2.2 Agriculture**

Nigeria's agro-ecological conditions are exceedingly diverse, allowing for the development of a wide range of agricultural products. Agriculture is one of the most important industries in the world. The sector is particularly important because of its potential for creating jobs as well as

its contribution to GDP and export revenue revenues. A thriving agricultural sector can ensure the availability of raw materials for industry while also providing gainful employment for the teeming populace. (Ojeka, Effiong & Eko, 2016). Agriculture is the study or practice of farming, which includes the cultivation of soil for the growing of crops and the keeping of animals for the production of food, wool, and other products, while agricultural productivity refers to the rise in agricultural produce per capital outlay. Due to its impact on economic growth and development, productivity has been a crucial problem in agricultural development initiatives for many years. It is also common knowledge that improving agricultural output is the simplest way for humanity to move from poverty to a state of relative material wealth. Increases in productivity generate wealth that can be used to satisfy future requirements, the ratio of final output to some measure of inputs, expressed in appropriate units, is defined as agricultural productivity. (Ojiya, Okoh, Mamman & Ngwu, 2017). Because of its positive effects on social and economic progress, employment, poverty, food security, civil conflict, and malnutrition, agricultural production has been a focus point of policymakers in many countries for many years. Due to current issues such as global warming and the Covid – 19 pandemics, agricultural production has also risen in prominence on countries' agendas and factors of agricultural productivity have become essential for scholars and decision-makers in light of the foregoing knowledge. (Ibrahim & Veysel, 2021).

### **2.3 Agricultural Output**

Agricultural output is the value of agricultural items generated during the accounting period, net of intra-branch consumption, and available for export and consumption prior to processing. (Ewetan, Fakile, Urhie & Odutan, 2017). Agricultural output is the value of agricultural items generated during the accounting period, net of intra-branch consumption, and available for export and consumption prior to processing. (Keji & Efuntade, 2020). There are a variety of economic activities associated to economic processes linked to agricultural processes that are carried out solely for the aim of profit. Livestock and forestry, fisheries, processing, and finally the selling of agricultural products are examples of these operations. (Babatunde, Biodun, Ibukun & Bode, 2017). Agricultural output and per capita income are thought to have a positive relationship in theory and an increase in agriculture production and the resulting output indicates that there is a surplus for export markets, resulting in domestic agricultural supply and industrial demand. The surplus agricultural output is then exported, generating foreign exchange for the domestic economy. Increased foreign exchange revenues result in higher national income and, as a result, higher per capita income. (Osagie, Lawson & Eriki, 2016).

### **2.5 Climate Change**

Agriculture is perhaps one of the sectors most harmed by climate change. Technological advancement attempts to alleviate the consequences of climate change, making it more necessary than ever to attract, retain, and develop qualified personnel (Komives and Dajnoki 2016). Extremes of climate change are projected to have a negative impact on the four pillars of food security – availability, access, utilization, and stability – as well as their relationships. Climate change influences food quantity and quality (through direct effects on yields), water availability and quality, the prevalence of pests and illnesses, and pollination (Daniel, Janos &

Monika. 2021). Climate change has become a greater danger not just to the sustainable growth of any nation's socioeconomic and agricultural operations, but to the entire human life. Overcoming the obstacles created by climate change in agricultural output, which affects economic growth, will rely on farmers' use of technology. Climatic change impacts agriculture in a variety of ways, including changes in average temperatures, precipitation patterns, rainfall, and climate extremes (e.g., heat waves), changes in pests and diseases, changes in the nutritional content of some foods, reduced crop production, and drought-prone zones have seen a significant decrease in production, posing a danger to national food security and resulting in a loss of raw material export profits. Climate change might have a negative impact on food production owing to geographical shifts and yield variations in agriculture, a drop in the quality of water available for irrigation, and land loss. (Deborah & Patience, 2019).

## **2.6 Boundary Dispute**

Boundaries are as old as man, and are thus not a new phenomenon in the connection between man, his environment, and his fellow humans. On a larger scale, land border disputes have plagued Africa as a whole Nigeria inclusive, owing in part to her colonial and postcolonial histories. There are various lengthy wars pertaining to the dividing of two or more ethnic groups who either share cultural values or have lived side by side for countless years, from Southern Africa through North, East, West, and Central Africa. As a result, the impact of border conflicts on intergroup interactions has risen in recent years across Africa. The Ogaden boundary issue between Ethiopia and Somalia, the Bakassi Peninsula between Nigeria and Cameroon, to name a few, would be among these disputes. (Israel, Udoh & Okpalaeke, 2017). The issue of boundary disputes in Nigeria's southern region began to gain traction when government officials and communities began to delimit boundaries in order to increase economic activity in the frontier areas, particularly through the exploitation of forest resources, the most important of which were timber, palm oil, and other cash crops. Government actions, such as the delimitation of borders by government officials, were another source of boundary conflicts and most boundary disputes would not have arisen if boundaries delimitation had not occurred. (Israel et al, 2017).

## **2.7 Theoretical Framework: Conflict Theory**

Conflict theory was used for this work. Conflict theory was first purported by Karl Marx; it's a theory that states that society is in a state of perpetual conflict because of competition for limited resources. Conflict theory holds that social order is maintained by domination and power, rather than by consensus and conformity. Those with wealth and power try to hold on to it by any means possible, chiefly by suppressing the poor and powerless. A basic premise of conflict theory is that individuals and groups within society will work to maximize their own wealth and power. The theory has been used to explain a wide range of social phenomena, including wars, revolutions, poverty, discrimination and domestic violence. Central tenets of conflict theory are the concepts of social inequality, the division of resources and the conflicts that exist between different socioeconomic classes. Conflict theory is useful in explaining the underlying factors driving resource-based conflicts between the communities involved, in the sense that rivalry for finite resources provides the basis for the conflict between the two groups.

Resources are not uniformly distributed in society, and various groups' interests collide in the pursuit of their personal or collective goals, which is destined to result in conflict.

## **2.8 Empirical Review**

Ajayi et al (2020), studied the effect of communal conflict on yam production in Agatu Local Government Area of Benue State, Nigeria. Two staged random sampling technique was used to select 75 respondents for the study. Both descriptive and inferential statistics was used to analyze the data collected. The major cause of communal conflicts as identified by the respondents include straying of cattle into neighboring farm (100.00%), destruction of crops (93.33%), over-grazing of lands (92.00%) among others. The result of the regression analysis shows that frequency of communal conflicts was found to be statistically significant at 1% level of probability, thus had negative effective on yam production. In conclusion communal conflicts had negative and significant effect on yam production in the study area. It was recommended that there is need for educational intervention in farmer/herdsmen conflict which could be achieved by creating better awareness of land use regulations among farmers and herdsmen.

## **2.9 Gap in Literature**

A plethora of studies has been carried out in the area of communal clash and agricultural production. However, from the studies carried out, extant works have either looked at general factors causing the clash between communities. Other studies investigated effect of communal clash on yam production and some selected crop yield. Hence, what stands this study out is its interest on boundary dispute and climate changes on how they relate to agricultural production. It also updates the research on the influence of communal clash on agricultural production in Awka North, in Anambra State, Nigeria

## **3. Methodology**

### **3.1 Research Design**

This study used descriptive research design which was aimed at eliciting information from the supposed sample of the study by way of asking questions, collecting and analyzing data from a supposedly representative members of the population at a single point in time with a view to determine the current situation of that population with respect to one or more variable under investigation.

### **3.2 Area of Study**

The area of the study is Awka North Local Government area of Anambra State. Awka North is one of the twenty-one (21) local governments in Anambra state. The towns that make up the local government area are AwbaOfemili, Ugbene, Ebenebe, Achalla (the capital), Urum, Amansea, Amanuke, IsuAniocha, Mgbakwu, and Ugbenu. Awka North is in one of the acclaimed agricultural zones of the state. It is created in 1991 and is located in the Anambra North Senatorial Zone of the State. They supply food to other surrounding Local Governments Areas around, hence the assertion as one “one of the acclaimed agricultural zones of the state”.



### 3.3 Population of the Study

The population of the study is made up all the agricultural cooperatives in Awka North local Government Area of Anambra State. Awka North local Government Area has 157 registered cooperative societies out of the 157 registered cooperative 141 of them are agricultural cooperative societies with a membership size of nine hundred and twenty-seven (927) members (Cooperative Department Ministry of Commerce and Industry, Awka, Anambra State).

### 3.4 Sample Size and Sampling Procedure

To determine the sample size from the population of 927 members of agricultural cooperative, Taro Yamane formula was used.

To determine the sample size, for the purpose of questionnaire distribution; the Taro Yamane formula was used. The formula is stated thus:

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

Where: n = sample size  
 N = population  
 e = Margin of error (5% or 0.05)  
 I = Constant

Substituting in the above formula:

$$\begin{aligned} N &= 927 \\ &= \frac{927}{1+927(0.05)^2} \\ &= \frac{927}{1+2.3175} \\ &= \frac{927}{3.3175} \\ &= \mathbf{279} \end{aligned}$$

### Source of Data

Questionnaire was employed to access the primary data, which was used for data analysis.

### 3.5 Method of data Analysis

Data collected was analyzed using descriptive statistics (frequencies, percentages, mean, and standard deviation) and the inferential statistics such as multiple regression models. The hypotheses of the study were tested using the regression model of the Ordinary Least Square (OLS). T-test and F-test statistics in the regression results will be used to test the significance overall fitness of the model.

### 3.6 Model Specification

Thus, the model of this study is stated as follows:

The models for this study are specified as follows:

Implicit Model

$$\text{AGO} = f(\text{BND}, \text{CLC}) \dots\dots\dots\text{eq (1)}$$

The model is explicitly specified as follows;

$$\text{AGO} = \alpha + \beta_1 \text{BND}_1 + \beta_2 \text{CLC}_2 \dots\dots\dots, \text{eq (2)}$$

The model is explicitly specified as follows;

The double log form of the model is specified to avoid having a spurious result by ensuring that all the variables are on the same scale for measurement:

$$\text{Log AGO} = \alpha + \beta_1 \text{log LND}_1 + \beta_2 \text{log CLC}_2 \dots\dots\dots\text{eq (3)}$$

The econometric form of the model becomes more realistic with the introduction of the random or scholastic term  $\varepsilon$ : The econometric form of the model is express thus:

$$\text{Log AGO} = \alpha + \beta_1 \text{log BND}_1 + \beta_2 \text{log CLC}_2 + \varepsilon \dots\dots\dots\text{eq(4)}$$

Where; **AGO** = Agricultural Output

**BND** = Boundary dispute

**CLC** = Climate Change

$\beta_0$  = Intercept of the model

$\beta_1 - \beta_2$  = Parameters of the model

$\alpha_i$  = Stochastic error term

### 3.7 Data Analysis

#### Descriptive Statistics

**Table 1: Descriptive Statistics of Responses**

S/N	Characteristics	Respondents Category	Frequency	Percentage
1	Gender	Male	193	69%
		Female	86	31%
		<b>Total</b>	<b>279</b>	<b>100%</b>
2	Age	26 - 35	73	26%
		36 – 45	89	32%
		46 – 55	75	27%
		56 - 65	36	13%
		Less than 25	6	2%
		<b>Total</b>	<b>279</b>	<b>100%</b>
3	Educational Qualification	Primary School	86	31%
		Secondary School	110	43%
		Tertiary Education	11	4%
		Apprentice	36	13%
		No formal education	25	9%
<b>Total</b>	<b>279</b>	<b>100%</b>		
4	Marital Status	Single	25	9%
		Married	201	72%
		Divorced	17	6%
		widow	36	13%
<b>Total</b>	<b>279</b>	<b>100%</b>		
5	Estimated Annual output	6 – 10 bags	6	2%
		11 – 15 bags	17	6%
		16 – 20 bags	64	23%
		21 – 25 bags	84	30%
		26 - 30 bags	109	39%
<b>Total</b>	<b>279</b>	<b>100%</b>		



**Source: Field Data, 2021**

Table 1 shows the percentage of respondents in relation to various causes of conflict between farmer and herders in the study area. Male 193 (38.69%) while female is 86(31%)

Concerning age of the respondents 73(26%) were between the age of 26 -35 years. 89(32%) were between 36 – 45 years, 75 (27%) of the respondents were 46 – 55 years old, 36(13%) were 56 - 65Years old while 6(2%) were less than 25 years.

86(31%) of the respondent had primary school education qualification, 110(43%) has secondary education qualification, 11(4%) has Tertiary education qualification, 36(13%) are Apprentice while 25(9%) has no formal education.

As regards marital status of the respondents 25(9%) are single, 201(72%) were married, 17(6%) were divorced, while 36(13%) were widow.

However, the annual output of the respondents, 6(2%) produced 6-10 bags, 17(6%) produced 11-15 bags, 64(23%) of the respondents produced 16 -20 bags, 84 (30%) produced 21 – 25, while 109(39%) produced 26 – 30 bags.

**Table 2: Estimation of sense of boundary dispute in the Study Area**

Mean estimation Statement	Number of observation = 279			
	Mean	Std. Dev.	Max	
Boundary dispute has led to lengthy wars among communities thereby making farming impossible	4.77*	5659532	3	5
Boundary dispute has divided two or more neighboring communities who either share cultural values for countless years	4.43 *	8439326	2	5
Boundary dispute has led to loss of live and properties reducing the number of farmers.	4.21*	.9243616	2	5
Boundary dispute has conflict has displaced so many families leaving the farm unattended.	3.34 *	1.538857	1	5

**Source: Field Data, November, 2021.** (Note: \* Accepted, \* \* Rejected. n = 279)

Table 2 shows the estimation of sense of boundary dispute in the Study Area. Results revealed that boundary dispute has led to lengthy wars among communities thereby making farming impossible has the (mean=4.77), Boundary dispute has divided two or more neighboring communities who either share cultural values for countless years (mean= 4.43), Boundary dispute has led to loss of live and properties reducing the number of farmers. (mean=4.21), Boundary dispute has conflict has displaced so many families leaving the farm unattended(mean=3.34). The respondents agreed to all the above statements relating to boundary dispute.

**Table 3: Estimation of sense of climate change in the study area.****Mean estimation Number of observation = 279**

<b>Statement</b>	<b>Mean</b>	<b>Std Dev</b>	<b>Min</b>	<b>Max</b>
Human nourishment are lowered due to weather change affecting farmers	4.61*	.7091751	2	5
Crop yields have diminished due to rising temperatures and decreasing rainfall	4.61*	.6497086	2	5
Weather change has increased in food shortage due to flood and drought	4.3*	.915633	2	5
food availability is greatly affected due to climate change	4.09*	1.110965	2	5

**Source: Field Data, November, 2021.** (Note: \* Accepted, \*\* Rejected. n = 279)

Table 3 shows the estimation of sense of climate change in the study area.

Results revealed that human nourishment are lowered due to weather change affecting farmers (mean=4.61), Crop yields have diminished due to rising temperatures and decreasing rainfall (mean=4.61), Weather change has increased in food shortage due to flood and drought (mean=4.3), food availability is greatly affected due to climate change (mean=4.09). The respondents agreed to all the above statements relating to climate change.

### **Test of Hypotheses**

The test is used to know the statistical significance of the individual parameters.

### **Table 4 Hypothesis One**

**H<sub>01</sub>:** There is no significant relationship between climate change and agricultural output of the respondents in the study area.

### **Effect of climate change on agricultural output in the area.**

#### **Regression Estimate of climate change and respondents agricultural output in the study area**

<b>Reduction in farm yield</b>	<b>Coef.</b>	<b>Std. Err.</b>	<b>t</b>	<b>P&gt; t </b>
Human nourishment are lowered due to weather change affecting farmers	<b>.5025587</b>	<b>.1284573</b>	<b>3.91</b>	<b>0.000</b>
Crop yields have diminished due to rising temperatures and decreasing rainfall	<b>.2205228</b>	<b>.141297</b>	<b>1.56</b>	<b>0.122</b>
Weather change has increased in food shortage due to flood and drought	<b>-.0807656</b>	<b>.0957546</b>	<b>-0.84</b>	<b>0.401</b>
food availability is greatly affected due to climate change	<b>-.1411542</b>	<b>.0773544</b>	<b>-1.82</b>	<b>0.071</b>
<b>_ Constant</b>	<b>1.961207</b>	<b>.8225526</b>	<b>2.38</b>	<b>0.019</b>
R	.84347			
R <sup>2</sup>	0.2259			
Adjusted R	0.1933			
Prob> F	0.0001			

**Source: Researcher's computerization**

The regression analysis on Table 4, the coefficient to multiple determination  $R^2 = 0.2259$ , describes the extent to which the dependent variable is being explained by independent variable. This implied that only 22% of variations in agricultural output are caused by climate change. Only variable with p-value less than 0.05 is statistically significant, looking at Table 4 the variable analyzed is significant. The regression coefficient for resource use p-value is 0.0001 which is below 0.05. Therefore, climate change has significant effect on respondents' agricultural output in the study area.

### Table 5 Hypothesis Two

**Ho<sub>2</sub>:** There is no significant relationship between boundary dispute and agricultural output of the respondents in the study area.

#### Effect of boundary dispute of the communities on agricultural output in the area.

#### Regression Estimate of boundary dispute and respondents agricultural output in the study area

<b>Farming activities are generally affected by boundary dispute</b>	<b>Coef.</b>	<b>Std. Err.</b>	<b>t</b>	<b>P&gt; t </b>
Boundary dispute has led to lengthy wars among communities thereby making farming impossible	<b>.1070993</b>	<b>.0689831</b>	<b>1.55</b>	<b>0.124</b>
Boundary dispute has divided two or more neighboring communities who either share cultural values for countless years	<b>-.0740343</b>	<b>.0474315</b>	<b>-1.56</b>	<b>0.122</b>
Boundary dispute has led to loss of live and properties reducing the number of farmers.	<b>-.0363274</b>	<b>.0424148</b>	<b>-0.86</b>	<b>0.394</b>
Boundary dispute has conflict has displaced so many families leaving the farm unattended	<b>.0516909</b>	<b>.0260595</b>	<b>1.98</b>	<b>0.050</b>
<b>_ Constant</b>	<b>4.667399</b>	<b>.402974</b>	<b>11.58</b>	<b>0.000</b>
R	.38615			
R <sup>2</sup>	0.0747			
Adjusted R	0.0358			
Prob> F	0.1137			

**Source: Researcher's computerization**

The regression analysis on Table 5, the coefficient to multiple determination  $R^2 = 0.0747$ , describes the extent to which the dependent variable is being explained by independent variable. This implied that only 7% of variations in agricultural output are caused by boundary dispute.

Only variable with p-value less than 0.05 is statistically significant, looking at Table 5 the variable analyzed is not significant. The regression coefficient for resource use p-value is 0.1137 which is above 0.05. Therefore, boundary dispute has no significant effect on respondents' agricultural output in the study area. The null hypotheses were accepted.

#### **4. Discussion of findings**

From the findings of the study, it was discovered that communal clash significantly affects agricultural production in the Awka North Local Government Area in Anambra State.

With a regression coefficient for climate change p-value is 0.0001 which is below 0.05, communal clash has significant effect on respondent agricultural output in the study area this is in line with Ajayi et al (2020), who opined that communal clash had negative effect on yam production in Agatu Local Government Area of Benue State, Nigeria. This study is also in line with Kughur et. al (2017) who observed that conflicts have not only increased instability, but they have also shown a significant propensity to exacerbate the food crisis in Nigeria and other afflicted nations by causing farmers to lose their lives, animals, crops, and precious property.

However, with a regression coefficient for boundary dispute p-value of 0.1137 which is above 0.05 indicates that boundary dispute has no significant effect on respondents' agricultural output in the study area. This finding is in contrast with the above study, meaning that there could be other factors that affect agricultural output other than boundary dispute in the study area.

#### **5. Conclusion**

In conclusion, climate change has altered agricultural output of respondents in Awka North in Anambra State in terms of lowering human nourishment, Crop yields have diminished due to rising temperatures and decreasing rainfall and food availability is greatly affected due to climate change.

However, boundary dispute seems not to have significant effect on agricultural output meaning that there could other factors that influence agricultural output in the area.

#### **Recommendations**

1. Anambra State government need to make policies that would enhance peaceful coexistence among the communities in Awka North local Government Area to enable farmers in the area attain their full potential in agricultural production.
2. Anambra State Ministry of Agriculture needs to intensify efforts in the provision agricultural inputs such as fertilizers so as to enhance soil manure for increased agricultural production.

#### **Suggestion for Further Studies**

With a regression coefficient for boundary dispute p-value of 0.1137 which is above 0.05, indicates that boundary dispute has no significant effect on respondents' agricultural output in the study area. This finding is in contrast with the above study, meaning that there could be other factors that affect agricultural output other than boundary dispute in the study area; hence there is need for further studies in order to find out other factors that might have caused communal clash in the study area.

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