

**BUMPER HARVEST AND MASS CORPSES: THE NEXUS BETWEEN
AGRICULTURAL REVOLUTION AND FARMERS - HERDERS
CONFLICT IN NIGERIA**

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Abstract

The persistent loss of lives and properties owing to the violent conflict between farmers and herders in Nigeria is unequivocally worrisome. This paper offers a critical appraisal of the role of the agricultural revolution in the emerging violence between farmers and herders in Nigeria which has defied all conciliatory attempts. A quantitative research design was adopted and secondary data were utilised for the study. The findings revealed a very strong relationship ($r=0.80$) between the agricultural revolution of the federal government and the growing frequency and intensity of the conflict. In addition, the conflict theory was adopted to further buttress the findings. Consequently, the paper suggests massive and consistent sensitisation of the public on the complexity of the conflict in order to depoliticise it; provision of adequate adaptation strategies to cushion the effects of climate change; adoption of ranching as an alternative to open grazing; strategic planning of urban development to allow for sustainability in land utilisation. This will unarguably translate to an end in the needless bloodbath ravaging the country.

Keywords: Agricultural Revolution, Conflict, Farmers, Herders

1. Introduction

The persistent loss of lives and properties owing to the sudden upsurge in the farmers-herders conflict in Nigeria has left no patriot in doubt of its severity and national importance. The frequency and intensity of the conflict in recent times has provoked political interpretations to the conflict from certain segments of the Nigerian populace who believe the conflict is aimed at dividing and ruling the citizens (Ibrahim, 2018). However, these interpretations are reflections of dissatisfaction with the manner with which the concerned authorities have dealt with the issue. This is because such allegations have remain grossly underrated due to lack of solid evidence (International Crisis Group [ICG], 2017), and hence do not negate the actual causations of the conflict. Clement & Peter (2017) attributed the conflict to parochial economic interest rather than communal interest. In his Muqaddimah, Ibn Khaldun (1332-1406) explained that conflict between farmers and nomads become inevitable when

climate becomes unfriendly and resources become scarce (Khalidun, 1986). Thus, climate plays an important role in the availability or scarcity of the natural resources – land, water and vegetation, needed by both farmers and herders. This resource scarcity has equally been noticed in Nigeria where areas of high fertility 50 years ago are now deserts spreading across 11 states of the federation (Integrated Regional Information Network [IRIN], 2009 In Adeoye, 2017). This has occasioned the influx of most herders southwards in search of pasture. The geometric increase in Nigeria's population has also been identified as a driver of the conflict given the massive urban sprawl associated with it which consumes part of the scarce land for infrastructural and residential purposes (Oli et al., 2018; Idowu, 2017). Imo (2017) observed that the increase in population has brought about a corresponding increase in food production owing to need to feed the growing population. This provoked a large scale food production to meet domestic consumption thereby causing an incursion into the acclaimed grazing fields of the herders. Consequently, the need to feed the populace on one hand and the need to feed the herds on the other hand on these scarce resources often times have resulted in severe conflict between farmers and herders leading to loss of lives and properties (Okoli & Atelhe, 2014).

Nevertheless, Nigeria has doubled its effort in boosting domestic food production through the economic diversification agenda of the Federal Government of Nigeria (FGN). This gathered momentum as oil prices in the international market became a source of worry to many nations. The agricultural sector has been identified as the propelling force behind this diversification process and thus has received the government's undiluted support especially in areas of food production (Ministry of Budget and National Planning [MBNP], 2017). The President Muhammadu Buhari-led administration is determined to at least double the growth rate in the agricultural sector (Federal Ministry of Agriculture and Rural Development [FMARD], 2017). Through the Agriculture Promotion Policy (APP), the radical revolution conceived has become a force to be reckoned with in Nigeria. In 2017, the agricultural sector accounted for over 25% to the country's GDP (NBS, 2018) with crop production accounting for 85% and other non-crop activities including livestock production accounting for 15%. Furthermore, the sector has engaged at least 70% of the country's labour force (FMARD, 2017). This commendable initiative has set the country on its path to greatness given the gradual attainment of self-sufficiency in food production and employment generation.

However, little or no attention has been paid to the connection between this agricultural revolution and the rising spate of farmers-herders conflict in the predominantly agricultural hubs of the country which spells doom for the future of the country (Musa et al., 2014). ICG (2017) observed that there has been a tremendous rise in the number of violent conflicts occasioned by the farmers-herders conflict in Nigeria with the conflict taking a new dimension. In the literatures of causation, the conflict has been linked to several social, political and environmental factors (Okoli & Atelhe, 2014; Malcolm & Adeleke, 2016; Idowu, 2017) but hardly have the literatures explored the link between the government policies on agriculture and the worsening conflict. Often times, the usual blame game of the government not providing adequate security in the country are dominant. However, while matters of insecurity are unarguably persistent, an ideal state of security does not imply the presence of armed security personnel on every farm. In fact, such is neither feasible nor sustainable. This reality thus necessitates the need for scholars of conflict resolution and social order to ransack the think tank for better and more workable solutions through proper diagnosis of the problem.

Consequent upon the above, this paper seeks to explore the role of the agricultural revolution in the worsening farmers-herders conflict as a means to filling the existing knowledge gap. This paradigm shift in the literature of causation provides deep insights into the conflict and breaks the ground for further exploration. This will also afford the concerned authorities an opportunity to resolve the lingering conflict through proper diagnosis which can guarantee its stoppage.

Research questions

- i. What is the impact of the agricultural revolution on Nigeria's economy?
- ii. How does the agricultural revolution affect the farmers-herders conflict in Nigeria?

Objectives of the study

- i. To assess the impact of the agricultural revolution on Nigeria's economy.

- ii. To examine the effect of the agricultural revolution on the farmers–herders conflict in Nigeria.

Methodology

The study adopted a quantitative research design and secondary data source for analysis. Data were gathered from relevant journals, textbooks, web articles and documents, quarterly and yearly GDP reports of the NBS, and news reports relevant to the topic. Both descriptive and inferential statistical tools were employed in the analysis of data. Tables and charts were used to present and describe trends in the data collected while the spearman correlation coefficient was used to test the association between the variables under study.

3. Conceptual Framework

Agriculture: Agriculture (also referred to as farming) has been conceived by Bareja (2014) as the art and science which focuses on growing plants and raising animals for food, other human needs, or economic gain. Thus, it involves the production of crops and animals either for food or commercial purpose (Agricdemy, 2017). The two common branches of agriculture are crop production (agronomy) and animal production (animal husbandry). Both branches play a key role in the agricultural sector with the dividing line being the end product (crops and meat respectively). Given the foregoing, there are basically two categories of farmers – crop farmers and animal farmers. Thus, the concept of farmers is used to refer to the crop farmers while the concept of herdsmen is used to refer to animal farmers (cattle herders).

Agricultural Revolution: The World Encyclopedia (2005) describes agricultural revolution as series of changes in farming practices in the 18th and early 19th centuries which brought about major changes in areas of crop rotation, new machinery, increased capital investment, scientific breeding, land reclamation and enclosure of common lands. Overton (2010) adds that agricultural revolution is characterised by significant changes in agricultural output and sometimes also in the organisation of production. Therefore, agricultural revolution encompasses all activities targeted at significantly improving on the present state of production in the agricultural sector for better subsistence and economic gains.

Conflict: Conflict is an inherent quality of human existence and has been defined in several scholarly ways. Jeong (2008) viewed conflict as any discord which arises due to any social situation such as differences in interest, values, and needs. Therefore, it is appropriate to regard conflict as a form of struggle over scarce resources. Thus, parties to a conflict are seen as rivals competing against one another to take advantage of the scarce resources. Both definitions have acknowledged the role of inadequacy or scarcity in the initiation of conflict.

4.1 Literature Review

Agriculture in Nigeria: An Overview

Food is a basic requirement for human survival. Thus, its production and security is highly prioritised by all nations. The agricultural sector of every economy is charged with the responsibility of ensuring the needed food security. The production process may be on a small scale (subsistence) or a large scale (commercial). In Nigeria, agriculture is made up of four cardinal areas namely crop production, animal production, fish farming and forestry (FMARD, 2017). All these areas require a common capital for start-up and continuous operation, land. Aso (2014) puts it that land is the life wire of every developing country as it is the major factor responsible for growth and development in the agricultural sector and by extension all other sectors of a country's economy. There is relative abundance of arable land in northern Nigeria compared to its southern counterpart given its geopolitical configuration. Most of the 19 States of the Northern region are actively engaged in both subsistence and commercial agricultural practices. Specifically, the North-central region is often regarded as the food basket of the nation (IPCR, 2017). This is by virtue of its well irrigated arable land and naturally favourable climatic conditions which favours massive crop and livestock production. Thus, it is a centre of attraction for all well-meaning agriculturists. The North-western region is also another major agricultural hub given its substantive arable land. This justifies why States like Zamfara and Kebbi in

northwest Nigeria pride themselves with farming. And lastly, the North eastern part of the country which hosts Lake Chad and some other fertile plateaux such as the Mambilla in the Far East. These entire nature's gifts to the north makes the region the hub of food and livestock production in Nigeria. Before 1970s, agriculture was the major source of foreign exchange earnings for Nigeria. The sector attracted foreign exchange earnings and provided employment for millions of citizens. However, the discovery and massive export of crude oil from Nigeria in the late 1970s availed the country an opportunity to earn higher foreign exchange with relatively low effort. Consequently, this led to a total neglect of the agricultural sector (Odetola & Etumnu, 2013; Uzonwanne, 2015). Nigeria's economy came to be regarded as a mono-economy due to its total dependence on crude oil export earnings. At its peak, Nigeria's dependence on foreign goods reached an extent where a staple food, rice, was being imported. Nigeria spent over \$20 billion on food importation (Nigerian Finder, 2018).

Since the military era, Nigeria has attempted to break away from the massive importation of goods especially food items. Successive regimes have either on their own or in collaboration with International Organizations introduced one policy or the other in ensuring internal self-sufficiency especially in food production. This can be found in the Operation Feed the Nation (OFN); Green Revolution (GR); Agricultural Development Projects (ADPs), FADAMA I,II and III; Special Programme for Food Security (SPFS); Agricultural Transformation Agenda (ATA) and Agricultural Promotion Policy (APP) among other initiatives. The President Muhammadu Buhari-led administration took drastic steps to revive the agricultural sector and make Nigeria a self-sufficient country as encapsulated in the Economic Recovery and Growth Plan (ERGP) 2017-2020. Policies favouring massive crop production were made and implemented which is yielding appreciable results as the contribution of agriculture to the nation's GDP is on the increase. More people have gone back to farms and importation of some agricultural products such as rice has been banned. 90% of what is consumed of rice is now produced locally. Over 70% of Nigeria's population are employed in the agricultural sector which has contributed over 25% of the GDP (Agricdemy, 2017; NBS, 2018). Below is a summary of the contribution of the agricultural sector to the Nigerian economy from 2014 to 2017.

Table 1: Agricultural Sector Contribution to Nigeria's GDP 2014-2017

| S/No | Year | Agric Sector contribution to GDP |
|------|------|----------------------------------|
| 01 | 2014 | 22.91% |
| 02 | 2015 | 23.11% |
| 03 | 2016 | 24.45% |
| 04 | 2017 | 25.08% |

Source: NBS GDP Reports 2014; 2017 and 2018.

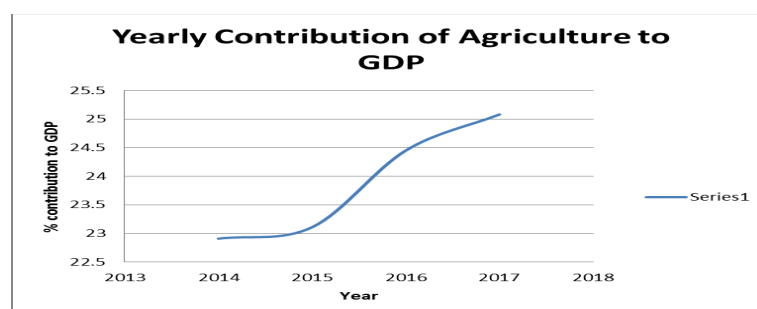


Figure 1: Yearly Contribution of Agricultural Sector to Nigeria's GDP 2014 – 2017

In figure 1 above, there has been a steady rise in the contribution of the agricultural sector to the GDP from 2014 - 2017. Thus, the agricultural sector could be said to have fared well in its effort to resuscitate and stabilise the Nigerian economy.

Farmers-Herders Conflict in Nigeria: An Overview

The origin of the farmers-herders conflict is rooted in land control (Idowu, 2017). It is caused by the relative deprivation or marginalization of a group from land use. In the past, the gross neglect of agriculture combined with little or no impact of climate change and a relatively small number of cattle all kept the farmer-herder conflict at its lowest ebb (Oli et al., 2018). However, with the pressing need to diversify the economy and the identification of agriculture as a major driver of the diversification process, land became a major asset to be reckoned with. In addition, herders' cattle continued to grow at an estimated 2% per annum (Malcolm & Adeleke, 2016). Climate change impact became severer, urbanisation and crop production increased due to rapid increase in population (Idowu, 2017). Also, the Boko Haram insurgency in the north east has forced the resident Fulanis in the region to migrate southwards. Consequently, all the forgoing factors meant a severe congestion and squeeze on (arable) land.

While the foregoing factors could be seen as the remote causes of the conflict, the immediate cause of the conflict can be traced to the recent resuscitation of massive food production aimed at achieving food security in the country. The massive output from crop production (85%) suggests that more farmers have been recruited and/or the few farmers must have expanded their operational capacities to meet the growing demand of consumers. By implication, this leaves the herders with less land to cater for their estimated 25 million cows whose daily water consumption is about 1 billion gallons and about 500 million kilograms of forages for daily feed (Malcolm & Adeleke, 2016). The conflict is known to have persisted over the years, but its frequency and intensity in recent times has dominated the big stories of the national dailies. Rural community dwellers in the affected areas now live in fear for their lives and/or their crops on the farm. This is in addition to the agony of the loss of their loved ones that have paid the supreme price in the struggle to earn a living. Below is a summary of the yearly estimated deaths recorded from the conflict from 2014 to 2017.

Table 2: Estimated Yearly Deaths from the Farmers -Herders Violence 2014 – 2017

| S/No. | Year | Approximate number of deaths |
|-------|------|------------------------------|
| 01 | 2014 | 1,229 ¹ |
| 02 | 2015 | 1,249 ³ |
| 03 | 2016 | 1,269 ¹ |
| 04 | 2017 | 1,700 ² |

Source: 1. ICG Report (2016); 2. Intersociety (2018); 3. Statistical Average for 2014 & 2016

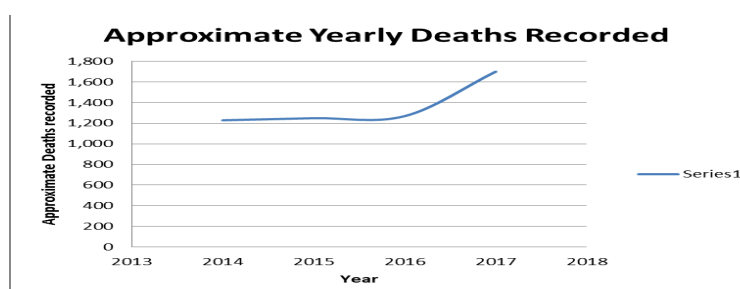


Figure 2: Approximate Yearly Deaths from Farmers-Herders Conflict in Nigeria 2014-2017

From table 2 above, a sharp rise in the deaths recorded from the violence was observed in 2014 where the deaths recorded surpassed the total number of deaths recorded before 2014 with over 1,000%. Hence, this sudden change in the trend of recorded deaths leaves more to be explored.

Table 3: Spearman correlation coefficient table for yearly contribution of agriculture to Nigeria's GDP and the corresponding deaths from the farmers-herders violence

| Year | Yearly Contribution to GDP (X) | Yearly Deaths (Y) |
|------|-----------------------------------|----------------------|
| 2014 | 22.91 | 1,229 |
| 2015 | 23.11 | 1,249 |
| 2016 | 24.45 | 1,269 |
| 2017 | 25.08 | 1,700 |

$r = 0.80$.

Source: 1. ICG Report (2016); 2. Intersoceity(2018); 3. Statistical Average for 2014 & 2016

The correlation between yearly contribution of agriculture to GDP and yearly deaths recorded from the conflict was found to be statistically significant, $r=0.80$. This implies that there is a very strong relationship ($r=0.80$) between agricultural sector contribution to GDP and yearly deaths recorded from the farmer-herders conflict.

Theoretical Framework

The study is anchored on the conflict theory of Karl Marx which conceives conflict as deeply rooted in economic determinism. The theory is apt for this study given its adequacy in explaining the role of economic forces in the initiation and sustenance of group conflict.

Conflict Theory

The conflict theory of Karl Marx argues that all societies are sharply divided into two antagonistic classes where a class is solely determined by its ownership of the means of production (property). Given that conflict is rooted solely in economic interest, Marx believes there are just two classes in the society – the haves and the have-nots. The haves are the sole owners of the means of production while the have-nots must work for the haves in order to sustain life. As such, there is a class struggle by the have-nots seeking to destroy the unequal exploitative system in order to establish a more just system based on equality (Ogunbameru, 2013).

The conflict between farmers and herders is majorly due to economic interest. This makes the conflict theory apt for this paper. Farmers and herders are two antagonistic forces or classes seeking to access and utilise a common resource, land. While the farmers have exclusive access to land (haves), herders are deprived of such exclusivity which leaves them with little or nothing to rely on (have-nots). Furthermore, the agricultural policies in recent times seem to favour farmers than herders and this provokes the already existing tensions occasioned by relative deprivation of the herders from land access and use. Consequently, the herders have resorted to a revolutionary act of invading farms and farm settlements especially in rural communities where the agricultural hub lies as a means to protest the inequity in the land allocation system. This explains why the conflicts are more pronounced in the rural areas as they are the custodians of the largest portion of arable lands.

Discussion of Findings

Agricultural Revolution and the Nigerian Economy: Any Impact?

The study used the annual contributions of agriculture to Nigeria's GDP to measure the success or otherwise of the agricultural revolution as used by Odetola & Etumnu (2013). This is because the GDP index reflects the output of every sector of the economy to the country's GDP and is suitable for

the measurement of sectorial productivity. It was observed that Nigeria's agricultural revolution had positively impacted on the Nigerian economy. The steady rise in the GDP contributions from agriculture from 22.91% in 2014 to 25.08% in 2017 indicates a positive impact of the sector on the economy. Average growth rate for the years under study (2014-2017) was 3.89%. This growth in the sector is attributable to the massive projects such as irrigation systems which were being commissioned to further boost the sector with more waiting to attain completion (Ehikioya, 2018). This finding also conforms to the findings of Aso (2014) that agriculture is the life wire of every economy and its development affects the development of every other sector of the economy. Consequently, the study finds it appropriate to suggest that agricultural revolution has done immensely well in its effort to resuscitate and stabilize the Nigerian economy. Aside the fact the agricultural sector helped to raise the country out of recession; it has also empowered many Nigerians who have now taken to farming as a source of livelihood. Food security is gradually being attained and employments have been generated for the teeming youths. All these helped to strengthen the hitherto weak economic base of Nigeria.

Agricultural Revolution and Farmers-Herders Conflict: Is there a Nexus?

The farmers-herders conflict has killed more people than the Boko Haram insurgency within a very short duration (2014 - 2018) (ICG, 2017; Mwanza, 2018). The violent conflict between farmers and herders has escalated in recent times claiming many lives and threatening the peace and stability of the country (Malcolm & Adeleke, 2016; ICG, 2017; Mosadomi, 2017). The year 2014 marked the beginning of a new face to the conflict between farmers and herders in Nigeria. The number of deaths recorded from violent conflicts rose with over 1000%. On one hand, Nigeria has recorded increased food production by 21m tonnes in 4 years (Tijani, 2016). On the other hand, it is also reported that the country has witnessed the deadliest conflict spate of killings from the farmer-herdsmen violence in the recent times (ICG, 2017).

Consequent upon the above, there is adequate evidence to suggest that there exists a relationship between the agricultural revolution and the rising rate of violent conflict between farmers and herders in Nigeria. This is because land as a means of production serving both farmers and herders has not been equitably distributed; and one party (herders) have been subjected to deprivation. Furthermore, more people have taken to the farming career and the consequence of which is further occupation of the arable land being competed for by farmers. Mwanza (2018) reported that Africa's arable land is being consumed by infrastructure and food producing firms for the fast growing population. This consequently denies the herders adequate grazing reserves and fresh water which threatens their economic interest and livelihood as it is tantamount to their gradual extinction.

In addition, while the APP of the FGN proposes establishment of ranches and grazing reserves for the herders to forestall the clashes, this is yet to be implemented due to stern resistance by some States and lack of wherewithal to initiate the project in some other States. All these factors have amounted to worsening conflict between the farmers and herders due to the feeling of rivalry. Without adequate provisions to cater for the needs of the herders, this violent conflict cannot be averted. The conflict grows more violent in the succeeding years owing to expansion in crop production activities which signifies further marginalisation and deprivation for the herdsmen. This is why anti-grazing laws and poorly conceived ranching proposals are usually being resisted by the herdsmen (Ahmed-Gamgum, 2018).

Furthermore, the statistical correlation test between agricultural revolution and farmer-herdsmen conflict was done using the GDP contribution and yearly deaths recorded as proximate data for the test. The correlation coefficient was statistically significant ($r=0.80$) which signifies a very strong relationship between the agricultural revolution and the farmers-herdsmen conflict. In essence, this implies that the violent deaths from the farmers-herdsmen crises highly determined by the agricultural revolution initiatives.

Conclusion

This paper established the relevance of the agricultural revolution to the success and growth of the Nigerian economy within the period under study. Furthermore, the paper has established a very strong link between the agricultural revolution of the FGN and the rising spate of killings owing to the farmers-

herders conflict. This is rooted in the gross inclination of policies favourable to majorly food production without adequate provision for the economic interest of the herders. This explains the sudden upsurge in the severity of the conflict between farmers and herders in recent times. The conflict theory of Karl Marx was adopted to buttress the findings given the theory's adequacy in explaining economic-based conflict. The theory was used to place the farmers in the category of the haves while the herders belonged to the have-nots.

Recommendations

The following recommendations are made given the findings from the study:

- i. There should be massive sensitisation and enlightenment of the citizens by the National Orientation Agency (NOA) and other concerned public enlightenment agencies such as the public media and Civil Society Organisations (CSOs) on the complexity of the conflict. This would go a long way in educating and enlightening the citizens on the multiple factors responsible for the problem. This way, citizens would debunk the 'ulterior-motives' belief about the conflict thereby easing its resolution.
- ii. As the effects of climate change persist, adequate adaptive strategies such as massive afforestation, irrigation farming, and use of hybrid seeds must be initiated and adopted by the farmers to help cushion the severe effects of climate change which may last for an extended period of time.
- iii. Open grazing is not in tandem with contemporary agricultural practice considering its risks to other economic interests. Therefore, ranching as proposed in the APP should take a centre stage in the agricultural revolution agenda. Ranching is the most appropriate and most productive way to ease the tension and manage the conflict given its propensity to provide employments; manure; generate power and ultimately save lives. Until this is done, anti-grazing laws would only be shadows of their real self.
- iv. Efforts must be put in place by the authorities concerned (Ministries of agriculture; land, works and housing; urban development boards, traditional rulers) to harmonise and ensure equitable allocation of land given its prevailing relevance to economic life. This will help reduce land use conflict and create lasting peace in the country.
- v. Urban sprawl must be checked in order to prevent incessant encroachment into farm lands and grazing areas. The urban development boards should work to ensure compliance with development plans of every state.

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