

Pattern of Suicide Attacks Incidence in Borno State by Boko Haram Insurgency

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Abstract: *Suicide bombing has been on an increase over the last fifteen years with about 80 percent of its occurrence after the September 11 attack on World Trade Center. Suicide bombers are mortally violent and often politically motivated and can be carried out by men, women, or children. Nigeria has experienced increase cases of suicide bombing with North eastern part recording the highest. The paper aimed at analyzing the pattern of suicide attack incidence in Borno state. To achieved this, the paper provided a detailed incidence of suicide attacks in Borno state from 2009-2017, shows the spatial pattern and trend of the incidence as well as providing recommendations. The study utilized secondary data from Armed Conflict Location and Events Data (ACLED) 2018 version, and security records. ArcGIS was employed for the analysis of the spatial pattern based on yearly. Trend analysis was utilized to indicate the trend of suicide attacks. Year 2014 experienced the highest suicide attacks with 103 incidence, 2009 and 2010 had no incidence of such attacks. Maiduguri had the highest with 121 suicide attacks. The trend analyze shows an increasing rate of 6 occurrences per year during the period of study. The R-square statistic shows that the model as fitted explained 27% variability in frequency of suicide incidence in the study area. The study recommended that security agencies should adopt the use of modern technologies in detecting suicide bombers, improving human right record of the security forces, regular seminars on counter violent extremism programs.*

Keywords: *Spatial pattern, suicide bombing (Attack), Boko haram, insurgency, GIS*

I. Introduction

Over the last fifteen years, Suicide bombing was regarded as the most contagious and perturbing form of insurgency in the world. This perfectly represents the Western view of suicide bombings. Suicide bombing are on the rise with about 80 percent of suicide bombing since 1968 occurred after the September 11 attacks Atran, (2006). The September 11, 2001 where 19 al Qaeda operatives hijacked four aircraft and flew them into the twin towers of the World Trade Center in New York and the Pentagon in Washington, DC. which resulted in about 3,000 fatalities and almost 9,000 injuries. Other prominent cases include the attack that took place on the USS *Cole* on October 12, 2000, which led to 17 fatalities and 39 injuries. On August 7, 1998, suicide bombers from the Egyptian Islamic Jihad parked trucks filled with 17 tons of explosives and detonated their bombs outside of the U.S. embassies located in Dar es Salaam, Tanzania, and Nairobi, Kenya. Twelve Americans were killed and thousands more civilians were injured. The explosions also caused considerable damage in both cases. On October 23, 1983, 241 U.S. servicemen (including 220 Marines) were killed when two trucks loaded with 12,000 pounds of TNT exploded in a military barracks in Lebanon. The suicide bombers were members of the Islamic Jihad (an organization affiliated with Hizbullah).

The region that popularly supported suicide bombing remains high in the Middle East. The attacks carried out by suicide bombers are both cheap and easy to perform and result in a disproportionate number of enemy casualties in the insurgent's organizations' favor. Suicide bombers select to commit suicide to harm others. Furthermore, the suicide bomber does not perform the attack independently but rather operates through an insurgent's organization. Suicide bombers are mortally violent and often politically motivated and can be carried out by men, women, or children. They are sometimes referred to as sacrifice bombings or homicide bombings. Suicide bombings are rare yet tremendously disparaging incidence and responses to such events are even rarer, because they require forecasting methods for effective hindrance and early discovery (Brown et al. 2004).

Nigeria has experienced an exceptional increase in insurgency incidence in the last ten years particularly the North eastern part of the country by the Boko haram group resulting into thousands of deaths in both civilian and military force and displacement of millions of people from their residential houses. The North

eastern part of the country had the highest shear of the suicide bombing incidence in Nigeria which is as a result of the activities of the Boko Haram insurgency in the geographical area. In the presence situation suicide attacks are one of the most commonly reported insurgency strategy which are very difficult in understanding and modeling for predicting prevention. A suicide bomber is a pre-intended effort from a suspicious person or group of people intended to kill others (specific target) sacrificing the attacker's own life. The first know suicide bombing in Nigeria was an incidence that occurred on 29 May, 2011, when President Goodluck Jonathan took the oath of office, Boko Haram, a shadowy Islamic terrorist group opposed to Nigeria's secular government, detonated three bombs at an army barracks in Bauchi state, killing at least 14 people. Two weeks later, another incidence of suicide bombing in Nigeria's history killed five people just outside the Nigeria Police Headquarters in the national capital, Abuja. These attacks highlight the challenges that Jonathan's government is facing if it is to improve governance, reduce conflict, and promote economic development, all despite Nigeria's extreme inequality, a youth bulge, crumbling infrastructure, and high unemployment. His biggest hurdle now is the Boko Haram, who in many ways is symptoms of Nigeria's problems, but the entrenched interests that have run Nigeria since the end of the civil war in 1970.

The Boko Haram stands for Jama'atu Ahlis Sunna Lidda'awati Wal-Jihad better known as Boko Haram is an Islamic terrorist group that has a strong operational based in the northeast of Nigeria. The ideology of the sect according them is to bring to an end the secular system of government and introduce sharia law in Nigeria. However, did not subscribe to the notion that the Boko Haram aim is to Islamize Nigeria through the introduction of sharia law. Looking at the activities of the foot soldiers of the sect, it clearly indicated that the unemployed and disgruntled youths who have been paid by unscrupulous politicians to cause mayhem in the country because of their selfish ambitions. The sect have used some tactics involving suicide bombing in their activities which they acted based on their doctrine or ideology of the group or organization they belong. However, the idea that suicide bombers' personalities and their religious denominations are the driving force behind their attacks has been dispelled through extensive data compiled

For a long time, many researchers have been trying to find out the pattern of suicide bombing throughout the world and Nigeria in particular for improving social security and saving human lives using different statistical methods. However, very little success has been achieved on detecting potential suicide attacks prior to its incident with high accuracy due to many reasons. Suicide bombing incidence has link with geographical properties as the entire incidence occurs at a particular geographical place (Spatial Location) and at a particular time (Chainey and Ratcliffe, 2005). Brown et al. (2004) considered spatial choice analysis to uncover the bombing patterns in the past incident locations to develop an empirical prediction model for suicide attack in Isreal.

Geographic Information System (GIS) is a tool capable of managing geographic (spatial and descriptive) data. It is an organized collection of computer hardware, software, geographic data to efficiently capture , store, retrieve, update, manipulate, analyze and display all forms of geographically referenced information according to the user defined specifications (Panda, 2013). GIS experts often note that it is important to mention that a GIS does not hold maps or pictures, it holds only a database. Thus the database concept is central to a GIS and this is the main difference between a GIS and a computer mapping system which can only produce good graphic outputs. A contemporary GIS incorporates a database management system (DBMS). So the GIS have become a tool to Visualize, model, analyze and query the database. Visualization is at the central of GIS, indeed GIS is very much dependent on visualization for its effectiveness (Deakin, 2011). One of the major benefits of GIS is its ability to incorporate different types of data into a meaningful presentation. GIS also allows for modelling of data by testing certain Criteria concerning data in the spatial database. GIS have a wide variety of applications in depicting suicide bombing locations and insurgency areas. This information provides a base for all intelligence operations, tactical decisions and operations, planning and execution of most battlefield activities. In order to successfully support current and future military operations in the study area, geospatial information must be rapidly integrated and analyzed to meet on going force structure evolution and new mission directives. It is against this background that the research sort to depict the spatial distribution of suicide bombing incidence in the study area with a view of providing lasting solution to the issue. To achieve this, it will provide a detailed data on incidence of suicide bombing, show the spatial distribution based on Local Government Areas (LGA), show the trend of the incidence of suicide bombing, and lastly, provide recommendation for further studies.

This study covers the geographical area of Borno State with precise interest on suicide bombing incidence by the Boko Haram incidence from 2009-2017. The State was selected for the study based on the fact that most of the insurgency activities that occurred within the north eastern Nigeria are in Borno State. The study employed simple descriptive statistics and maps in the anlysis.

II. Material and Method

Study Area

The study was conducted in Borno State which is located in the North-Eastern part of Nigeria (See figure 1). The state comprises of twenty seven (27) Local Government Areas (LGAs) with Maiduguri as the capital which has the highest population with over 500,000 people. The northern LGAs have a lower population due to the harsh climatic conditions and lack of basic social infrastructure. The state lies between Latitudes 10° and 13° North and Longitude 12° and 15° East (Ijere & Daura, 2000; Online Nigeria, 2003). Borno state is seen as the home place of insurgency in the country. Most of the inhabitant are farmers consisting of arable farmers, herdsman, and fishermen. The state covered about 46,436km². The state has a population of 5.7 million people (adjusted for 2016) African Masterweb, (2016).

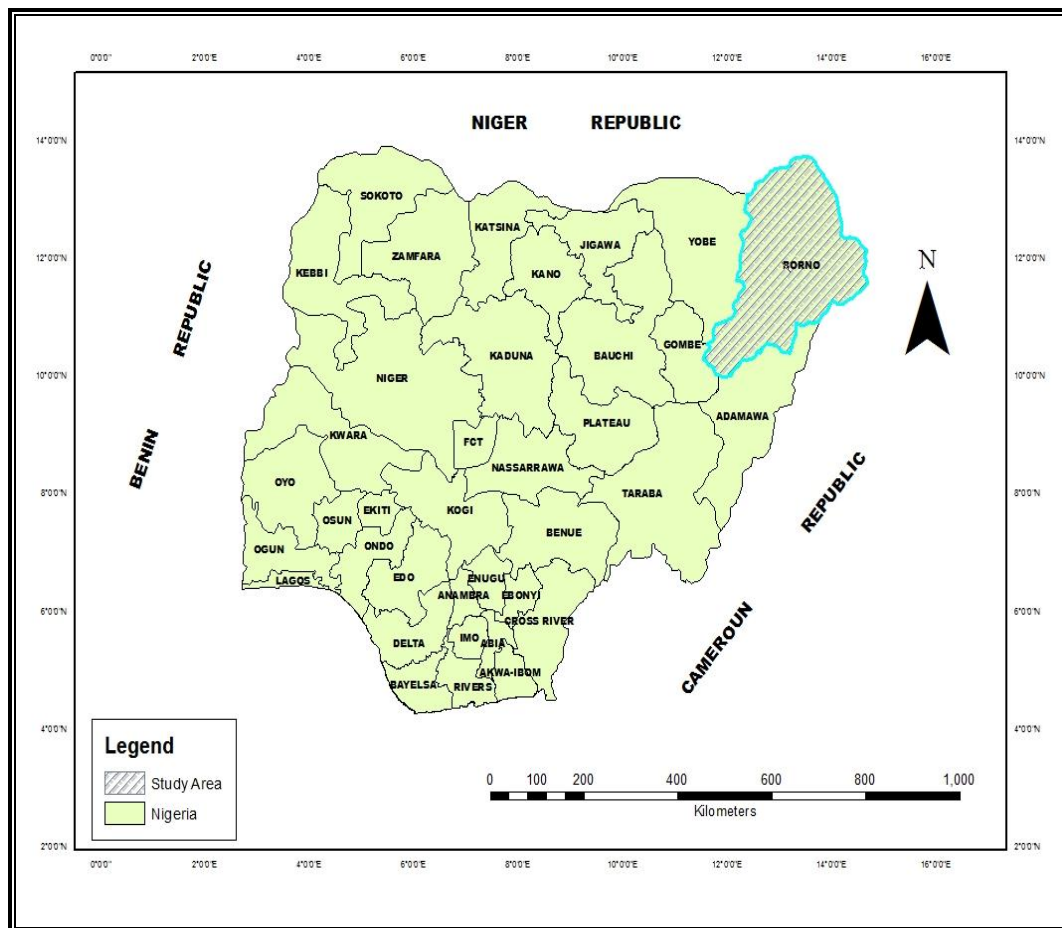


Figure 1: Nigeria showing study area
Source: Department of Geography, NDA, Kaduna (2017)

Data

The methodology adopted in this study is divided into three stages namely: Data acquisition, Data verification, Data processing and analysis.

Data acquisition

Secondary data source was the main data utilized in the study. These were derived from Satellite image, boundary feature from OSGOF, Armed Conflict Location and Event Data (ACLED).

Data verification and grouping

Data derived from the secondary sources were subjected to verification and grouping. These include sorting of suicide bombing incidence based on Local Government Areas (LGA) and on a yearly bases. This was done to allow for depicting of the incidence on a spatial pattern format from 2009-2017.

Data Processing

Data utilized in this study were imported and geo-referenced using ArcCatalog. All data were projected to the WGS 1984 UTM Zone 35N coordinate system (SRID 32635) as this encompasses the overwhelming majority of the study area. Each datasets was imported to a single file geodatabase as feature classes using ArcCatalog. Individual feature classes representing the LGA administrative areas of the State were joined to create a single layer of the study area.

III. Method

Insurgency activities in Borno state have been involved in the use of suicide attacks in part of their activities. The suicide attack incidence were highlighted and mapped based on Local Government Areas (LGAs) for a period of 2009-2017. Armed Conflict Local and Event Data (ACLED) data was extracted using ArcGIS for events of insurgency in Borno State in which only those that involved suicide attacks were utilized and analysed in the study. The frequency for the LGA and years were inserted in excel and later incorporated into ArcGIS software to depict the distributional pattern of the attacks.

IV. Result and Discussion

The spatial pattern of suicide attacks in the study area from 2009-2017 is depicted in Figure 2a-2g. The central and eastern part of the state recorded the highest suicide attacks in 2014 that ranges between 10-13 incidence. These are in places that include Damboa and Gwoza. The lowest suicide attacks were in the north and southern part of the state with 0-2 suicide attacks incidence. These are in areas like Guzamala, Ngazai, Gubio, Bayo, Shani among others. The state exhibited the same spatial pattern throughout the period of the study with the exception of 2009 and 2010 which had no incidence of suicide attacks. However, the spatial distribution of suicide attacks in the state from the lowest to the highest varies from year to year. The high rate of suicide attacks experienced in these areas was as a result of the presence of hideout which gave the insurgency a conducive environment to manufacture the equipments used for the suicide missions. The year 2016 and 2017 revealed a different pattern of low suicide attacks from what was observed in other years in Borno State. The change in the pattern of the attacks during this period was attributed to the high security personnel deployed in the State, movement of the high command to Borno State, and the establishment of more security units; thus leaving the insurgents in uncoordinated attacks in the area. As a matter of fact, the deployment of more troops to the state pushes the suicide attacks towards the border areas (Danbazau, 2016).

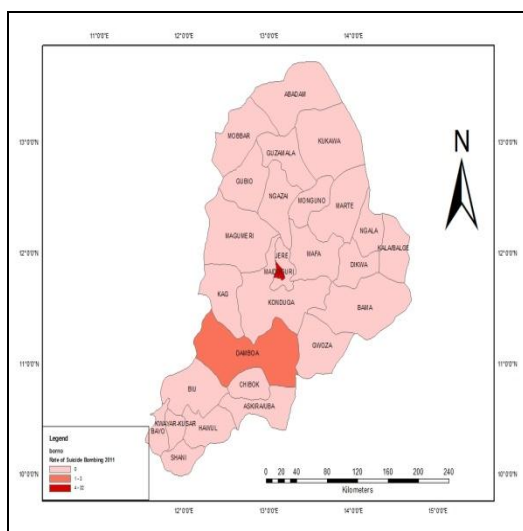


Figure 2a: Suicide Attack of 2011
Source: Research Field work 2018

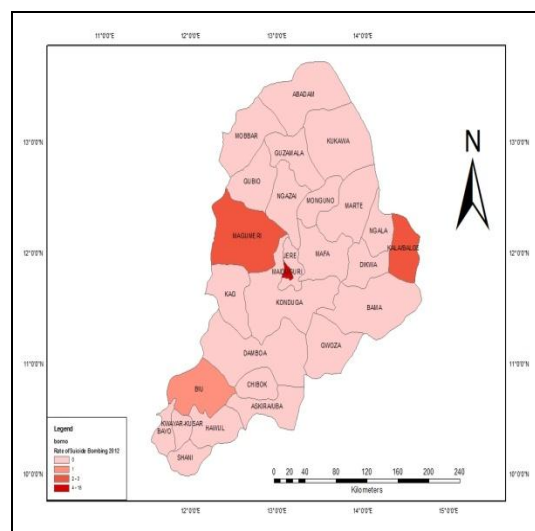


Figure 2b: Suicide Attacks of 2012
Source: Researcher Field work, 2018

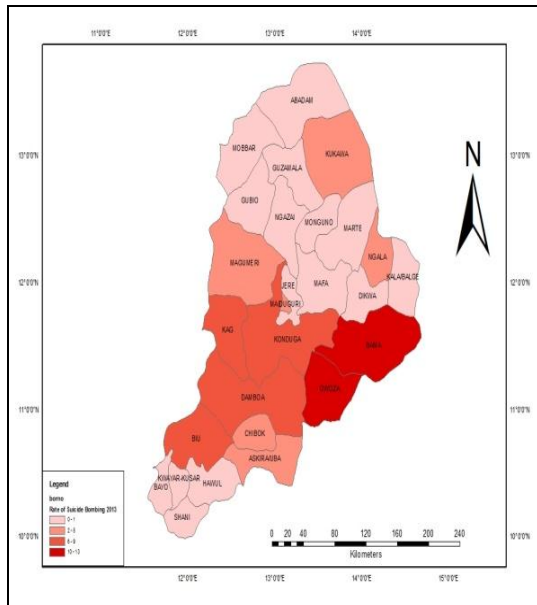


Figure 2c: Suicide Attack of 2013
Source: Research Field work 2018

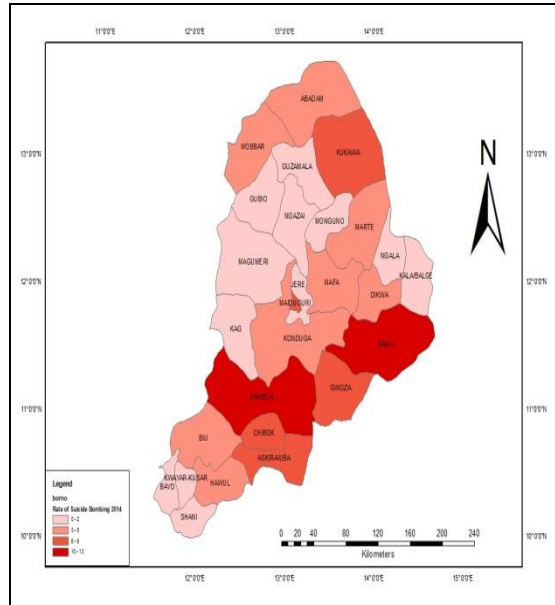


Figure 2d: Suicide Attacks of 2014
Source: Researcher Field work, 2018

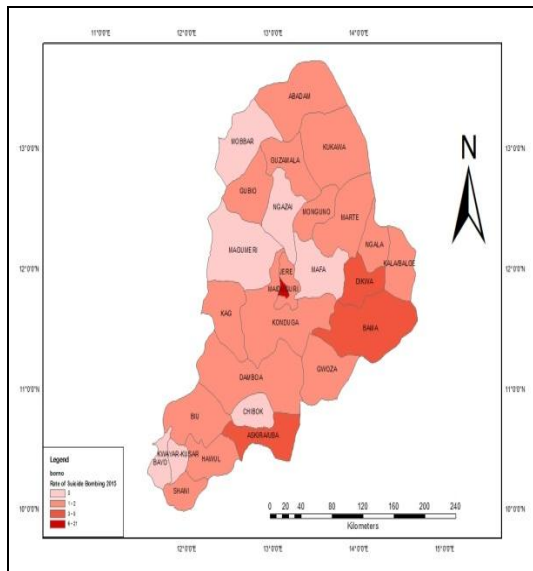


Figure 2e: Suicide Attack of 2015
Source: Research Field work 2018

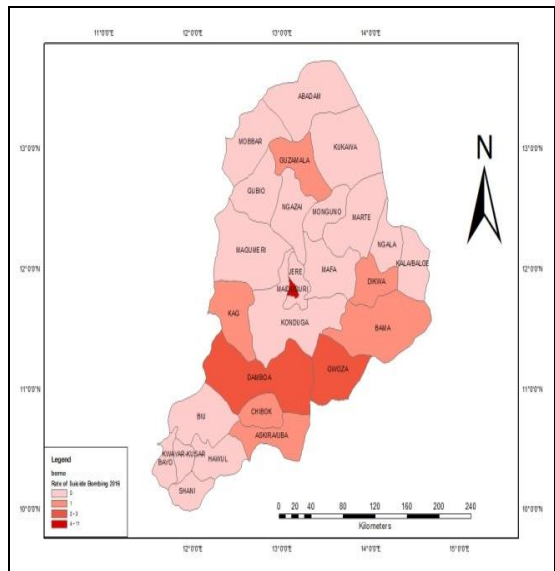


Figure 2f: Suicide Attacks of 2016
Source: Researcher Field work, 2018

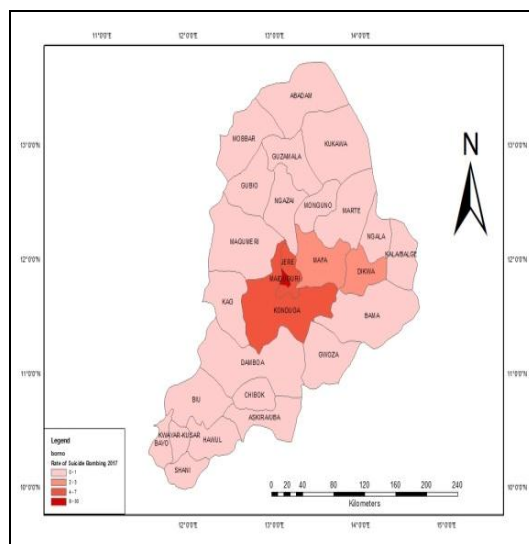


Figure 2g: Suicide Attack of 2017
Source: Researcher Field work, 2018

Despite the yearly analysis of suicide attacks in the study area. It is worthy to explain the entire distribution of suicide attacks from 2009-2017 in Borno state (see Figure 3). Maiduguri experienced the highest incidence of suicide attacks that ranges from 31-121 incidence. This may not be surprising perhaps, because Maiduguri has been regarded as the birth place of insurgency in Nigeria (Onuoha, 2012). The high rate of the incidence in Maiduguri was as a result of the daily frequencies of suicide attacks earlier recorded. Konduga, Damboa, Gwoza, and Bama where next in the number of incidence of suicide attacks with 17-30 incidence. The northern part of the state experienced the lowest incidence of suicide attack within the period of the study.

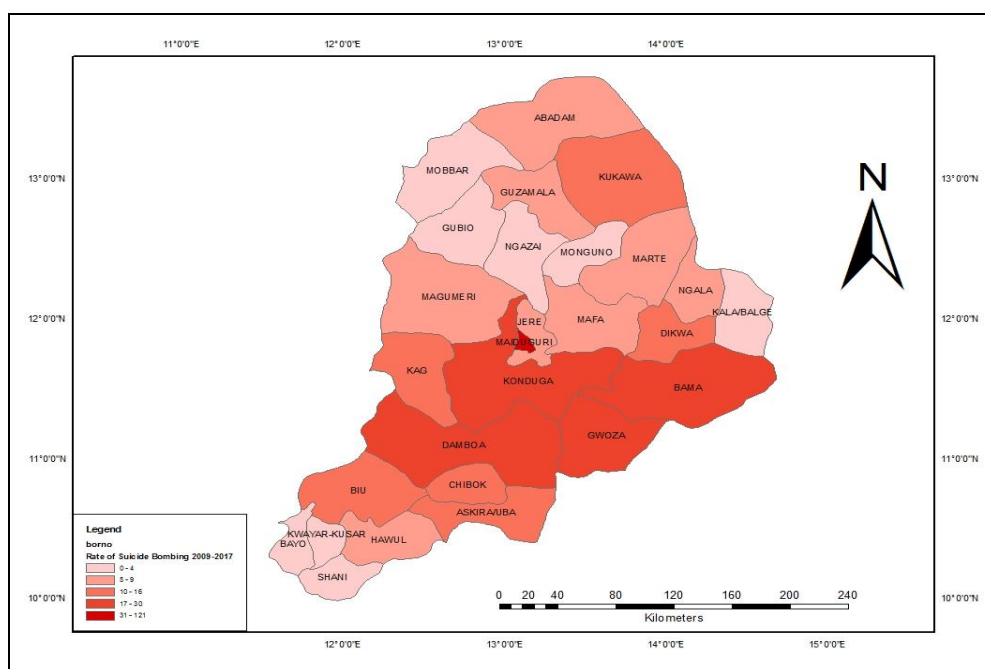


Figure 3: Suicide Attack Incidence in Borno State (2009-2017)
Source: Researchers Fieldwork, 2018

The result of the trend analysis revealed a statistically significant positive trend in suicide attack for the period of study (See figure 4). The result further shows that there was a tendency that the incidence of suicide attacks might increase in the near future if adequate measures are not taken. Also from the analysis, the frequency of suicide attack showed an increasing rate of 6 occurrences per year during the period of study. The R-square statistic shows that the model as fitted explained 27% variability in frequency of suicide incidence in the study area.

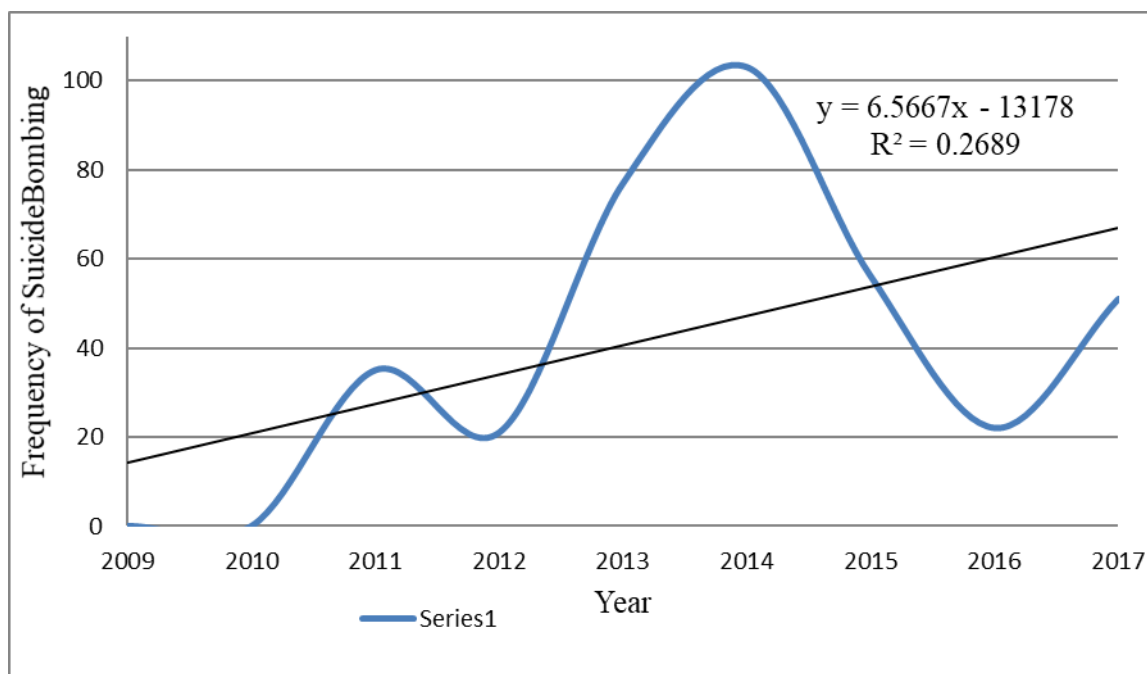


Figure 4: Trend of Suicide Attack in Borno State (2009-2017)
Source: Researchers Fieldwork, 2018

V. Conclusion

The study assess the pattern of suicide attacks incidence in Borno state from 2009-2017. The incidence of suicide attack in the state increases at a steady rate from 2011 to 2014 but decreases from 2015 to 2015. Year 2014 had the highest incidence of suicide attack in the state with over 100 incidence of suicide attacks by the insurgents in the study area. Suicide attacks are concentrated at the central part of the state with Maiduguri heavily hit with about 101 suicide attacks incidents while the lowest were recorded the southern and north western part of the state. The study therefore recommended that security agencies should adopt the use of modern technologies in detecting suicide bombers, improving human right record of the security forces, regular seminars on counter violent extremism programs.

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