

Post Conflict Review of Economic Impact of Boko Haram Insurgency on Public Buildings in Borno State, Nigeria

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ABSTRACT

Armed conflict is one of the major challenges of today and in most of the time, the construction sector is the second most affected area after human lives with economic impact of losses incurred in the sector always mirrored in the perspective of fixing back the wreckages in their original forms, rather than fixing back their improved and more secured versions. The study bridges this crucial gap with a new valuation order in which it surveyed, identified and enumerated all public buildings destroyed during Boko Haram insurgency in Borno state and, using 'enhanced bottom-up' method of costing violence, designed and evaluated their improved and more secured versions for reconstruction. It is expected to serve as a blueprint for policy formation. Field information for the study were sourced through physical inspection of destruction sites and the use of self-administered questionnaires. Analysis indicated that, public buildings destroyed during Boko Haram insurgency in Borno State require the sum of N3, 614,653,400,000.00 to be replaced with their improved and more secured versions. It is concluded that this amount could have been curtailed with the provision of enhanced community-based custody and security to the buildings. Recommendations therefore include among others, the formal entrustment of every community with security affairs of all public buildings in their jurisdictional areas and the provision of security personnel to assist the communities in security strategies.

Keywords: Post Conflict, Boko Haram, Economic Impact, Borno State, Public Buildings.

INTRODUCTION

General Introduction

Borno State had experienced series of wars and communal violence ever since the days of Kanem Empire (700s to 1300s) through to the days of Borno Empire (1300s to 1900s) up to modern-day Borno State, but no violence incident had ever claimed more lives, injuries and destruction of private and public properties in the area than the Boko Haram Insurgency that took place from 2010 to 2023 (Ahmed & Eckel, 2019; Boko Haram, 2023; Boko Haram insurgency, 2023; Hamma, 2023). This could partly be attributed to population growth and infrastructural development that took place over the years (Zakariya, 2023). Nevertheless, the Boko Haram Insurgency has caused Borno state significant economic disruption (Walker, 2020). Beyond the immediate economic impact, Boko Haram Insurgency had produced serious setback to growth, development, investment, consumption and tourism with resultant negative effect on the economic upswing and development of the area (Ahmed & Eckel, 2019; Boko Haram insurgency, 2023). Boko Haram Insurgency had altered the economic behaviour of Borno State by succeeding in changing the investment and consumption pattern of the people as well as diverting both public and private resources away from productive activities towards protective measures (Ahmed & Eckel, 2019; Boko Haram, 2023; Boko Haram insurgency, 2023). However, now that the Insurgency has seemingly given way for peace to prevail in Borno state, the dice is cast for both government and the private sector to start counting their losses. This study provides the government with computed figures on losses incurred on public buildings during the insurgency in Borno state. Additionally, the study designed and evaluated an

improved and secured version of each destroyed public building for reconstruction. With this dual attribute, therefore, the study is expected to serve as a guiding document for policy formation on public buildings that were destroyed during Boko Haram Insurgency in the state.

Need for the Study

Data on any public building in the civil service, according to Civil Service Handbook (2021), is obtained through the constitution of a team of professionals that must include at least a Quantity Surveyor, an Architect and a Builder as members, to inspect the project. For instance, when an estimate for reconstruction of a block of classrooms in Rann village (Kala Balge L.G.) of Borno State is needed, because the village is about 250 kilometers away from Maiduguri the state capital, the government must pay at least 2-day food, transport and sleeping allowances to each and every member of the team and their official driver. This is in addition to fueling their official vehicle to and from Rann village (Machina, 2024). These expenses could have been curtailed with the existence of a database of figures and estimates on all public buildings in the state. This database is expected to be updated from time to time as the need arises. This study therefore establishes a database of information on public buildings destroyed during Boko Haram Insurgency in Borno state.

Field Mission of the Study

The Boko Haram Insurgency has caused considerable loss of human lives and destruction of properties in Borno State (Boko Haram, 2023; Boko Haram insurgency, 2023; Omodunbi et al, 2021; Musa, 2021; Brechenmacher, 2019; Ayandele & Aniekwe, 2024; Frederick, 2024). While loss of human lives is irrevocable, ordinarily, destroyed personal (movable) properties such as vehicles, radio sets and furniture can be replaced, and ruined real (immovable) properties such as buildings on the other hand, can be reconstructed. However, as destruction during insurgencies affects both private and public properties, the primary concern of this study is those public buildings that were ravaged during Boko Haram Insurgency in Borno State.

According to a Post-Insurgency Recovery and Peace-Building Assessment carried out by an intervention programme involving the World Bank, European Union, and the UN with the six States that comprise the northeastern geopolitical zone of Nigeria, the number and types of public buildings destroyed in Borno State during the over-one-decade Boko Haram Insurgency include: 5,335 classrooms and other buildings in 512 primary and 38 secondary schools; two tertiary institutions; 1,205 municipal, local government and ministry buildings; 76 police stations; 35 electricity offices; 14 prison buildings; 201 health centers; and 1,630 water supply offices (Omodunbi et al, 2021; Musa, 2021; Ayandele & Aniekwe, 2024; Frederick, 2024; Shehu, 2020). Notwithstanding such reports, the study utilized its own independent and unbiased empirical approach to investigate, identify and ascertain the number and types of public buildings destroyed during the insurgency in Borno State. In addition, the study evaluated and determined the cost of reconstruction of an improved equivalent of every destroyed public building in each local government area of the state and thereafter, arrived at the total amount required for reconstruction of all public buildings destroyed during the insurgency.

Aim and Objectives

The aim of the study is to survey, identify and enumerate all public buildings destroyed during Boko Haram Insurgency in Borno State and thereafter, to design and evaluate their improved and more secured version for reconstruction. Its objectives are;

To provide the Government with concise figure of losses incurred on public buildings destroyed during Boko Haram Insurgency in Borno State.

- ii. To design an improved and more secured version for reconstruction of each public building destroyed during Boko Haram Insurgency in Borno State.
- iii. To provide the Government with monetary valuation of each public building destroyed during the insurgency for reconstruction as designed in (ii) above

- iv. To create a database of information on public buildings destroyed during Boko Haram Insurgency in Borno State for use in governance.

LITERATURE REVIEW

Post Conflict Rehabilitations

As a country, Nigeria has witnessed quite a number of insurgencies such as the Declaration of Niger Delta Republic, the Nigerian Civil War, the Movement for the actualization of the Sovereign state of Biafra, the Ooduo People's Congress, the Arewa People's Congress, and the Boko Haram insurgency. Yet by and large, the body of literature that dealt with physical development of post conflict communities in the country were only mindful in fixing back the incurred physical losses in their original forms, rather than fixing back their improved and more secured versions. Examples of these literatures are: Toyin (2024), Gavin (2024), Mustapha (2021), Ansaru (2021), Muzan (2019), Aliyu (2022), and Mailafia (2019). The situation is particularly disheartening with those literature that dealt with post conflict rehabilitation of Boko Haram affected communities, because most public structures in Northeastern part of Nigeria, where the insurgency has been more prevalent, are predominately built of mud, thatches and wattles, or insecurely built where modern materials were used. Examples of this group of literature include: Omodunbi et al (2021), Musa (2021), Shehu (2020) and Ayandele & Aniekwe (2024). However, the need for every community in Nigeria to be accorded the privilege of modern and secured public facilities cannot be overemphasized. The study therefore seeks to accomplish this need by surveying, identifying and enumerating all public buildings destroyed during Boko Haram insurgency in Borno state and, thereafter, to redesign and evaluate their improved versions with enhanced facilities as well as security and other protective features for reconstruction.

Public Buildings

A Public Building can be defined as any building structure which is owned by the government and meant to be used by the public or for the benefit of the public. While some public buildings are constructed for direct utilization of the public, others are used by the government to discharge its official functions. Example of Public Building structures are: prisons, markets, stadiums, recreation, viewing, and information centers, parks, government offices, schools, hospitals, courthouses, libraries, police stations and public housing (Brown, 2020). Each of these places connect people to each other in ways that define and support the community. According to Samsung (2020), the concept of public building is as old as the Ancient Greece and Rome, where temples, basilicas, public bathhouses and forum buildings were spaces for public life. In the modern day however, the concept of public buildings has broadened to encompass such structures as airports, seaports and railway stations.

Apart from providing physical places for public services which is crucial to the smooth running of a modern state, public buildings extend the living and social spaces of the residents. In addition, community structures such as markets, schools and libraries allow people to interact with each other as well as participate in educational or economic activities. Public buildings also affect the way we think and feel. In 1943 Britain's Prime Minister Winston Churchill said "we shape our buildings and afterwards our building shapes us" (Samsung, 2020). This notion is still true in the modern world considering the fact that the design and aesthetic composition of a building today can affect the mood of its users.

The economic benefits accruable from public buildings are (i) Increase Property Value: Public buildings such as markets, parks, ports, hospitals and schools make a community more livable and attractive to residents. As most residents would like to live around these structures, the property value of nearby homes increases with influx of people (Herberts, 2019); (ii) Support Local Economies: Businesses always prefer a marketable location for their products and as public buildings attract residents, businesses too would like to be there to sell out their products (Doughlas, 2019); (iii) Increase Tourism and Sales activities: Public buildings can serve as hubs for tourism and other social activities and people will often spend money when they gather together (Samsung, 2020); (iv) Lower Public Health Costs: Public buildings such as parks, stadiums and recreational centers can have enormous positive impact on a person's physical and mental health, thereby lowering the incidence of chronic diseases (Herberts, 2019; Samsung, 2020); (v) Lower Costs Related to Pollution: The trees planted in such public buildings as parks and recreational centers serve as pollution retardants. Samsung (2020) said,

according to US Forest Service, one tree reduces air pollution control costs by \$62,000, recycles \$37,500 worth of water, and controls \$31,200 worth of erosion; (vi) Economic Growth: The construction of public buildings such as schools, hospitals and public housing will generate significant employment and revenue to the contractors involved, and also to the contractors' employees and other business contacts, giving a boost to the building subsector of the economy. (Herberts, 2019; Samsung, 2020); and (vii) Market for Building Services: The proliferation of public buildings in a community does not only enhances the aesthetic look of the surrounding but also creates opportunity for professionals and alike to provide services and materials in building services (Douglas, 2019; Herberts, 2019; Samsung, 2020).

Destruction of Public Buildings During Boko Haram Insurgency

Coincidentally, just like other Islamic insurgent groups around the world such as the Al-Shabaab of Somalia, the Islamic State in Iraq and Levant (ISIL), the Hamas of the Israel, the Hisbullah of the Lebanon, and the various Al-Qaeda groups, attacks carried out by Boko Haram are generally and significantly characterised by destruction of building structures, either in whole or in part, setting such structures ablaze as the predominant practice, most probably to instil fears in the minds of people (Ahmed & Eckel, 2019; Boko Haram, 2023; Boko Haram insurgency, 2023; Omodunbi et al, 2021; Musa, 2021; Ayandele & Aniekwe, 2024; Frederick, 2024; Nda-Isalah, 2022). However, even though both private and public building structures were affected during Boko Haram insurgency in Borno state, public structures were the most affected in the state. This is because the Boko Haram insurgents detest anything western and they view public buildings as part of westernization and therefore destroy almost all such structures they come across. Afterall, Borno is a state with proliferation of public buildings due to complete reliance of the people in the state on government for the provision of public amenities (Tony, 2020; Stanford, 2023; Borno State, 2023).

METHODOLOGY

The Study Area

Located within 12 degrees 8 minutes 59 seconds north and 12 degrees 53 minutes 59.99 seconds east, Borno State is one of the 36 states of Nigeria with Maiduguri as its capital city. It is one of the six states comprising the North-East geopolitical zone of the country. Borno state is bordered by Yobe state to the west, Adamawa state to the south, Gombe state to the southwest, whilst its eastern border covers part of national border with Republic of Cameroon, the northern border forming parts of national border with Republic of Niger and its northeastern boundary compasses through the entire national border with Republic of Chad. Borno state is the only Nigerian state to share border with three foreign countries (Hamma, 2023; Borno State, 2023). Having a total area of 75,835 km², Borno state is the second largest in landmass to Niger state in Nigeria. However, it is ranked as the eleventh most populous state having an estimated population figure of 5,860,200 people as of 2016, translating to a population density of 83/km² (Borno State, 2023). Borno state being a fertile area, agriculture was the main pre-occupation of its people before the Boko Haram Insurgency broke in, as 80% of the population were engaged in farming, animal husbandry and fishing (Hamma, 2023; Borno State, 2023).

Costing Method for the Study

The estimation of the monetary value (or monetization) of an act of violence, be it insurgency, terrorism or war, generally involves an aggregation of both direct and indirect costs which the incident imposes on individuals and the society. While direct (or tangible) cost refers to immediate monetary effect of violence on the victim, perpetrator and society including economic valuation of mortality, morbidity, hospitalization, xenophobes, relocation, loss of quality of life, policing, judicial system, incarceration, forgone salary, etc, indirect (or intangible) cost encompasses long term economic impact of the incident on individuals and the society, including threat to economic growth, disruption of financial market and trade, inhibition of business investment, reduction in tourism, etc (Wickramaskeva et al. 2015; Harrison & Iqbal, 2020).

Since large number of studies have used diverse range of methodologies in measuring the monetary value of violence, Iqbal et al (2019) were therefore of the view that, the economic cost of any act of violence is dependent on the principles employed in estimating the cost. To this end, the four predominant methods used in costing

violence that were identified in literature are: the contingent valuation, bottom up costing method, econometric modeling, and the hedonic pricing.

The contingent valuation prices violence before the incident takes place and the bottom-up approach evaluate the cost of the incident after it has taken place. According the Harrison & Iqbal (2020), the contingent valuation is based on the question of “what is the monetary value an individual or society is willing to pay to avoid the violence incident”, whereas the bottom-up costing calculate the cost on the question of “how much will it take to fix the impact.”

On the other hand, while econometric modeling uses macroeconomic variables such as growth, investment and financial market to evaluate violence (Gailbulloev & Sandler, 2008), the hedonic pricing capitalizes on population movement (i.e. displacement, relocation and migration of people) resulting from violence to determine the cost of shelter in an environment (Tita et al, 2006).

This study adopts what it refers to as ‘enhanced bottom-up’ approach of costing violence as all insurgency-destroyed public buildings in Borno State were assessed and their improved versions with enhanced facilities as well as security and other protective features were designed and evaluated for reconstruction. However, some may call this system of valuation as ‘Africa bottom-up’ method because it is only fair for destroyed African structures built of thatches and wattles to be replaced with improved version.

Data Collection

The three principal approaches adopted for accomplishment of field study were:

- (i) **SITE VISIT:** Most destruction sites in insurgency affected local government areas of Borno state were physically visited to ascertain the nature and magnitude of wreckage done on public buildings. This is achieved through physical enumeration and measurements of destroyed buildings as well as physical determination of the type of materials used on the buildings.
- (ii) **SELF-ADMINISTERED QUESTIONNAIRES:** This is a collation stage for all information that could not be physically gathered in (i) above. The stage is accomplished through face-to-face dialogue with respondents. These respondents, who are all permanently resident in Borno State include: Local Council Chairmen, Secretaries and their subordinates; State Government employees and political Appointees; Royal fathers; Residents of insurgency-affected areas; Refugees; and Students from affected local government areas. The respondents also provided all the information needed on those destruction sites that cannot be physically reached due to presence of some insurgents in the areas. In addition, the respondents were accorded the privilege to express their views on the nature of construction improvement that need to be made if the ravaged public buildings in their various localities were to be reconstructed.

All respondents were unequivocally assured of complete confidentiality of any information provided to the study.

(iii) DESIGN AND EVALUATION

After determining the nature, magnitude, type and number of public buildings destroyed during the insurgency, their improved and secured versions were designed and evaluated for reconstruction. However, the study adopted the principles of ‘the same design for the same purpose’ in which identical designs were provided to all types of public buildings that are meant to be used for the same purpose. For example, all Primary Schools in rural areas, Court Houses, Emir’s Palaces or Local Government Secretariat have the same design. Bill of Quantities (BOQ) were used for their valuations.

Data Presentation

Field compilation on the number and types of public buildings destroyed in each of the 27 local government areas of Borno state are presented on Table 1. In addition, modern designs with improved security features and

other facilities were proposed for each type of destroyed public building, and accompanying cost estimates for their reconstruction were established. Table 2 shows the cost estimate for reconstruction of improved and secured version of each type of insurgency-destroyed public building. The two Tables were used in calculating the total amounts required for reconstruction of destroyed public buildings in each local government area as would be shown in the next subsection.

Table 1: The number and types of public buildings destroyed in each local government area of Borno state.

TO TA L C O S T O F R E C O N S T R U C T I O N O F D E S T R O Y E D P U B L I C B U I L D I N G S (N I G E R I A N N A I R A)	Other. Buildings	Town Hall	Court. House	Water. Off	Elect. Off	Prison/ Correction Centre	Police Station	Village Head Palace	District Head Palace	Emir Palace	Jnr. Staff. Qtrs	Snr. Staff. Qtrs	State Govt Annex. Off	L.G. Annex. Off	L.G Lodge	L.G Sect Bldg	Tertiary. Inst	Secondary Sch	PRI. Sch. Type III	PRI. Sch. Type II	PRI. Sch. Type I	Health Centre	H O S P I T A L	L G A	S / N
90.4 64,2 50,0 00.0 0	7	2	2	5	3	-	3	20	2	-	20	70	13	5	1	1	-	3	13	7	4	21	1	1	1
																									Abadam

2	A s k i r a / U b a	-	31	29	31	48	10	-	1	1	5	13	220	70	2	34	143	6	2	6	38	5	9	17	441,630,500,000.00
3	B a m a	1	37	12	40	59	8	1	1	1	5	13	250	70	1	12	112	14	3	12	50	8	12	22	372,601,250,000.00
4	B a y o	1	8	2	4	7	-	-	-	-	-	2	-	-	-	1	3	1	-	-	-	-	1	2	26,758,250,000.00
5	B i u	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,257,500,000.00
6	C h i b o k	1	28	28	22	39	2	-	1	-	5	13	70	20	-	5	81	3	-	3	25	2	3	5	253,930,750,000.00
7	D a m b o a	-	28	15	30	62	3	-	-	-	-	5	150	20	-	5	25	1	-	2	5	1	1	5	209,914,000,000.00
8	D i k w a	1	5	2	2	3	1	-	1	1	5	7	15	20	-	4	21	2	-	2	12	5	2	7	54,504,250,000.00

9	G u b i o	1	1	2	8	1	1	-	1	1	5	1	10	10	-	3	37	1	-	2	³	2	3	5	87,9 91,5 00,0 00.0 0
10	G u z a m a l a	1	1	5	7	1	-	-	1	1	5	2	20	20	-	2	12	3	-	3	2	2	3	6	64,7 84,7 50,0 00.0 0
11	G w o z a	3	2	2	2	4	8	-	1	1	5	1	17	50	1	26	10	6	1	5	3	3	5	8	354, 784, 500, 000. 00
12	H a w u l	-	3	3	4	5	5	-	-	-	-	8	10	50	-	6	34	6	-	4	1	2	3	5	277, 597, 750, 000. 00
13	J e r e	-	-	6	2	-	1	-	1	1	³	6	-	-	-	1	-	2	1	9	7	2	1	1	26,1 64,0 00,0 00.0 0
14	K a g a	-	1	1	1	2	1	-	-	-	2	2	-	-	-	3	31	3	1	3	1	2	3	5	96,9 88,5 00,0 00.0 0
15	K a l a B a l g e	1	1	2	2	3	3	-	1	1	5	1	5	2	-	4	24	2	-	2	6	-	1	2	62,1 56,7 50,0 00.0 0

16	Konduga	1	6	10	31	44	2	-	1	1	5	13	150	20	-	4	48	3	1	5	1	2	2	3	199,364,750,000.00	
17	Kukawa	1	21	7	16	28	3	-	1	1	5	13	150	50	1	3	24	3	1	3	2	4	5	3	5	147,251,000,000.00
18	Kwaya Kusar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	95,000,000.00	
19	Mafa	1	20	12	11	21	2	-	1	1	5	13	15	20	-	3	30	5	1	6	1	8	2	3	7	302,825,900,000.00
20	Magumeri	1	7	2	5	10	5	-	1	1	3	13	35	20	-	5	45	2	1	2	1	6	2	3	6	107,085,500,000.00
21	Maiduguri	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	2	1	-	-	3	17,591,500,000.00	
22	Marte	-	22	6	12	25	2	-	1	1	5	13	60	100	-	2	13	3	-	3	3	3	3	4	5	107,974,750,000.00

23	Mobbabar	1	2	3	5	2	2	-	1	1	5	1	6	20	-	2-	10	1	1	2	5	2	5	8	69,429,500,000.00
24	Monguno	-	-	-	-	15	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	5	16,206,750,000.00
25	Ngala	1	20	11	18	23	8	1	1	1	5	13	15	20	1	4	25	6	1	4	17	3	3	9	155,704,750,000.00
26	Nganzai	1	20	3	5	8	3		1	1	5	13	15	20	-	1	16	1	-	2	20	2	3	5	69,500,500,000.00
27	Shani	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	95,000,000.00
TOTAL		19	368	237	335	582	73	2	18	17	90	227	1526	622	6	132	864	83	14	85	349	57	75	170	3,614,650,000.00

SOURCE: Field survey conducted by authors. Table 2: Cost Estimate for Reconstruction of Improved and Secured Version of each Public Buildings

S/N.	Type of Public Building	Cost Estimate for Reconstruction of Improved and Secured Version
1.	Hospital	₦1,257,500,000
2.	Health Centres	₦425,000,000
3.	Primary School Type I	₦122,057,000,000

4.	Primary School Type II	₦1,457,500,000
5.	Primary School Type III	₦965,750,000
6.	Secondary School	₦2,967,500,000
7.	Tertiary Institution	₦3,558,000,000
8.	Local Government Secretariat	₦475,000,000
9.	Local Government Lodge	₦335,500,000
10.	Local Govt. Annex Offices	₦225,500,000
11.	State Govt. Annex Offices	₦197,500,000
12.	Senior Staff Quarters	₦115,500,000
13.	Junior Staff Quarters	₦85,500,000
14.	Emir's Palace	₦2,757,500,000
15.	District Head Palaces	₦1,550,500,000
16.	Village Head Palaces	₦995,000,000
17.	Police Station	₦95,000,000
18.	Prison/Correction Centre	₦406,500,000
19.	Electric Office	₦145,000,000
20.	Water Office	₦125,500,000
21.	Court House	₦175,500,000
22.	Town Halls	₦79,500,000
23.	Other Buildings	₦145, 000,000.00

SOURCE: Results of Design and Valuation conducted by authors.

ANALYSIS

The total cost estimate for reconstruction of improved and more secured versions of public buildings destroyed during Boko Haram insurgency in each local government area of Borno state are given on Table 1 (last column). Each of these total cost estimates were obtained by Multiplying the total number of structures destroyed under each category of public buildings in a local government area (Table 1) with the corresponding cost estimate of improved and secured version of that category of public building (Table 2) and summing the multiplications together. For example, under Bama Local Government Area, which has in-surgency destroyed structures that encompassed all categories of public buildings, we have as follows:

1No. Hospital x ₦1,257,500,000 + 37No. Health Centres x ₦425,000,000 + 12No. Primary. Sch. Type I x ₦122,057,000,000 + 40No. Primary. Sch. Type II x ₦1,457,500,000 + 59No. Primary. Sch. Type III x ₦965,750,000 + 8No. Sec. Sch x ₦2,967,500,000 + 1No. Tertiary Inst. x ₦3,558,000,000 + 1No. L.G. Secretariat x ₦475,000,000 + 1No. L.G. Lodge x ₦335,500,000 + 5No. L. G. Annex Offices. X ₦225,500,000 + 13No. State

Govt Annex Offices x ₦197,500,000 + 250No. Snr Staff Qtrs x ₦115,500,000 + 70No. Jnr Staff Qtrs x ₦85,500,000 + 1No. Emir’s Palace x ₦2,757,500,000 + 12No. District Head Palaces x ₦1,550,500,000 + 112No. Village Head Palaces x ₦995,000,000 + 14No. Police Stations x ₦95,000,000 + 3No. Prison/Correction Centres x ₦406,500,000 + 12No. Electric Offices x ₦145,000,000 + 50No. Water Offices x ₦125,500,000 + 8No. Court Houses x ₦175,500,000 + 12No. Town Halls x ₦79,500,000 + 22No. Other Buildings x ₦145, 000,000.00 = ₦372,601,250,000.00

The total amounts required for reconstruction of destroyed public buildings in each local government area of the state (last column of Table 1) were all obtained in the same way as that of Bama local government area (above). These amounts are:

1. Abadam = ₦90,464,250,000.00.
2. Askira/Uba = ₦441,630,500,000.00.
3. Bama = ₦372,601,250,000.00.
4. Bayo = ₦26,758,250,000.00.
5. Biu = ₦1,257,500,000.00.
6. Chibok = ₦253,930,750,000.00.
7. Damboa = ₦209,914,000,000.00.
8. Dikwa = ₦54,504,250,000.00.
9. Gubio = ₦87,991,500,000.00.
10. Guzamala = ₦64,784,750,000.00.
11. Gwoza = ₦354,784,500,000.00.
12. Hawul = ₦277,597,750,000.00.
13. Jere = ₦26,164,000,000.00.
14. Kaga = ₦96,988,500,000.00.
15. Kala Balge = ₦62,156,750,000.00.
16. Konduga = ₦199,364,750,000.00.
17. Kukawa = ₦147,251,000,000.00.
18. Kwaya Kusar = ₦95,000,000.00.
19. Mafa = ₦302,825,900,000.00.
20. Magumeri = ₦107,085,500,000.00.
21. Maiduguri = ₦17,591,500,000.00.
22. Marte = ₦107,974,750,000.00.
23. Mobbar = ₦69,429,500,000.00.
24. Monguno = ₦16,206,750,000.00.
25. Ngala = ₦155,704,750,000.00.
26. Nganzai = ₦69,500,500,000.00.
27. Shani = ₦95,000,000.00.

Figure 1 highlights the amount required in each local government area in bar chart form.

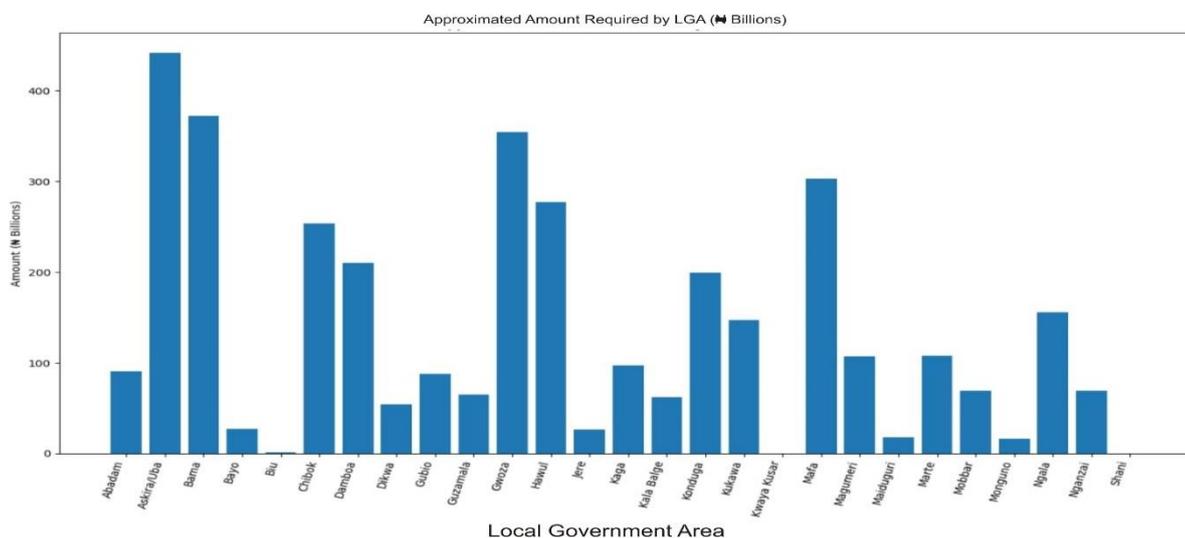


Figure 1: Cost Estimates for Reconstruction of Destroyed Public Buildings During Boko Haram

Insurgency in Each Local Government Area of Borno State, Nigeria.

SOURCE: Results of Design and Valuation conducted by authors.

RESULTS AND DISCUSSION

After further summing together the total amounts needed for reconstruction under each of the 27 local government areas, the study reveals that, the total amount required to reconstruct the entire public buildings destroyed during Boko Haram Insurgency in Borno state stands at **N3,614,653,400,000.00**, with Askira/Uba local government area having the lion share of **N441,630,500,000.00** and followed by Bama local government area with **N372,601,250,000.00**.

As shown on Table 1, each local government area in Borno state has its own share of magnitude of destruction, which primarily depend on the intensity of insurgency that took place and the number of public buildings within the local government area concerned. It is also evident from the Table that no local government area in the State is spared from the scorch of the Boko Haram Insurgency. This partly explains why Ahmed & Eckel (2014), Boko Haram (2023), Boko Haram insurgency (2023) and Hamma (2023) were of the opinion, that no violence incident in Borno State and it environ had ever claimed more lives, injuries and destruction of private and public properties than the Boko Haram Insurgency.

CONCLUSION AND RECOMMENDATIONS

Having surveyed, identified and enumerated all public buildings destroyed during Boko Haram Insurgency in Borno State, the study designed and evaluated their improved and more secured versions for reconstruction. Results in the study indicate that, the total amount required by the government to reconstruct improved and more secured versions of public buildings destroyed during Boko Haram Insurgency in Borno state stands at **N3,614,653,400,000.00**, with Askira/Uba local government area having the lion share of **N441,630,500,000.00** and followed by Bama local government area with **N372,601,250,000.00**. However, the adverse effect of insurgency which affects both individuals and the society alike, always stretches through all sectors of the economy. Public buildings are only a subsector of the wider economy. Carrying out similar effort of identifying and enumerating insurgency-destroyed properties in all other subsectors of the economy and evaluating their improved versions for reconstruction and/or replacement will, undoubtedly, signify a new dawn in arriving at the total amount needed for reconstruction and rehabilitation of insurgency-ravaged society. This study therefore stands as a challenge to all other professionals to contribute their own quotas by following suit. For example, the Electrical Engineers can assess all destroyed electrical system and provide an evaluation of improved distribution network for re-installation, the Doctors can assess every damaged medical item in the clinics and provide an evaluation of their improved versions for replacement, etc.

Furthermore, as most members of insurgency group are part and parcel of the society (Mailafia, 2019; Muzan, 2019), the study concludes that, the magnitude of destruction on public buildings during Boko Haran insurgency in Borno state could have been reduced to some extent if the structures were provided with community-based custody and enhanced security. To this end, the study recommends as follows:

The community as custodian of public buildings.

Every community to be entrusted by the law to take charge of security affairs of public buildings in their jurisdictional boundaries. The respective traditional royal fathers in communities are to be empowered to oversee the supplementation of the law and the government should make budgetary provision for the purpose.

Community participation in the construction and maintenance of public buildings.

The government is recommended to imbibe the spirit of direct participation of the community in both construction and subsequent maintenance of public buildings through direct labor system. The communities should be advised through their respective traditional royal fathers to organize groups for the purpose. This is expected to bring public buildings closer to the people.

Firefighting Equipment.

Even though it is reliably understood that every local government area in Borno State has its own firefighting equipment, it is very difficult for the equipment to reach some rural places (on time) due to unfavorable nature of most rural roads in the state. As a result, it is possible for an entire public building to be engulfed in fire before fire-fighters could come to its rescue. It is therefore recommended that, adequate fire-fighting gadgets be provided to every public building and the locals be trained on their usage at government expenses. In addition, fire-fighting helicopter could be procured by the state government to enhance fire-fighting strategy of the state.

Security Personnel

Even though the various communities are to take charge of the security affairs of all public buildings in their respective jurisdictional boundaries as indicated in recommendation 1 above, the government should also provide security personnel to every public building to assist the communities in their security strategies.

REFERENCE

1. Ahmed I. and Eckel M. (2014). "In the Home of Peace, A Siege of Fear": VOA https://www.voanews.com/MediaAssets2/projects/boko-haram/index_en.html
2. Ansaru, (2021). In Wikipedia. <https://en.wikipedia.org/wiki/Ansaru>
3. Ayandele O. & Aniekwe C. C. (2024). A decade After Chibok: Assessing Nigeria's Regional Response to Boko Haram. ACLED. <https://acleddata.com/2024/04/16/a-decade-after-chibok-assessing-nigeria-regional-response-to-boko-haram/>
4. Boko Haram (2023). In Wikipedia. https://en.m.wikipedia.org/wiki/Boko_Haram
5. Boko Haram insurgency (2023). In Wikipedia. https://en.m.wikipedia.org/wiki/Boko_Haram_insurgency
6. Borno State (2023). In Wikipedia. https://en.m.wikipedia.org/wiki/Borno_State
7. Brechenmacher S. (2019). Stablizing Northeast Nigeria After Boko Haram. CAREGIE. <https://carnegieendowment.org/undefined/?lang=en>.
8. Brown F. (2020). Public Buildings Definition. DesigningBuildings. <https://www.designingbuildings.co.uk/wiki/public%20building%20definition>
9. Civil Service Handbook (2021) Vol 18. Produced by the Presidency, Office of Establishment and Management Services, Abuja, Nigeria.
10. Doughlas O. N. (2009). 10 benefits of Creating Good Public Spaces. ProjectforPublicSpaces. <https://www.pps.org/article/10benefits>
11. Frederick d. (2024). Displaced But Not Forgotten: Hope and Help for Victims of Boko Haram. IOM NIGERA. <https://nigeria.iom.int/stories/displaced-not-forgotten-hope-and-help-victims-boko-haram-nigeria>
12. Gaibuiioev,K., and T. Sandlev (2008). "Growth Consequences of Terrorism in Western Europe." RePEc. <https://doi.org/10.1111/j.1467-6435.2008.00409.x>.
13. Gavin, W. (2024). Revisiting the Nigerian Civil War. ROAPE. <https://roape.net/2024/03/21/revisiting-the-nigerian-civil-war>
14. Hamma T. (2023), About Borno. <https://bornostate.gov.ng/about-borno/>
15. Harrison B., and M. Iqbal (2020). Economic impact of terrorism from 2000 to 2018. Peace, economics, peace science and public policy.18-28 <https://doi.org/10.1515/peps-2020-.0031>
16. Herberts H. G. (2019). 5 Economic Benefits of Parks and Recreational Facilities. HRG. <https://hrg-inc.com/5-economic-benefits-of-parks-and-recreational-facilities/>
17. Iqbal M., H. Bardwell, and D. Hammonal (2019). Estimating the global economic cost of violence: methodology improvement and estimate updates. Defence and peace economics, 1-24. <https://doi.org/10.1080/10242694.2019.1689>
18. Machina M, A. (2024). Economic Impact of Boko Haram Insurgency on Public Buildings in Yobe State, Nigeria. Multidisciplinary Journal of Sociology and Anthropology (MUJOSAU). Department of Sociology and Anthropology, University of Maiduguri, Nigeria. 1(4), 15-46.

19. Mailafia O. (2019). Conflict and Insurgency in Nigeria. 247Ureport. <https://247ureport.com/2019/09/conflict-and-insurgency-in-nigeria-by-obadiah-mailafia>
20. Musa D. (2021). Boko Haram Insurgents takes complete control of Geidam community in Yobe State. Tvcnewsng <https://www.tvnews.tv/2021/04/boko-haram-insurgents-take-complete-control-of-geidam-com>
21. Mustapha, K. (2021). Movement for the “Emancipation of the Niger Delta” (MEND) Constitutes a Threat to the U.S. National Security. Scientific Research. <https://www.scrip.org/journal/paperinformation?paperid=109851>
22. Muzan, A. O. (2019). Insurgency in Nigeria: Addressing the Causes as Part of the Solution. SAFLII. <https://www.saflii.org/za/journals/AHRLJ/2019/13.html>
23. Nda-Isalah J. (2022). Boko Haram insurgency killed 100,000, caused N3.24tr damages, says CDS. <https://guardian.ng/news/boko-haram-insurgency-killed-100000-caused-n3-24tr-damages-says-cds/>
24. Omodunbi, O., Adebowale, L. A. & Richard, A. I. (2021). View of Boko Haram Insurgency in Nigeria. Advanced Policy Options for Lasting Solutions (APOLS). <https://ad.univ.danubius.ro/index.php/AVDRI/article/view/1229/1539>
25. Samsung C. T. (2020). Public Buildings: An extension of our Living and Social Spaces. Engineering Construction. <https://news.samsungcnt.com/en/features/engineering-construction/2020-09-public-building-extension-living-social-spaces/>
- Shehu L. (2020). Borno lost 900,000 Houses, 5,000 Classroom Buildings to Boko Harm attacks—Governor Zulum. Sahara Reporters, New York. <https://saharareporters.com/2022/02/01/orno-lost-900000-houses-5000-classroom-buildings-boko-haram-attacks-%E2%80%93-Governor-Zulum>
27. Stanford University (2023). MMP: Boko Haram | FSI Stanford University. <https://cisac.fsi.stanford.edu/mappingmilitants/profiles/boko-haram>
28. Tita G. E, Petras T. L., and Greenbaum R.T. (2006). Crime and residential choice: A neighborhood level analysis of the impact of crime on housing prices. Journal of quantitative criminology.22 (7): 299-317 <https://doi.org/10.1007/S10940-006-9013-Z>.
29. Tony D. (2020). Final Report-Borno State Commodities Value Chain Assessment Report. Submitted by; Nigerian Incentive Based Risk Sharing System for Agriculture Lending (NIRSAL). https://facluster.org/sites/default/file/documents/final_report_borno_state_commodities_value_chain_assessment_report_pdf
30. Walker A. (2012), What is Boko Haram? United States Institute for Peace. <https://www.usip.org/sites/default/files/SR308.pdf>
31. Wickramasekva N. J., Wright, H. Elsey, Murray J, and Tubeuf S. (2015). Cost of crime: A systematic review. Journal of criminal justice 43 (3): 218-28 <https://doi.org/10.1016/j.jcrimjus.2015.04.06>
32. Zakariya S. (2023). Peace. Borno State Government. <https://bornostate.gov.ng/orno-home-of-peace/>