



The Effect of Insecurity on Food Security in Nigeria, 1960-2024

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ABSTRACT

The research investigate the effect of insecurity on food security in Nigeria. The specific objectives of the study are to examine the causes of food insecurity and to determine the effect of insecurity on the food security in Nigeria. The data cover for 65 years which ranges from 1960-2024. The data was generated from Bureau of Statistical in Nigeria. The technique analysis for the data is Regression analysis. The finding of the study was that, insecurity, rural-urban drift and farmers' productivity were the major causes of food insecurity in Nigeria. And the effect of insecurity in Nigeria is negatively to the food security in the country. The recommendation for the study was that the Federal government of Nigeria should take the issue of insecurity paramount as it is the major determinant to the economic growth in the country.

Introduction

Food security is a critical component of human well-being that has existed since the dawn of civilization. Initially, a nation's ability to obtain enough food to meet its dietary energy needs was referred to as food security (Pinstrup-Andersen, 2009). Approximately half a century ago, during the early 1970s global food crises, the idea of food security was born. There were several definitions of food security published in various works about forty years ago (Maxwell & Smith, 1992). The basic three things that every human being needs are food, clothing, and shelter; these are referred to as basic needs. It is especially significant for countries with large populations and inadequate agricultural infrastructure.

Over time and space, food security has evolved over the past few decades. As the global food system has evolved and the nature of the food problem has become more widely understood, the concept of food security and its methods have occasionally been developed and adjusted (Barichello & Clay, 2003).

At a 1974 conference organized by the Food and Agricultural Organization (FAO) of the United Nations, the world community for the first time came up with strategies to ensure food security for the hungry by producing enough food, guaranteeing food supply, and providing safety from price fluctuations (Anderson and Cook, 1999). A basic or fundamental human need is food security, and one of the biggest issues of the century is ending hunger. The World Bank (1986) defines food security as "the state in which all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life." It is a state where everyone always has access to enough food that is sufficiently nutritious for an active and healthy life (IFPRI, 2019). Human health and the nation's political and economic stability are both impacted by food security, making it a vital aspect of life (Napoli, De Muro and Mazziotta, 2011).

Nigeria's lack of food security, according to Cabral, Yeboah, and Laborde (2016), is caused by a number of factors, including a lack of social amenities like roads, railroads, and ports, which make it difficult to move food from production to consumption, and farmers' restricted access to agricultural inputs like seeds, fertilizer, and pesticides, which makes it challenging to boost yields. The fact that crop production in many African countries depends heavily on rainfall, the Boko Haram conflict, farmer-herder conflicts, and other types of insecurity all hampered productivity and food production, making it harder for people to obtain the food they require. The insecurity slows growth and reduces agricultural output. In light of this, this study employed a quantitative methodology to examine the relationship between food security and insecurity using the elements of food security, with a particular emphasis on offering insights into how insecurity affects people's lives, food security, and the country's economy as a whole.

Statement of the Problem

The high rate of poverty in Nigeria has an impact on people's access to and proper use of food because of low agricultural yields, limited access to inputs, and inadequate infrastructure. The production and equitable distribution of food may be impacted by environmental issues like flooding, natural disasters, and climate change. Political and economic instability are inevitable, and they eventually cause food markets to become disrupted and prices to rise, which will have a negative impact on economic growth. About 40% of Nigerians live below the poverty line, and food insecurity is a significant problem for them. Increasing the amount of investment in the agriculture sector to improve food security is a significant challenge. Due to poverty and a lack of knowledge about meals, people's purchasing power is low, which means they cannot afford the food required for economic growth.

Due to the activities of terrorists, poor households in Nigeria have experienced severe food insecurity since 1999. This situation is expected to persist among households in the affected country. Other factors that have contributed to this insecurity include the Boko-Haram insurgency, banditry, and the farmers-herders class (Rasheed, 2013). Food insecurity is higher in conflict-affected countries than in non-conflict-affected countries, according to the FAO (2017). In the short term, violent conflicts may have an impact on people's nutritional health. Their livelihoods may suffer long-term effects from this.

Farming households, whose primary source of income is farming, have been particularly impacted by the state of insecurity. Due to the risk to their lives, households that participate in production are frequently unable to visit their farms due to concerns about terrorists (2013, Rasheed). In light of this, studies find out if the nation lacks the resources to ensure food security for its citizens or if the insecurity was the root cause.

Research Question

The research question are as follows:

What are the causes of food insecurity in Nigeria?

What is the effect of insecurity on food security in Nigeria?

Objectives of the study

The major objective for this work is to examine the effect of the insecurity on the agricultural sector in Nigeria while the specific objectives are as follows:

To determine the major causes of food insecurity in Nigeria

To examine the effect of insecurity in Nigeria on food security

Justification of the study

Nigeria was a nation that was able to meet the needs of its people in terms of food security during the years prior to and few years following its independence. It had a pyramid of groundnuts in the North, cocoa in the West, and palm oil in the Eastern parts of the country. However, following its independence, Nigeria abruptly became dependent on other nations for survival, in addition to experiencing insecurity following the 1967–1970 civil war. Following the discovery of crude oil in Nigeria in the early 1970s, which led to the neglect of the agricultural sector of the economy, there have been various forms of terrorism in the nation ever since. And as a result, the nation was unable to feed itself. Since nothing goes well in any country in the world without peace, insecurity is a crucial variable under the independent variable in the model. It functions as a dummy variable measure with zero and one (0&1). Score of 0 indicates that terrorism does not exist in the nation, while a score of 1 indicates that it does. The information spans the years 1960–2024. In order to account for the amount of food produced in Nigeria prior to the civil war, acts of terrorism, and the discovery of crude oil in the nation, the date was chosen.

Literature Review

Scholars have conceptualized the term "food security" in a variety of ways. Different opinions and conflicting perceptions have caused the meaning to change over time. Food security has historically been brought up in discussions about international food issues during a global food crisis in the middle of the 1970s. Food supply issues, particularly how to ensure food availability and price stability of staple foods on a national and international level, were the primary focus when food security first emerged. The crisis was sparked by the way the global food economy was organizing, which was reflected in the supply-side, international, and institutional factors concerns (World Food Programme, 2009).

Several factors have been identified by Haile (2005) as the cause of Africa's precarious food insecurity. Low agricultural productivity, a lack of agricultural policies, inadequate infrastructure and high transportation costs, a lack of suitable marketing strategies, numerous extreme weather events, a high prevalence of diseases like HIV/AIDS, a lack of safety nets and financial support systems, and religious and political conflicts are some of these.

Babagana, Ismail, Mohammed, and Dilala (2018) investigated the impact of Boko Haram terrorism on agricultural activities in Yobe State's Gujba Local Government Area using a mixed-method descriptive survey design. 394 respondents in all participated in the study. Data was gathered using closed-ended questionnaires and structured interviews. Their research revealed that Boko Haram's terrorism had initially (2012–2016) profoundly impacted all normal human activities in the area, including farming, to the extent that crop and animal production virtually ceased, and many farmers had to flee for two years (2014–2016). However, food assistance, which is given by a number of non-governmental organizations, is still necessary for returnees. They only looked at one LGA (Gujba) in Yobe state, and they only used descriptive statistics to analyze the quantitative data they collected. Therefore, it was not possible to determine with certainty how much Boko Haram impacted agricultural activities.

A 2017 study by Abubakar, Salihu, and Kwajafa examined how the Boko Haram insurgency affected local farmers' productivity in Adamawa State. The target population was given 333 questionnaires as part of the study. Both descriptive and inferential analysis were used in the study. The logit model was used to determine the productivity of local farmers in the study area. The primary findings show that the income and productivity of peasant farmers in the affected areas have decreased. Female farmers make up the majority of farmers in the affected areas, and they are no longer able to access credit

facilities. They also found that the instability brought on by Boko Haram terrorism has often harmed tens of thousands of people whose main source of income is farming, and has compelled large-scale farmers to leave their farms in order to defend themselves in Adamawa Northern and portions of Central Senatorial zones. Economic activity has been somewhat hampered as a result of the state's internally generated revenue declining. The qualitative method was not used in the study, despite the fact that both descriptive and inferential statistics were used to analyze and report the data. This would have allowed the researchers to adequately address the question of why the quantitative findings were what they were. This is due to the subjective nature of the majority of quantitative questions, which prevent respondents from voicing some of the concerns raised. However, this might have been possible if the survey method had included follow-up questions in the form of Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs) to further validate or otherwise.

Jara and Bunu (2021) used primary data, such as questionnaires and interviews, to investigate how Boko Haram terrorism affected crop production in Northern Adamawa State. The study used a combination of simple and multistage random sampling techniques to select 278 respondents. According to the results of the descriptive statistics used to analyze the data, the farmers who produced between 1100 and 2000 kg of rice, cowpeas, groundnuts, sorghum, and maize before the start of Boko Haram terrorism were 80, 125, 20, 27, and 30 kg, respectively. Additionally, they found that during the time of relative peace in the region, 115, 138, 135, 80, and 76 kg of maize, sorghum, groundnuts, cowpeas, and rice were distributed to farmers, respectively. A much greater number of farmers are currently producing fewer kilograms of crops, which ultimately results in lower output, as compared to the output that was achieved in the study area prior to the terrorist attack.

According to the findings of the multiple regression analysis, Agri, Blessing, and Eneji (2019) employed the Ordinary Least Squares method of multiple regression analysis of time series data using Agricultural Gross Domestic Product (AGDP). In Balanga LGA of Gombe State, the case study for the study on the effect of insurgency on agricultural productivity in Nigeria, they were able to ascertain that insurgency significantly affected the level of agricultural productivity. Because the local government shares a border with some local government areas in Borno state, major farmers in the local government are afraid to travel to distant farms for their safety. They used inferential statistics as a powerful analytical tool. However, the lack of accuracy and credibility of the data bank, particularly with regard to government agencies, makes relying on secondary data collected over time potentially misleading. Therefore, qualitative data ought to have been used to bolster their conclusions.

Tari, Kibikiwa and Umar (2016) argued in their work that Boko Haram terrorism has affected the food security status of local government areas in the Adamawa Northern Senatorial district. The study is descriptive in nature and employs a combination of purposive and fundamental random sampling techniques. The food security line was used to determine the daily calorie intake of 1060 kcal and 1150 kcal. Mubi North, Maiha, and Hong reported food insecurity at 1003 kcal and 963 kcal, respectively. The Logit Regression Model was used to determine the food security status of the households in the study areas. According to the study, the agricultural sector usually takes the brunt of terrorist activity in these areas, and there is still a high rate of malnutrition, especially among children in the study area. In Northern Adamawa and portions of Central Adamawa, particularly in the local government areas of Mubi North, Maiha, Hong, and Gombi, poor harvests have been reported. The study focuses on this issue and forecasts that Boko Haram's operations could lead to severe food insecurity, or hunger, in Northern Adamawa state, with agriculture being the most affected economic sector. They also discovered that Boko Haram's terrorist activities had a major effect on the food security status of families in the study area. According to their thorough analysis of family calorie consumption, terrorist activities in the case study areas continue to present significant obstacles to agricultural and family food security. Many households that rely on agricultural products as their primary source of food and family income have suffered as a result of the crisis. An obviously insufficient method of examining the impact of Boko Haram on food security was to use the food security line as a stand-in for the degree of food insecurity experienced by the study population. The researchers would have used more advanced and well-known proxies, such as the four pillars of food security, Food Frequency Scores (FFS), and Dietary Diversity Score (DDS), to assess the extent, complexity, and degree of food and nutrition insecurity associated with Boko Haram activities in the study areas. A valuable resource that significantly increases the productivity of individuals, companies, and the overall national economy is the protection of people and property. Low productivity could result from its jeopardization, especially in the agricultural sector where land is the main fixed rather than mobile factor of production. The productivity of farmers has been negatively impacted by insurgency, according to numerous empirical studies, particularly in regions where Boko Haram Sects have taken control.

To bolster the aforementioned assertion, Ojo, Usman, Mohammed, Ojo, and Oseghal (2018) examined how insurgency affected the productivity of food crop farmers in Borno and Gombe states and compared the levels of terrorism in the two states. In order to collect primary data using a structured questionnaire, they employed a survey research design and a two-stage sampling technique. The study employed Ordinary Least Square regression to determine the impact of terrorism on the productivity of food crop farmers. Their results showed that terrorists' activities had a major and detrimental effect on the productivity of food crop farmers in the study area. Many farmers reside in the IDP camps, where farming is impossible, and as a result of their fear of being killed, their productivity has drastically dropped. Their study would have been more illuminating and, in fact, more appealing if they had used the mixed method (triangulation) to arrive at the findings both within and across the two study areas.

"The Effect of Boko Haram on Farm Output in Biu Local Government Area of Borno State," a study conducted by Usman (2019), selected 380 household heads from four wards in the Biu Local Government Area to participate as respondents. Descriptive statistics were used to examine the socioeconomic traits of the respondents in the Biu region. T-test statistics were used to compare the output levels prior to and during the height of Boko Haram's activities in the Biu local government. The results revealed a significant difference in output between before and during the peak of Boko Haram activity. The agricultural output of the local farmers was greatly impacted by Boko Haram's activities. The outputs all had very high T-values: 11.71 for maize, 10.97 for groundnuts, 12.38 for cowpeas, 12.34 for sorghum, and 11.15 for rice. The P-value for each of the outputs was less than 0.05, or .000, suggesting that Boko Haram activities have had a major influence on the region's crop production. The results also showed that Boko Haram terrorism had a negative effect on the agricultural output of the farmers in Biu local government because of the widespread migration from the crisis area, the destruction of

agricultural products, the abandonment of fertile farms, and the steep drop in farm income. Some farmers were killed on their farms as a result of Boko haram attacks, which added to the nation's food insecurity.

Methodology

Source of Data

The data is sourced from Bureau of Statistics of Nigeria which is Time Series data from 1960-2024.

Analysis technique

The Technique used to analyse the data is Regression model

Model Specification

The Model specification is based on the Developmental Indicator Model. The variables under consideration are food production, urban drift, insecurity, rural population and transportation cost.

Food production is a dependent variable while others are independent variables.

Food production = f (farmers' productivity, insecurity, rural-urban drift, transportation cost)

$FPD = f (prd + ins + rud + tpc)$

$FPD = f (\beta_0 + \beta_1 PRD + \beta_2 INS + \beta_3 RUD + \beta_4 TPC + \mu)$

Where

FPD = Food Production

PRD = Farmers' Productivity

INS = Insecurity

RUD = Rural-Urban Drift

TPC = Transportation Cost

$\beta_0, \beta_1, \beta_2, \beta_3$ and β_4 are parameters

μ is error term

Result and Discussion

Dependent Variable: FPD

Method: Least Squares

Date: 12/18/24 Time: 08:01

Sample: 1960 2024

Included observations: 65

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1847.588	199.7158	-9.251088	0.0000
PRD	21.54643	2.358169	9.136933	0.0000
RUD	-3.75E-09	1.08E-09	-3.472693	0.0010
TPC	7.74E-05	6.40E-06	12.09997	0.0000
INS	-51.45815	17.06507	-3.015407	0.0038
R-squared	0.908852	Mean dependent var		93.54708
Adjusted R-squared	0.902775	S.D. dependent var		103.1300

S.E. of regression	32.15683	Akaike info criterion	9.852930
Sum squared resid	62043.70	Schwarz criterion	10.02019
Log likelihood	-315.2202	Hannan-Quinn criter.	9.918925
F-statistic	149.5673	Durbin-Watson stat	2.380719
Prob(F-statistic)	0.000000		

In the above the table, if all other factors are held constant, a 1% increase in farmer productivity would result in a 215% increase in Nigeria's food production; however, this is not the case because many of them engage in subsistence farming. At the 5% level, it is noteworthy. If all other factors remain unchanged, a 1% increase in rural-urban drift will result in a 38% reduction in Nigeria's food production. This is the case because many young people are rushing to the city and obtaining white-collar jobs rather than staying in the village where they left their parents to work in a tolling ground where their food production is low because of their power. At the 5% level, it is also significant.

Holding every other variable constant an increase in the transportation cost by 1% it will lead to 77% increase in the food production in the country, this is so because many of this farmer will find it difficult to buy food rather they will end up produce what they and their families will eat throughout the year. And it is significant at 5% level. Holding every other variable constant an increase in the insecurity by 1% it will lead to 515% decrease in the food production in the country. Because of their fear of being killed or abducted by the nation's terrorists, many farmers abandon their produce to the mercy of God rather than risk any of these outcomes. Since insecurity prevented them from harvesting their farm produce, they ultimately turned to stealing food from neighboring farms or houses, and even setting food on fire, in order to provide for their family. At the 5% level, it is also significant. The independent variables explain the variation in the dependent variable, according to the 91% R square. At the 5% level of significance, the F-Statistics is highly significant.

This indicates that Nigeria's food production was significantly impacted by insecurity. The primary causes of food insecurity in Nigeria are insecurity, followed by rural-urban drift and farmer productivity. This result is consistent with Haile's (2005) research, which found that low productivity, a weak safety net, high transportation costs, and other factors are the main causes of food insecurity in Africa. According to research by Bello (2024) and Abubakar, Saliyu, and Kwajafa (2017), insurgency has a detrimental impact on Nigeria's food security. They both believe that insurgency contributed to a decline in the country's food production.

The recommendation for the study is that the Federal government of Nigeria should take the issue of insecurity paramount as it is the major determinant to the economic growth in the country. And that the community should join hands to fight any element of social vices in their areas.

References

- Abubakar, E.S., Saliyu, Z.H., & Kwajafa, A.P. (2017). Effect of Boko Haram Insurgency on the Productivity of Local Farmers in Adamawa State, Nigeria. *Asian Journal of Economics, Business and Accounting*, 5(3): 1-7
- Agri, E. M., Blessing, B. & Eneji, A.G. (2019). The Effects of Insecurity on Agriculture Productivity in Nigeria: The Case Study of Gombe State. *Sumerian Journal of Business and Marketing*. 2(6): 59-69
- Anderson, M. D. & Cook, J. T. (1999). Community food security: Practice in need of theory? *Agriculture and human values*, 16 (2), 141-150
- Babagana, M., Ismail, M., Mohammed, B.G. & Dilala, M.A. (2018). Impact of Boko Haram Insurgency on Agricultural Activities in Gujba Local Government Area, Yobe State, Nigeria. *International Journal of Contemporary Research and Review*, 9(12): 20268-20282
- Barichello, R. & Clay, E. (2003). Trade Reforms and Food security. *Conceptualising the Linkages*. Rome, 123
- Cabral, A., Yeboah, J., & Laborde, D. (2016). Infrastructure constraints and food security in Sub-Saharan Africa. *Journal of Food Policy*, 2(60), 70-79.
- FAO (2017). Northeastern Nigeria: Situation Report- January 2017. Online: http://www.fao.org/fileadmin/user_upload/FAO_countries/Nigeria/ToR/FAO_Situation_Report_Northeastern_Nigeria_January_2017.pdf (Last accessed: 31/03/2021) .
- Haile, M. (2005). Weather pattern, food security and humanitarian response in sub-sahara Africa. *Philosophical Transactions of the Royal Society B; Biological Sciences*, 360, 2169-2182
- IFPRI (2019). Food security. USA: International Food Policy Research Institute
- Jare, N. & Bunu, G. M. (2021). Effect of Boko Haram insurgency on crop Production in Northern Adamawa state, Nigeria. *International Journal of innovative agriculture and Biology Research*, 9 (9): 24-31
- Maxwell, S. & Smith, M. (1992). Household food security: a conceptual review. *Household food security: concept, indicators, measurement*, 1, 1-72
- Napoli, M., De Muro, p., & Mazziotta, M. (2011). Towards a Food Insecurity Multidimensional Index (FIMI). *Master in Human Development and Food Security*.

- Ojo, M. A, Usman M. A. Mohammed U. S., Ojo A. O. & Oseghale A. I. (2018). Effect of insurgency on Food Crop Farmers' Productivity in Borno and Gombe states, Nigeria. *Ife Journal of Agriculture*, 30(3): 43-55
- Pinstrup-Andersen, P. and Pandya, L. R. (2009). *The unfinished agenda. Perspectives on overcoming hunger, poverty, and environmental degradation.* International Food Policy Research Institute: Washington DC.
- Rasheed, I. O. (2013). Boko Haram Insurgency and Democratic Consolidation in Nigeria. In Ikuejube, G. and Falade, D. A (Eds). *Socio-Political Conflicts and the Challenges of Democratic Consolidation in Nigeria.* Ibadan: John Archers.
- Tari, V. A. Kibikiwa, M.G. & Umar, K. (2016). The effects of Boko Haram insurgency on food security status of some selected local government areas in Adamawa State, Nigeria. *Sky Journal of Food Science*, 5(3): 12-18
- Usman, A. (2019). Effects of Boko Haram on Farm Output in Biu Local Government Area, Borno State, Nigeria. *International Journal of Research and Innovation in Social Science (IJRISS)*, 3(11): 56
- World Bank Annual Report (1986). Washington D.C.
- World Food Programme. (2009). WFP's food security definition and framework. Retrieved from <https://www.wfp.org/content/wfps-food-securitydefinition-and-framework>