ANALYSIS OF BOKO HARAM INSURGENCY ACTIVITIES IN NORTH EASTERN NIGERIA: A GEOGRAPHICAL INFORMATION SYSTEM APPROACH

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ABSTRACT

Over the years, Nigeria as a Nation has been witnessing serious unrest characterized by the ethnic, political, farmer's-herder's conflict and activities of the insurgency. The north eastern geopolitical zone of Nigeria was not left out of the activities. The activities of the Boko Haram insurgents has led to over ten thousand people losing their life and properties making many homeless. The paper is aimed at providing a comprehensive data and show the spatial distribution of activities of Boko Haram insurgency in Adamawa, Borno and Yobe States between 2009 and 2017. The paper utilizes secondary data from Armed Conflict Data (ACLED), printed materials, newspaper records, journals, and security agencies records. The method of analysis utilized in the study is Geographical Information System (GIS) approach using ArcGIS software and graphs to indicate the activities of the insurgency. The finding of the research shows that Borno State has the highest occurrence of insurgency and Yobe State recorded the lowest. The study concludes that the activities of the insurgents are more at the northern part and along the international boundaries.

Keywords: Insurgency, Boko Haram, North-eastern Nigeria, Geographical Information System (GIS).
Introduction
Conflict and violence have been a long-established aspect within political geography which has made geographers researching on the aspect of violence and conflict, including insurgencies. These are intrinsically geographical as they occur in a particular place and across geographical territory.

Nigeria has been battling with many forms of conflict and violence which include political, ethnic and religious violence, militancy, cattle rustling, farmer’s-herders’ conflict. The commonest is the Boko Haram insurgency most especially in the North eastern part of the country. Boko Haram is a Hausa name meaning “Western education is forbidden”. This group is regarded as a controversial extremist Islamic group that seeks to impose Sharia law in the northern part of Nigeria (Murtada, 2013). The sect emanated from an orthodox teaching slightly resembling that of Taliban in Afganistan and Pakistan. It considers anything western as an aberration or completely un-Islamic.

The sect believes that Western education is the cause of corruption, inequality and injustice bedeviling the society and must be forbidden (Akubor, 2011; Bamigbose, 2011; Nwanegbo and Odigbo, 2013). However, the attitude of Boko Haram on Western education is hypocritical as most of their activities reveal that the sect is not completely focused with regard to Western education and technology. This is in view of the modern technological resources it employs in the conduct of its deadly activities; it must have close affinity with those whose educational attainment is very high (Sani, 2011).

Insurgency as a social science concept has been given many conceptions. Essentially, however, insurgency is one element of the spectrum of political violence (O'Neill, 1990; Hammes, 2006; Reed, 2007). O'Neill (1990) defined insurgency as a struggle between a non-ruling group and the ruling authorities in which the non-ruling group consciously uses political resources and violence to destroy, reformulate, or sustain the basis of one or more aspects of politics. Insurgents have the “nihilistic goal of ensuring the government cannot function. Hammes (2006) noted that it’s easier to achieve insurgents’ goal than governing, as it is easier and more direct to use military power than to apply political, economic and social techniques. While the insurgents can use violence to delegitimize a government, simple application of violence by the government cannot restore that legitimacy.

Insurgency is further seen as an organized use of subversion and violence to seize, nullify or challenge political control of a region. As such, it is primarily a political struggle, in which both sides use armed force to create space for their political, economic and influence activities to be effective (Blanchard, 2014). Insurgency is not always conducted by a single group with a centralized, military-style command structure, but may involve a complex matrix of different actors with various aims, loosely connected in dynamic and non-hierarchical networks. To be successful, insurgencies require charismatic leadership, supporters, recruits, supplies, safe havens and funding (often from illicit activities). Mustapha, Ummu and Mohammad (2018) defined it as organized movement that has the aim of overthrowing a constituted government through subversive means and armed conflict). This definition suggests that insurgent groups employ unlawful means towards achieving an end, which could be political, religious, social or even ideological. The goal of insurgency is to confront and overthrow an existing government for the control of power, resources or for power sharing (Siegel, 2007).

Insurgents seek to subvert or displace the government and completely or partially control the resources and population of a given territory. They do so through the use of force (guerrilla warfare, terrorism and coercion/intimidation), propaganda, subversion and political mobilization (UNPD, 2017). Insurgents fight government forces only to the

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extent needed to achieve their political aims: their main effort is not to kill counterinsurgents, but rather to establish a competitive system of control over the population, making it impossible for the government to administer its territory and people. Insurgent activity is therefore designed to weaken government control and legitimacy while increasing insurgent control and influence (Mustapha, Ummu and Mohammad, 2018).

The activities of the sect came into limelight in 2002 when it first operated in Kanama, Yobe State and also in Gwoza, Borno State (Nwanegbo and Odigbo, 2013). However, its origin is traced to 1995 when it started as ‘Sahaba’ Islamic association (Sani, 2011), which suggests that prior to 2009, the sect operated as a non-violent organization. It is believed that it embraced violence as its “weapon of martyrdom (Nwozor, 2013) when some of its members were killed in July 2009 and the death of its leader, Muhammad Yusuf, in the police custody under a questionable circumstance (Bamigbose, 2011; Sani, 2011; Nwozor, 2013; UNPD, 2017). Since then, the sect’s dastardly attacks become intensified, not only in the North East, but in the North West, north Central and the Federal Capital Territory, Abuja. Its trend has attained a more sophisticated, deadly, dangerous and international dimension, most especially in the last four years (Goyei, 2018; UNPD, 2017; Smith, 2014).

The activities of the sect especially since 2009 have concentrated mostly in the North eastern region of Nigeria with Borno State mostly hit with every day report of the activity (Mustafa and Helda, 2017). The nature of their reprehensible acts includes bombings (suicide), kidnapping of innocent people especially women and students (like the Chibok girls kidnapped in 2014 and the Dapchi girls in February, 2018), shooting victims at close ranges, throat-slitting and day light and nocturnal attacks (The Nation, 2014; Mustafa and Helda, 2017). This scenario has called for the use of Geographic Information System (GIS) analysis in the understanding of the spread of Boko Haram insurgency.

GIS is a computer-based database used to store, integrate in layers and display data of a geographical nature. It has a widespread use in the area of ecological monitoring and environmental planning. Nowadays, GIS is used for many purposes including insurgency mapping, crime control conflict location and spread. Jiawei (2003) defined GIS as a relational database capable of manipulating both spatial data (in the form of digitized maps) and attributes data (comprising data sets in the form of alfa-numerical records). Sadiya, et al. (2016) revealed that GIS as a hardware, software and procedures collectively supporting the collection, input, storage, retrieval, manipulation, transformation, analysis and presentation of geo-referenced objects and field data.

The location, distribution and management of insurgency activities is very complex and requires a systematic and structured methodology that will allow a comprehensive analysis of its activities, locations and comparism. Advances in the areas of Geographic Information Systems (GIS) and other information technology such as remote sensing (RS) and Global Positioning System (GPS) have opened a new set of opportunities for use in mapping of insurgency, its spread both in spatial and temporal (Brown et al., 2004) studied the spatial forecast methods for terrorist events in urban environments in Iraq. The study used GIS to analysis the spread of insurgency activities and show the spatial distribution of where insurgency occurred. Chainey and Ratcliffe (2005) studied GIS and crime mapping in Pakistan integrating of GPS and GIS for identifying where insurgency occurred and the impact of insurgency on the environment.

Since the emergence of Boko Haram insurgency in the North Eastern Nigeria it has created a security challenges within the region.
There seem to be inadequate information on their activities and the spatial spread within the region. This has caused more life’s been lost and properties destroyed, and increasing the number of Internal Displaced Person within the region. It is against this background that the paper is conducted in order to employ Geographical Information System (GIS) in the analysis of the spatial spread of insurgency activities from 2009 to 2017 in North Eastern region of Nigeria. In doing that the study will provide an up to date data on the occurrence of Boko Haram, secondly, will show the spatial spread of the insurgency activities, thirdly, will compare the activities based on state within the time frame, and lastly provide recommendation for further studies.

Materials and methods

Study Area

The study is conducted in Adamawa, Borno and Yobe States in North eastern geo-political zone of Nigeria, which is located between Latitudes 06°00´00´´N and 14°00´00´´N of the Equator and Longitudes 10°00´00´´E and 14°00´00´´E of the Greenwich Meridian as shown in Figure 1. It shares international boundaries with Niger Republic to the North, Republic of Chad to the North East and Cameroun to the East. The study area shares internal boundaries with Jigawa, Bauchi, Gombe and Taraba States to the west. It has a total land mass of about 153,317 Km² (Rayar, 1996) and 65 Local Government Areas. (Figure 1.).

Method

The study used purposive sampling to select three states out of the six states in the North eastern geo-political zone of Nigeria. The study utilizes documented data from Armed Conflict Data (ACLED), Security agencies and
newspaper records as well as published studies to investigate the activities of Boko Haram in Adamawa, Borno and Yobe States. The spatial data considered are names of Local Government Areas (LGAs) where insurgency activities occurred and the number recorded within the period considered in the study. These served as the geometry and attribute data. The data considered in the study was incorporated into a GIS environment which was done to allow different layers of data shape files to be overlaid. In order to have a clear data for each layer of information in a GIS format, it has to be stored in the same geographical projected and co-ordinate system. Therefore, all data involved was stored in different shape files of same geographical coordinate system. ArcCatalog was used to structure and prepare data for this study where data was transformed to WGS 1984 UTM Zone 33N (SRID 32633) and imported into a single file geo-database. The data set for the study area Adamawa, Borno and Yobe States of Nigeria. The incidences of Boko Haram attacks on a state basis from 2009-2017 were analyzed to show the annual spatial pattern for each as well as comparism was made using chropleth mapping and line graph.

**Results and Discussion**

The result reveals that 1,905 incidences of the insurgency were carried in the three states between 2009 to 2017. The result also shows that Borno State have the highest number of insurgency attack (77%) and with two third with all the LGAs in the state have experienced at a incidence. However, the case is different in both Adamawa and Yobe States where only few LGA’s experienced the incidence. The result further reveals that for the spatial distribution of the insurgency activities is more attacks in the northern and central part of the region as shown in Figure 2. This is in agreement with the finding of Goyei (2018) that Boko Haram Attack s has caused the North east region of Nigeria great insecurity. This outcome might the result of the insurgency becoming a transnational activity as reported by UNDP (2018) and Goyei (2017).

![Spatial Distribution of Boko Haram Activities in North Eastern Region of Nigeria](image)

**Figure 2:** Spatial Distribution of Boko Haram Activities in North Eastern Region of Nigeria

*Source: Fieldwork (2018)*

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The result indicates that the activities is mostly concentrated at the North and North-eastern part of Adamawa State with Madagali recording highest (62 attacks) Boko Haram incidences, while the western and eastern part of Adamawa State recorded the lowest or no occurrence of insurgency activities from 2009 to 2017 (Figure 3). It might be due to the northern part sharing bountry with Boron State and Cameroom, making movement easy for the sect. The findings is in agreement with Goyei (2018) ans Smith (2014) that bound cities are easier to attack. The result further shows that spatial distribution of Boko Haram incidences in Adamawa State is uneven pattern. This is in agreement with UNDP (2017) that the insurgency has been unevenly distributed in the north east region. The implication is that most local living within these villages and town have relocated to peaceful areas in other parts of the country.

Figure 3: Spatial Distribution of Boko Haram Incidences in Adamawa State
Source: Fieldwork (2018)

The result reveals that Maiduguri which is located at the central part of the Borno State and it’s capital have the highest number (300) of insurgency activities than any town in Borno State (Figure 4). This is in agreement with Blair (2015) and Goyei (2018) that the sect captured and gained control of territory in around the state. The result also shows that south central part of Borno State recorded few or no occurrences of the activities. The spatial distribution shows that the activities of the sect is mostly in the northern part of the state. This imply that the Borno State is one of the most attacked states in the region and Nigeria as a nation. This have made the people to abandon their homes and farms to seek for a secured place creating internally and externally displacement in the state.
The result reveals that the northern part of Yobe State have the least occurrence of Boko Haram attacks in the state. The result further shows that the insurgency activities is not
evenly distributed within Yobe State as shown in Figure 5. The result also shows that Potiskum and Damaturu have the highest with over 50 insurgency activities in the state while LGAs at the Northern part of the state have few incidences of Boko Haram insurgency. This is in agreement with the findings of Goyei (2018), Mustapha, Ummu and Mohammad (2018) and UNDP (2017) that many women has lost their husbands and means of livelihood in Potiskum/Damaturu and the environs due to attacks from insurgency.

From the analysis of the spatial distribution of insurgency activities of the various states considered in the study. The result shows that Borno state has the highest number of the occurrences with about 1461 (76.7%) of the total incidence, Yobe state with 224 (11.8%) incidence of insurgency and the lowest is Adamawa state with 220 (11.5%) incidences of Boko Haram insurgency in terms of comparison (Figure 6). A further probe of the spatial distribution reveals that the attacks are more in the Northern part of the study area as shown in Figure 2. This might be the reason for high number of displaced persons in the region as suggested by Mustapha, Ummu and Mohammad (2018). The implications are that people no longer stay in these areas, farming and other economic activities are also stopped and increase in poverty level of the people of the region. The children are also driven away from their homes, which leads to the kids not attending schools and there denying these kids education.

**Figure 6: Boko Haram Incidences in the Selected States**

Source: Fieldwork (2018)

**Conclusion and Recommendation**

The spatial spread of insurgency activities in the North eastern geo-political zone of Nigeria, was undertaken to show the differences in its occurrences in Adamawa, Borno, and Yobe States from 2009 to 2017. The study discovered that Borno State is the most attacked state in study area and that the attacks were more on the northern part of the study area. The study has showed that GIS can be utilized in showing the spatial spread of
insurgency activities over a period of time as well as making comparison within places on the earth surface. The result of the study can assist the Government, security agencies, non-governmental organisations (NGOs) and policy makers in making decision with regards to counter-insurgency policies. Lastly, the study recommended that Government and security agencies should adopt the use of GIS analyst (Geospatial analyst) to access accurate information on insurgency areas.

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