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# An Evaluation of Commodity Supply Chain and Logistic Strategy for Internally Displaced Persons in Borno and Plateau State, Nigeria

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***Abstract***

*This study is an attempt to evaluate the logistics and supply chain processes involved in providing humanitarian aid commodities for Internally Displaced Persons (IDPs) in Jos Plateau State, Central and Maiduguri Borno State, North Eastern Nigeria.*

*The study was carried out in two IDP camps, one located in each of these two towns – Jos and Maiduguri, with the method of survey questionnaire which was administered to 60 respondents randomly selected from 200 state and non-state actors involved in the supplying of aid commodities to both camps at the time of this study.*

*The findings uncover gaps between research and practice; providing new insights into human behaviour in the humanitarian aid commodity logistics and supply chain management. Explanations for these barriers and possible solutions to mitigate them are disclosed in the course of this study.*

*The summary of the findings from the study are: Initial IDP needs assessments are not done, no clearly outlined national disaster management plans, the capacities of the state and non-actors inadequate and Logistics Service Providers generally ill equipped.*

*It is in the opinion of this researcher that in order to ensure a very effective and efficient response to the needs of Internally Displaced Persons in Jos Central and Maiduguri North Eastern Nigeria the state and non-state actors must address the gaps identified in this research.*

***Keywords:*** *Camps, Conflict, Disaster, Displacement, Host Community, Humanitarian Logistics, Humanitarian Aid Commodities, Humanitarian Aid Worker, Internally Displaced Persons, Kampala Convention, Logistics Service Providers, State and non-state Actors and Supply Chain Management.*

## Abbreviations

| | | |
|---|---|---|
| DRO | : | Disaster Relief Organizations. |
| FEMA | : | Federal Emergency Management Agency. |
| HA | : | Alternative Hypothesis. |
| HO | : | Null Hypothesis. |
| IDP | : | Internally Displaced Persons. |
| LSP | : | Logistics Services Providers. |
| MSF | : | Medicines Sans Frontiers. |
| NEMA | : | National Emergency Management Agency. |
| SCM | : | Supply Chain Management |

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|---|---|---|
| SCRC | : | Supply Chain Resource Cooperative. |
| UNHCR | : | United Nations High Commission for Refugees. |
| $X^2$ | : | Chi-Square. |
| WFP | : | World Food Program. |
| WHO | : | World Health Organization. |

## Background of the study

Internal displacement in Nigeria was already in the headlines 48 years ago, when some two million people died and several millions became internally displaced during the Biafran war (1967-1970). While displacement of this magnitude has not reappeared since then, Nigeria has over the past four years seen a dramatic increase in communal violence. Although the situation cannot be compared to the former civil war, or be characterized as a typical "armed conflict", all parts of the country have recently been affected by armed clashes between different ethnic groups, or between political factions, as well as looting by armed nomadic groups. Added together, these pockets of violence have caused a humanitarian situation and levels of internal displacement comparable to some of the better known African emergencies. (Profile of Internal Displacement: Nigeria. Norwegian Refugee Council May 2003).

As a result of the non-international armed conflict between the Nigerian Government and the armed opposition (Jama'atu Ahlu s-Sunnati lil-Da'wa wal-Jihad / Islamic State West Africa Province group) more than 1.76 million people are internally displaced in the North Eastern region of Nigeria. The total number of internally displaced persons (IDPs) in North East and North Central Nigeria is estimated at over 2 million people, making Nigeria host to the six largest IDP population in the world. Borno, Adamawa and Yobe States currently have the largest number of IDPs, with approximately 1.68 million persons who have been displaced as a result of the conflict, including approximately 528,000 IDPs in Maiduguri Metropolis, Borno State. Given the large scale of the displacement, and the ongoing instability in many Local Government Areas (LGAs) in the North East of Nigeria, the Federal and State Governments have been facing, and continue to face, a critical humanitarian situation that is not expected to end anytime soon. (Internal Displacement in North East Nigeria: International Committee of the Red Cross 2016). It is obvious from the foregoing that providing essential commodities for this huge number of displaced persons within a very short time could be very challenging as a result there is a need for research into possible ways of addressing the problems. This is what motivated the researcher to conduct this study.

As a State Party to the African Union Convention for the Assistance and Protection of Internally Displaced Persons in Africa (the "Kampala Convention"), the Nigerian Government has the primary duty and responsibility to assist and protect IDPs in its territory, with support from humanitarian organizations where needed. It is also obliged to incorporate the Convention into the domestic legal framework and promote conditions for voluntary, dignified and safe durable solutions to displacement. (Internal Displacement in North East Nigeria: ICRC 2016).The question is has Nigerian Government been able to effectively and efficiently provide for the IDPs? The researcher will in the course of this work provide answers to this concern.

In the early 2006, the increasing number of Internally Displaced Persons (IDPs) due to conflict induced internal displacement informed the Nigerian Government to consider a National Policy on IDPs, the draft of which was tabled for consideration in 2007 but the then Federal Executive Council did not adopt it. The draft was revised twice between 2009 and 2012 to reflect the new realities and based on the framework provided by the Kampala Convention (The Draft National Policy on IDPs in Nigeria, September 2011). Having recognized that in Nigeria and elsewhere in the world, IDPs are

amongst the most vulnerable populations for obvious reasons, the Federal Government of Nigeria signed, ratified and deposited her instruments of the African Union (Kampala) Convention for the Protection and Assistance of IDPs in Africa (The AU Kampala Convention, 2009).

Nigeria is yet to domesticate this piece of legislation and this may be responsible for the ineffective and inefficient management of the humanitarian commodities' supply chains and the logistics of their distributions nationally, especially in Internally Displaced Persons (IDP) camps in Jos Plateau state and Maiduguri Borno state Nigeria. Another serious issue is that the Kampala document is not detailed enough on what constitutes humanitarian aid commodities, their logistics and supply chain processes. That is, the document did not provide a standard operating procedure (SOP) of identifying the commodities, procuring, warehousing, transporting and distribution of the humanitarian aid commodities for speedy delivery to the points of needs. In most cases either the commodities fail to be delivered on time to the camps or poorly distributed within the camps due largely to poor planning, inadequate funding, corruption and low capacity of the personnel. In some serious cases the commodities are left to rot or idle away in the open air space or poorly ventilated national or regional warehouses while the actors go through seemingly unending bureaucratic (logistics) processes and the IDPs wallow in near or total lack of basic commodities for survival. In some other cases, politicians trying to score political points over their opponents spend more time on propaganda instead of granting speedy approval for the procurement, delivery and distribution of the needed essential aid commodities which are usually in very urgent demand.

As earlier pointed out, there are myriads of problems responsible for the emergence of these gaps but for the purpose of this work the researcher decided to investigate three key issues: (1) Lack of sustainable emergency response plans. (2) Low capacity of state and non-state actors. (3) Lack of equipped/specialized humanitarian logistics service providers in Nigeria. This research project is therefore aimed at evaluating the strategies been adopted in Nigeria by both state and non-state actors to manage the supply chains and logistics of humanitarian aid commodities in Jos and Maiduguri Nigeria especially as it affects the IDPs. It will enable us to know whether the IDPs are adequately or inadequately provided for within a reasonable period of time as recommended by internationally accepted standards of practice in humanitarianism and also proffer solutions for improved performance where applicable.

## Statement of the research problem

The humanitarian aid commodities are usually in urgent needs by the IDPs anywhere they are located in the world and this was the case in Jos Plateau state and Maiduguri Borno state Nigeria, but they are hardly delivered on time due largely to a very weak and non-agile supply chain and poorly coordinated logistics and supply chain management systems. In the two IDP camps visited in the course of this research the conditions of the IDPs were deplorable due to none or very late arrival of humanitarian aid commodities that are in most cases insufficient. The problem is so serious that some IDPs especially the children and elderlies were looking severely unkempt, malnourished, and ill and in some cases appeared to be dying gradually in the camps. The major problem in most cases from the investigation of the researcher is the delay in delivery and distribution of the humanitarian aid commodities to the IDPs. There is no clearly defined system of moving humanitarian aid commodities from the donors' cargoes or markets to the national/regional warehouses and onward to the IDP camps. Even when the aid commodities eventually get to the camps no well-coordinated systems of distribution is seen to have been put in place.

In order to properly address these problems the following research questions were raised:

1. Is the lack of sustainable disaster response plans responsible for the delay or untimely aid commodity supply and distribution to IDPs in Jos Plateau and Maiduguri Borno states Nigeria?
2. Is the lack of well-equipped and specialized humanitarian logistic service providers in Nigeria responsible for the delay or untimely commodity supply and distribution to IDPs in Jos Plateau and Maiduguri Borno states Nigeria?
3. Is the low capacity of state and non-state actors on humanitarian logistic systems responsible for the delay or untimely commodity supply and distribution to IDPs in Jos Plateau and Maiduguri Borno states Nigeria?

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## Hypothesis

Generally, IDPs hardly have access to their basic needs in the camps on time due to a myriad of problems such as inadequate preparation for a very rapid response in emergencies, low capacity of state and non-state actors, and non-specialization of logistics service providers in humanitarian aid commodity supply chain operations. In order to critically examine some of these problems and provide solutions to them, the following research hypothesis have been raised for this study.

H01: Lack of sustainable disaster response plans is not responsible for the delay or untimely humanitarian commodity supply and distribution to IDP camps in Jos Plateau state and Maiduguri Borno state Nigeria.

HA1: Lack of sustainable disaster response plans is responsible for the delay or untimely commodity supply and distribution to IDP camps in Jos Plateau state and Maiduguri Borno state Nigeria.

HO2: Lack of well-equipped and specialized humanitarian logistic service providers in Nigeria is not responsible for the delay or untimely commodity supply and distribution to IDP camps in Jos Plateau state and Maiduguri Borno state Nigeria.

HA2: Lack of well-equipped and specialized humanitarian logistic service providers in Nigeria is responsible for the delay or untimely commodity supply and distribution to IDP camps in Jos Plateau state and Maiduguri Borno state Nigeria.

HO3: Low capacity of state and non-state actors on humanitarian logistic systems is not responsible for the delay or untimely commodity supply and distribution to IDP camps in Jos Plateau state and Maiduguri Borno state Nigeria.

HA3: Low capacity of state and non-state actors on humanitarian logistic systems is responsible for the delay or untimely commodity supply and distribution to IDP camps in Jos Plateau state and Maiduguri Borno state Nigeria.

## Definition of operational terms

**Camps:** These are erected sites with non-permanent shelters (e.g. tents) used for the collective and communal accommodation of evacuated or displaced persons. Camps can be planned (i.e. purposely-built sites, completed before or during the influx of people) or self-settled (i.e. set up spontaneously by internally displaced persons or host communities without the support of the government or the humanitarian community).

**Conflict-Induced Displacement**: This refers to displacement resulting from people being forced to flee their homes or areas of abode for one or more reasons including armed conflict such as civil war, communal conflicts, generalized violence, natural disasters etc. and where the state authorities are unable or unwilling to protect them.

**Development-Induced Displacement**: This refers to a situation where people are compelled to move as a result of policies and projects implemented to supposedly enhance 'development'. Examples of this include large-scale infrastructure projects such as dams, roads, ports, airports, refineries and oil and gas installations.

**Disaster:** In this study, a disaster refers to an unanticipated natural or human made occurrence resulting in serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected individuals, community or society to cope using their or its own resources

**Disaster-Induced Displacement:** This category includes displacement of people caused by natural hazards, disasters (floods, volcanoes, landslides, earthquakes), environmental change (deforestation, desertification, land degradation, global warming) and human made induced disasters (industrial accidents, radioactivity).

**Guiding Principles:** This refers to the 1998 United Nations document on Internally Displaced Persons. The document is known as the Guiding Principles on Internal Displacement, it is recognized as an important international framework for the protection of internally displaced persons globally.

**Host Community**: This refers to a community that, though not displaced itself, experiences the impact or consequences of displacement, either because it has to host a considerable number of internally displaced persons either in camps, collective centres, informal settlements or directly

integrated into households. It also refers to a community that has to receive and integrate formerly displaced persons who decide to return to their homes and places of habitual residence or who have decided to settle permanently elsewhere in the country.

## Humanitarian aid commodities

These are commodities needed for the alleviation of suffering of the Internally Displaced Persons (IDPs) in the camp or at a known location. These commodities must be provided as soon as an IDP camp or location is identified. They include pre-packaged food items, shelter materials, water sanitation items, blankets, bed sheets, towel, soap, cooking pots, plates, spoons, food stuff, clothes, slippers, insecticidal treated mosquito nets, chairs, fire woods, kerosene stoves, first aid drugs and materials etc.

## Humanitarian logistics

Humanitarian logistics is a branch of logistics which specializes in organizing the delivery and warehousing of supplies during natural disasters or complex emergencies to the affected area and people. It is the process of planning, implementing and controlling the efficient, cost-effective flow and storage of goods and materials, as well as related information, from the point of origin to the point of consumption for the purpose of alleviating the suffering of vulnerable people.

**Humanitarian Aid Worker:** Aid workers typically operate in front line conditions, facilitating the effective distribution of humanitarian aid to people who have been hit by human or natural disasters. This includes any worker engaged by a humanitarian agency, whether internationally or nationally recruited, or formally or informally retained from the beneficiary community, to conduct the activities of that agency.

**Internal Displacement**: According to the African Union Convention for Protection and Assistance of Internally Displaced Persons in Africa (Kampala Convention, 2009), "Internal displacement" means "the involuntary or forced movement, evacuation or relocation of persons or groups of persons within internationally recognized state borders" [Article 1 (l)]. Internal Displacement is the relocation of people from their place of abode to another location within a country as a result of conflict, natural disaster or economic development.

**Internally Displaced Persons (IDPs)**: According to the African Union Convention for Protection and Assistance of Internally Displaced Persons in Africa (Kampala Convention, 2009), the term "Internally Displaced Persons" is defined as "persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border" [Article 1 (k)].

**Kampala Convention**: This refers to the African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa adopted by the special summit of the Union held in Kampala, Uganda, on 22nd October 2009.

**Logistics**: Logistics management is the governance of supply chain functions. Logistics management activities typically include inbound and outbound transportation management, fleet management, warehousing, materials handling, order fulfillment, logistics network design, inventory management, supply/demand planning, and management of third party logistics services providers (Teachtarget.com). Logistics management simply put is the coordination of activities at each nodes or points along the supply chains.

**Non-state actors:** This refers to private actors who are not public officials of the Government of Nigeria, including other armed groups not referred to in article 1(d) of the Kampala Convention, and whose acts cannot be officially attributed to the Nigerian government.

**Supply Chain Management:** Supply chain management (SCM) is the active management of supply chain activities to maximize customer value and achieve a sustainable competitive advantage. It represents a conscious effort by the supply chain firms to develop and run supply chains in the most effective & efficient ways possible. The Supply Chain Resource Cooperative (SCRC) Articles, 2017.

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It is the management of the flow or movement of goods and services from the sources of production to the final consumer.

## Review of literature

### Introduction

There is generally a dearth of materials (theoretical and/or empirical) on Humanitarian Logistics, especially on the Humanitarian Aid Commodities supply to Internally Displaced Persons (IDPs) in Jos Plateau state and Maiduguri Borno state Nigeria. This notwithstanding the researcher carried out a literature review on Humanitarian Logistics from available academic journal articles, book chapters, papers on conference proceedings, material from tutorials at academic conferences and online using available search engines.

### Definition and origin of humanitarian logistics

We define humanitarian logistics as that special branch of logistics which manages response supply chain of critical supplies and services with challenges such as demand surges, uncertain supplies, critical time windows in the face of infrastructure vulnerabilities and vast scope and size of the operations (Aruna Apte, 2010). Humanitarian Logistics is also defined as the process of strategically managing the planning, acquisition, transportation and warehousing of goods and materials from the point of origin to the point of consumption, to help deliver relief which mirrors the needs of beneficiaries in a cost-effective way (Thomas and Kopczak, 2005). Specifically, the activities of ‘‘planning, implementing and controlling the efficient, cost-effective flow of and storage of goods and materials as well as related information, from point of origin to point of consumption for the purpose of alleviating the suffering of vulnerable people’’ are known as ‘‘humanitarian logistics’’ (Thomas and Kopczak 2005 p. 2). Briefly, ‘‘for humanitarians, logistics is the processes and systems involved in mobilizing people, resources, skills and knowledge to help vulnerable people affected by disaster’’ (Van Wassenhove 2006 p. 476).This definition has similarities to commercial logistics, but differs in a few key areas; whilst the commercial sector aims to minimize costs, relief agencies aim to reduce human suffering (Holguin-Veras et al., 2013; Day et al., 2012).

Most humanitarian organizations such as the World Food Program (WFP) and Medicines Sans Frontiers (MSF) agree that humanitarian logistics is “the process of planning, implementing, and controlling the efficient, cost-effective, flow and storage of goods and materials, as well as related information, from point of origin to point of consumption for the purpose of meeting the end beneficiary’s requirements” (Thomas, 2005). Response to a disaster must be tailored to the characteristics of the disaster. A disaster is defined by Federal Emergency Management Agency (FEMA) as an event that causes 100 deaths or 100 human injuries or damage worth US$ 1 million.

Humanitarianism is often traced back to Henri Dunant’s efforts to attend to wounded soldiers in World War I (leading to the establishment of the Red Cross movement), albeit disaster relief efforts have been in place throughout history. Humanitarian Logistics practice thereby has a long history, even though the term “humanitarian logistics” has not been used in practice for long, Humanitarian Logistics has always been at the heart of relief operations although its status was not earlier recognized to the extent it is today. So even though one can argue that humanitarian logistics has been central for fulfilling missions, it lacked operational knowledge and generally too there was no investment in technology and communication as well as latest methods and techniques e.g. mathematical modeling (Gustavsson, 2003; Beamon and Kotleba, 2006). Furthermore, there was a shortage of humanitarian logistics experts, supply chain processes were largely manual, there was inadequate assessment and planning, and limited collaboration and coordination (Thomas and Mizushima, 2005). The lack of professionalization of Humanitarian Logistics also meant that logisticians were rarely included in the planning stages of a humanitarian response. Thus the voice of logisticians was often absent. The cumulative result of all these factors was that the logistics function remained isolated from finance, emergency response, information technology and management, leading to the sub-optimization of operational efficiency and effectiveness (Thomas and Mizushima, 2005.

### Commercial versus humanitarian logistics

1. **Strategic Goals:** Commercial logistics maximize profitability and achieve high customer satisfaction. Humanitarian logistics minimize loss of life and alleviate suffering.
2. **Product Demand:** Products and services supplies and people demand pattern relatively stable and predictable in Commercial logistics. In Humanitarian logistics it is highly challenging due to the nature of the unknowns (locations, type, and size of events, politics, and culture), and "last mile" considerations.
3. **Inventory Control:** In Commercial logistics Inventory Control has well-defined methods for determining inventory levels based on lead time, demand and target customer service levels. In Humanitarian logistics inventory control is challenging due to the high variations in lead times, demands and demand locations.
4. **Management Information System:** In commercial logistics Information System is holistic, using advanced technology. In Humanitarian logistics information is often unreliable, incomplete or nonexistent. Beamon 2004.
5. **Lead Time:** In commercial logistics lead time is determined by Supplier-Manufacturer-Distributor-Retailer-Consumer chain or communications. In Humanitarian Logistics there is a zero time between the occurrence of the disaster and the need for aid commodities, actual lead time is determined by the chain of material flow during operations.
6. **Supply Network Configuration:** In Commercial Logistics there exist network for supply chain design. In Humanitarian Logistics this is challenging due to the numerous unknowns (location, type and size of disaster, politics, and culture and 'Last Mile' considerations.
7. **Performance Measurement System:** Commercial Logistics is historically focused on resource performance measures such as maximizing profits or minimizing costs. Humanitarian Logistics focus on output
8. Performance measures such as time required to respond to a disaster or ability to meet the needs of the disaster victims.

## Historical overview of IDPS in nigeria

As reported in the updated Global IDP Database of the Norwegian Refugee Council, internal displacement already occurred in Nigeria 30 years ago, when during the Biafran war (1967-1970) some two million people died and ten million people became internally displaced. While displacement of this magnitude has not been repeated since, approximately 500,000 people were forced to flee their homes after ethnic violence rocked Nigeria in October 2001, the majority of whom returned to their homes by mid-2002. Available figures suggested that towards July 2002, a total of at least 30,000 people remained internally displaced in Nigeria. This figure is mainly composed of a remnant of the June/July 2001 clashes involving Tivs in Benue and Taraba states, as well as people still displaced after the October 2001 violence in Benue state involving Tivs and the Jukun/military. The exact extent of displacement is difficult to estimate, because many internally displaced persons seek shelter within social networks and relocate to other towns and communities to join other family and clan members. Some of the major incidents of displacement since June 2001 are listed below:

June 2001: Ethnic fighting between Tivs and Hausa-speaking Azaras in Nasarawa State displaced some 50,000. Fighting spread to Taraba State in July 2001, creating a further 25,000 IDPs. Some 1,800 people remained in Benue State as of July 2002.

September 2001: Religious violence between Hausa-Fulani Muslims and indigenous Christians in Plateau State displaced 60,000, most of whom later returned.

October 2001: Ethnic clashes between the Tiv and Jukun groups and army violence displaced some 300,000 to 500,000 people in Nigeria's central region. Some 15,000 displaced remained in Benue State as of July 2002.

January 2002: Revenge attacks on Christians in Plateau State caused the displacement of some 3,000 people, all of whom returned to their homes later.

February 2002: Ethnic clashes in Lagos between Yorubas and Hausa-speaking northerners displaced more than 2,000 people, who returned by July 2002. Global IDP Project (2002).

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Between 2003 and 2008, the National Commission for Refugees estimated at least 3.2 million people were displaced due to ethnic and religious conflict, from and within various states in the country. In August 2008, Nigeria ceded the Bakassi Peninsula to its neighbour, the Republic of Cameroon, following many years of dispute and an intervention from the International Court of Justice (ICJ) in October 2002. An estimated 400,000-755,000 people were forced to move across the border to Cross Rivers and Akwa-Ibom states in the Niger Delta region. Many were left landless, homeless, and cut off from their means of livelihood for years. There are approximately 100,000 people that are yet to be resettled according to state authorities. Thousands are also displaced annually as a result of environmental degradation and natural disasters, including flooding in the north central and northwest areas, erosion in the southeast, and oil spillage and development projects in the south-south Niger Delta region. Mohammed F.K. (2017).

There were reportedly some 80,000 IDPs in the country at the end of 2009 (USDOS, 11 March 2010). There are, however, no reliable statistics on internal displacement in Nigeria and different numbers exist in the absence of any comprehensive survey. The figures provided by government and non-governmental agencies are generally only estimates referring to localized displacement situations. In general, estimates only include people who have sought shelter at temporary IDP camps, leaving out the many who find refuge with family and friends. In most cases, numbers are not disaggregated by age and sex. As there are no mechanisms in place to monitor durable solutions, it is also impossible to determine whether and when people have ceased to be displaced. Nigeria also regularly experiences displacement as a consequence of natural disasters such as flooding or soil erosion (IFRC, 21 October 2010).

At the end of 2015, 3.9 million people in north-east Nigeria out of a total of 5.2 million across the Lake Chad Basin were in urgent need of food assistance. Of the $248 million required for the emergency response in north-east Nigeria in 2016, less than 20 per cent was available by May. International Crisis Group August 2016.

The humanitarian crisis in north-east Nigeria remains severe due to ongoing conflict, continued internal displacement and the unpredictable return of refugees from neighboring countries. Since late October 2017, large-scale displacements have taken place in Borno State and northern Adamawa State, with influxes of internally displaced persons (IDPs) in Pulka, Gwoza, Ngala, Monguno, Askira/ Uba, Konduga, Bama and Mafa most notably. In just three months, 28,000 have fled these areas and other locations for various reasons including voluntary relocation, insecurity and poor living conditions. Another large-scale displacement took place along the Maiduguri-Monguno axis (Tungushe, Tungushe Ngor, Gajiram, Gajigana, Gasarwa) due to a surge in hostilities in the northeast of Borno State. Biometric verifications are still ongoing in all the aforementioned locations but aid groups estimate that over 36,000 women, children and men have been displaced in recent months, most of whom are in dire need of food, water, shelter, blankets and clothes, as well as medical care. Host communities are also extremely vulnerable. These newly displaced populations report that many more families remain in areas inaccessible to humanitarian workers, and additional displacements from these areas are expected in the coming weeks.

The food security situation has slightly improved in population centres across the north-east in 2017 thanks to various factors including improved security, scale-up of food and livelihoods assistance, favourable climatic conditions for agricultural production and slight market recovery. Nonetheless, conflict continues to limit the amount of land under cultivation and the situation remains concerning in 2018, with 2.6 million currently severely food insecure and 3.7 million expected to face critical levels of food insecurity during the upcoming lean season (June through September). Without sustained assistance, the situation could quickly deteriorate.

## Stages of disaster management

Disaster management is often described as a process composed of several stages, even though there is disagreement among authors as to the structure and nomenclature of the stages (Kovács and Spens 2007, 2009; Altay and Green 2006; Pettit and Beresford 2005; Van Wassenhove 2006; Lee and Zbinden 2003; Thomas 2003; Cottrill 2002; Nisha de Silva 2001; Long 1997). However, for the most part, the literature concurs on the existence of the following phases: Mitigation; Preparation;

Response and Reconstruction. The process that involves logisticians mainly concerns the preparation, response and reconstruction; together these constitute humanitarian logistics stream. The mitigation phase refers to laws and mechanisms that reduce social vulnerability. These are issues that relate to the responsibilities of governments.

The preparation phase refers to various operations that occur during the period before a disaster strikes. This phase incorporates the strategies put into place that allow the implementation of a successful operational response. This phase is crucial because it is the one in which the physical network design, information and communications technology systems, and the bases for collaboration are developed. The aim of this stage is to avoid the gravest possible consequences of a disaster. This phase also incorporates the efforts that are made between disasters in learning and adapting from past experiences so as to meet new challenges. Kovacs and Spens 2007.

The response phase refers to the various operations that are instantly implemented after a disaster occurs. This phase has two main objectives; they are consecutive and constitute two sub-phases (Cozzolino et al. 2012): • The first objective is to immediately respond by activating the ‘‘silent network’’ or ‘‘temporary networks,’’ as defined by Jahre et al. (2009); this is the immediate-response sub-phase; • The second objective is to restore in the shortest time possible the basic services and delivery of goods to the highest possible number of beneficiaries; this is the restore sub-phase. In the response stage, coordination and collaboration among all the actors involved in the humanitarian emergency deserve particular attention (Balcik et al. 2010; Kovács and Spens 2007, 2009; Maon et al. 2009; Tomasini and Van Wassenhove 2009). Connections to feasible donors, suppliers, NGOs, and other partners are made in the first phase, but they are not activated until the catastrophic event takes place. Then, all the actors involved operate as quickly as possible: at the start, speed—at any cost—is of the essence, and the first 72 hours are crucial (Van Wassenhove 2006).

The reconstruction phase refers to different operations in the aftermath of a disaster. It involves rehabilitation, and this phase aims to address the problem from a long-term perspective. The effects of a disaster can continue for a long period of time, and they have severe consequences on the affected population. In addition, disasters can also have long-term effects on the management of companies. For example, immediately after a disaster, transportation companies may undergo a modal shift from road to rail that prevails long after the occurrence of the disaster (Kovács and Spens 2007). With regard to humanitarian logistics stream, it is interesting that the transition between the stages involves the shift in focus from speed to cost reduction in terms of operational performance (Tomasini and Van Wassanhove 2009b). Each stage of the process has a specific objective that can be achieved through the application of two supply chain principles: agility and leanness (Cozzolino et al. 2012).

## Humanitarian AIDS commodity distribution processes

This research study focuses on the four phases of the disaster relief to ensure urgent movement of aid commodities after a disaster strikes. Based on existing protocols aid commodities assembled in the preparedness phase are rapidly moved to areas of urgent need. Such commodities are primarily concerned with protecting human life and stabilizing the economic and physical infrastructure of the affected location. This will require the collaboration and cooperation of multiple agencies – state and non-state actors to deliver aid commodities in an efficient manner, thereby reducing the delay in response time and duplication of effort. In summary, when a disaster strikes, the sequence of response follows: donations and funding are solicited from donors, quotations and later, commodity supplies are obtained from pre-qualified vendors. Sometimes the commodity supplies are obtained in advance, especially during the pre-positioning stages. The commodity supplies received from donors and commodity supplies purchased from vendors are then transported by various modal means to predetermined locations and distributed by emergency responders in the affected areas. The complexity of humanitarian logistics can be better appreciated when the distribution processes in a very tight timeline along with the administrative bottlenecks are taken into account.

The emergency responders arrive early enough at the distribution centre to organize its layout and the staff. They will begin the distribution exercise with a plan on crowd control, and provide all required information to the IDPs who have already gathered at the site. Crowd control is a key element in any distribution. Do not start a distribution until crowd control measures are in place. Ensure that

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monitoring arrangements are in place. The list of beneficiaries may and may not be available depending on the extent of the disaster and the need to respond very fast.

## Factors associated with the supply and distribution of humanitarian commodities

The factors associated with the supply and distribution of humanitarian aid commodities are: Time, security & protection, access, politics & conflict dynamics, location, previous experience of aids work, impact of crisis, culture & social organization, marginalization & discrimination, coordination, donors, human resources, mode of operation, mandate & policies and humanitarian principles.

## Humanitarian aid commodities needed by the IDPs

In emergencies, families often flee with little more than the clothes they are wearing and consequently find themselves displaced without any personal belongings. In addition to food, they urgently need certain non-food items (NFIs) to survive, including items for shelter (tents, plastic sheeting, blankets, sleeping mats), cooking (stoves, pots, kerosene, fire wood), and health and sanitation (buckets, soap, jerry cans, sanitary cloths, mosquito nets, first aid medicines).

Conduct situational analysis immediately to identify most needed aid commodities, especially lifesaving needs and prioritize their supply to the IDPs.

## Humanitarian organizations delivering aid commodities in plateau and borno state nigeria

There are numerous governmental, nongovernmental organizations and logistics services providers delivering humanitarian aid commodities to IDP camps in Jos Plateau state, central and Maiduguri Borno state, north east Nigeria. Some of the organizations deliver directly with their own haulage vehicles/vans while some others outsource the deliveries to third party logistics firms. The latter group may supervise the distribution at the destinations or hand over the aid commodities to the state or other non-state actors. The most visible humanitarian organizations in the locations selected for this research are: Medi Sans Frances (MSF), International Committee of the Red Cross (ICRC), International Federation of the Red Cross and Red Crescent Society (IFRCRCS), Nigeria Committee of the Red Cross (NCRC), World Food Program (WFP), OXFAM, International Organization for Migration (IOM), Danish Refugee Council (DRC), Norwegian Refugee Council (NRC), International Medical Corps (IMC), Refugee International, Catholic Relief Society (CRS), Food and Agricultural Organization (FAO), United Nations High Commission for Refugees (UNHCR), United Nations Population Fund (UNFPA), United Nations Children's Fund (UNICEF), National Emergency Agency (NEMA) and United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) (IOM Displacement Tracking, 2015). Third Party Logistics companies like Axios, MDS Logistics, DHL Courier, FEDEX Courier, FF Plus Newday ltd, AB logistics, Clearme logistics, Hanana Global Links ltd, GIG logistics, Qship ltd, Chisco Group Nigeria ltd, Ocenj logistics etc. deliver documents and aid commodities on behalf of some of these organizations.

## Theoretical framework

This research is based on the theory of obligation in the context of humanitarianism. The foundational assumption of this theory is that there exists a moral imperative to assist the structurally dispossessed and functionally abused. It builds particularly on the cross-disciplinary work (both academic and applied) of anthropologists, but also of political scientists, sociologists, human rights specialists, and others. The links between human rights and humanitarianism are stressed, while suggesting principles that can guide humanitarian organizations as they serve those in need. Humanitarianism is defined as "crossing a boundary;" risk usually is encountered by the service provider as scarce resources are used to help the vulnerable. Obligation is defined, in part, as "what one should do." A theory emerges as the "morally possible" and the "materially possible" intersect. Notions of human dignity are shown not to be appropriate in orienting the real-world work of humanitarians; notions of fairness are more appropriate as humanitarian work is organized and implemented. "Pragmatic humanitarianism" occurs as principled guidelines and achievable actions merge, and as non-neutral stances are taken as (for example) refugees are assisted. Humanitarian aid

is shown to be fundamentally a moral relationship based on the obligation of "those who have" to address the felt needs of "those who have not." (Peter et al 2008).

This research focuses on moral theory at the level of the humanitarian organization. In particular, the researcher offers the theory of obligation as a moral framework suitable for organizing humanitarian assistance.

## Methodology

### Introduction

In order to collect primary data for this research Structured Questionnaire and Direct Observations were used as a method.

In addition, the internet, Professional Journals, articles and text books on humanitarian logistics were referred to as secondary data sources to support primary data generated in this study.

### Research design

In this study Questionnaires were designed in such a way that they will elicit unbiased responses from the study population. The data collected were analyzed using Chi Square method as a statistical tool to provide answers for the research questions. Further observations were made of the premises and offices while the Questionnaires were been administered. The whole process was designed to help in drawing definite conclusions from the data analysis.

### Population of the study

The study population is made up of 120 employees of National Emergency Management Agency (NEMA) and 80 employees of Humanitarian Logistic Organizations in Jos and Maiduguri. Using Fisher's Formula, 60 members of the population were sampled for participation in this research. NEMA is the organ of the Federal Government of Nigeria that is charged with the responsibility of coordinating humanitarian responses in Nigerian emergencies. Humanitarian Logistics Organizations, local and international, collaborate with NEMA officials to supply urgently needed commodities either directly from the open market or national, zonal and state warehouses/depots (strategic reserves) to the IDPs.

### Sample and sample size

The study sample is 60 out of the 200 study population. This sample size was arrived at using the **Fisher's Formular**

Where:

$$SS = Z^2 * (p) * (1-p) / c^2$$

Z = Z value (e.g. 1.96 for 95% confidence level) p = percentage picking a choice, expressed as decimal (% Prevalence) 20% used in this research i.e. 0.2.

c = confidence interval, expressed as decimal, 5% used in this research i.e. 0.05.

SS= (0.952.0.2) (1 – 0.2)/$0.05^2$ = (0.9025 × 0.2) (0.8)/0.0025 = 0.1444/0.0025 =57.76 = 60.

As shown in the above calculation the sample size for this research is **60.**

### Sampling techniques

Sampling is the process of selecting a part (i.e. sample) of the whole (i.e. population) for the purpose of a study. This study as a social survey focuses primarily on the supply and distribution of humanitarian aid commodities to selected IDP camps located in Maiduguri and Jos, Nigeria therefore the 60 participants were randomly selected from the offices of NEMA and Humanitarian Logistics Organization located in these two towns.

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### Data collection

In this study the primary data were collected using structured Questionnaires that respondents provide a yes or no answer while the secondary data were collected from the review of professional journals, scientific publications using internet search engines. The data were all collected at reasonable hours of the day in the office premises of NEMA and selected Humanitarian Logistics Organizations.

### The questionnaire

The Questionnaire is made up of 10 structured questions. The first 2 questions concern the age and sex of the respondents (biometric data). Though these are not part of the variables under this study it enables the researcher to ensure that under aged persons are not selected as participants and that due regard is given to the gender of the participants.

### Method of sample collection

A brief pre-questionnaire session was held at each selected location in Jos Plateau state and Maiduguri Borno state to explain the aim of the research to the randomly selected participants who were assured of their privacy. They were provided with the self-administered questionnaires, which they filled and were collected on the spot. In a period of 2 days in Jos Plateau state and 3 days in Maiduguri Borno state a copy each of the structured Questionnaires were distributed to each of the 60 randomly selected respondents in this study. In the Jos offices of NEMA and the Humanitarian Logistics Organizations, 20 respondents were administered the Questionnaires. 12 drawn from NEMA and 8 drawn from the Humanitarian Logistics Organizations. In the Maiduguri offices of NEMA and the Humanitarian Logistics Organizations, 40 respondents were administered the Questionnaires. 24 drawn from NEMA and 16 drawn from the Humanitarian Logistics Organizations. Observations were also made on all the premises and some operational processes on ground in the offices visited. The submitted questionnaires were checked for completeness and documented.

### Data analysis, interpretation and discussion of results

1. Number of male and female respondents

**Table 1.**

| VARIABLE | FREQUENCY | PERCENTAGE |
|---|---|---|
| Male | 48 | 80% |
| Female | 12 | 20% |
| Total | 60 | 100% |

**Source:** Research finding from field survey, 2017.

Table 1 shows that 80% of my respondents are males and 20% of them are females. This is a good reflection of the situation I found on the ground in the offices visited in the course of this study. There are more males than females in the ratio of 4:1, in almost all the offices visited for both state and non-state actors. This is an indication of a gender imbalance in disaster relief operation which was explained by the management that men are more disposed to work in conflict prone environment than females.

2. IDP Need assessment before commencement of operations

The researcher wants to know from the respondents if IDP's initial need assessments were carried out before commencement of humanitarian logistics operations in Jos Plateau state and Maiduguri Borno state. The responses are as shown in table 2 below.

**Table 2.**

| VARIABLE | FREQUENCY | PERCENTAGE |
|---|---|---|
| No initial need assessment for IDPs | 48 | 80% |
| There is initial need assessment | 12 | 20% |
| Total | 60 | 100% |

**Source:** Research finding from field survey, 2017.

Table 2 shows that 80% of the respondents agreed that no initial need assessment were done for the IDPs before commencement of humanitarian logistics operations. 20% said an initial need assessment of the IDPs were conducted by both state and non-state actors. It can be inferred from this data that proper need assessment of the IDPs were not conducted before commencement of humanitarian logistics operations when disaster occurred in Jos Plateau state and Maiduguri Borno state.

3. Lack of national sustainable disaster response plan

The researcher wants to know whether a document on national sustainable disaster response plan is at the disposal of or known to the respondents in Jos Plateau state and Maiduguri Borno state. The responses are as shown in table 3 below.

**Table 3.**

| VARIABLE | FREQUENCY | PERCENTAGE |
|---|---|---|
| Lack of sustainable disaster response plans | 54 | 90% |
| Availability of sustainable disaster response plans | 6 | 10% |
| Total | 60 | 100% |

**Source:** Research finding from field survey, 2017.

Table 3 shows that 90% of the respondents said that there was no sustainable national response plans for humanitarian logistics operations in Jos Plateau state and Maiduguri Borno state. 10% said there was a sustainable national response plan. It can therefore be inferred that there was no proper and sustainable national response plans for humanitarian logistics operations in the event of a disaster or emergency in Jos Plateau state and Maiduguri Borno state.

4. Low capacity of state and non-state actors

The researcher wants to know whether the state and non-state actors charged with the responsibility of delivering aid commodities to IDPs have the capacity to do the job. The responses are as shown in table 4 below.

**Table 4.**

| VARIABLE | FREQUENCY | PERCENTAGE |
|---|---|---|
| Low capacity of state and non-state actors | 46 | 77% |
| Enough capacity of state & non-state actors | 14 | 23% |
| Total | 60 | 100% |

**Source:** Research finding from field survey, 2017.

Table 4 shows that 77% of the respondents agreed that the capacity of both state and non-state actors involved in humanitarian logistics operation in Jos Plateau state and Maiduguri Borno state is low. 23% of the state and non-state actors said they have enough capacity for humanitarian logistics operations in Jos Plateau state and Maiduguri Borno state. It can be inferred here that the capacity of the state and

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non-state actors need to be improved upon in order to respond quickly and adequately to the emergencies in Jos Plateau state and Maiduguri Borno state.

5. Humanitarian logistics companies not well equiped

The researcher wants to know if the humanitarian logistics organizations are well equipped for emergency aid operations in Jos Plateau state and Maiduguri Borno state. The responses are as shown in table 5 below.

**Table 5.**

| VARIABLE | FREQUENCY | PERCENTAGE |
|---|---|---|
| Humanitarian logistics companies not well equipped. | 45 | 75% |
| Humanitarian logistic companies are well equipped. | 15 | 25% |
| Total | 60 | 100% |

**Source:** Research finding from field survey, 2017.

Table 5 shows that 75% of the respondents said that humanitarian logistics companies do not have the equipment for the job of delivering aid commodities to the IDPs in Jos Plateau state and Maiduguri Borno state on time. 25% of the respondents said the humanitarian logistics companies in Jos Plateau state and Maiduguri Borno state are well equipped for the job. It can be inferred from this finding that humanitarian logistics companies in Jos Plateau state and Maiduguri Borno state Nigeria need to be well equipped in order to deliver faster and better to IDP camps in their coverage area.

## Testing the hypothesis

The three Hypothesis raised for the purpose of answering the research questions were tested as outlined below.

## Hypothesis one

### Null Hypothesis (H0)

**$H0_1$**: Lack of sustainable disaster response plans is not responsible for the delay or untimely humanitarian aid commodity supply and distribution to IDP camps in Jos and Maiduguri Nigeria.

**Table 6.**

| VARIABLE | FREQUENCY | PERCENTAGE |
|---|---|---|
| YES | 6 | 10% |
| NO | 54 | 90% |
| Total | 60 | 100% |

**Source:** Research finding from field survey, 2017.

### Alternative Hypothesis (HA)

**$HA_1$**: Lack of sustainable disaster response plans is responsible for the delay or untimely commodity supply and distribution to IDP camps in Jos and Maiduguri Nigeria.

Calculations:

Assume level of significance at 0.05 in the Chi Square calculations using table 6 above.

**Table 7.**

| RESPONSES | O | E | O – E | $(O – E)^2$ | $(O – E)^2/E$ |
|---|---|---|---|---|---|
| YES | 6 | 30 | -24 | 576 | 19.2 |
| NO | 54 | 30 | 24 | 576 | 19.2 |
| Total | 60 | | | | 38.4 |

**Source:** Research finding from field survey 2017.

Note that Expected frequency (E) = Number of Samples/Number of Variables.
(O): Observed frequency.
Degree of Freedom: d.f = n –1, where n = 2. Therefore, 2 – 1 = 1.
From the Chi Square Table, at 0.05 level of significance and 1 degree of freedom, we have a Chi Square value: $X^2 = 3.84$

The calculated Chi Square value as shown in the table above is 38.4 which is higher than 3.84 obtained from the table. Therefore the Null Hypothesis (H0): Lack of sustainable disaster response plans is not responsible for the delay or untimely humanitarian aid commodity supply and distribution to IDP camps in Jos and Maiduguri Nigeria is rejected and the Alternative Hypothesis (HA): Lack of sustainable disaster response plans is responsible for the delay or untimely commodity supply and distribution to IDP camps in Jos and Maiduguri Nigeria.is accepted.

Conclusion: This implies that sustainable disaster response plans must be in place in order to avoid delay or untimely aid commodity supply and distribution to IDP camps in Jos and Maiduguri Nigeria.

**Hypothesis two**

**Null hypothesis**

**$H0_2$:** Lack of well-equipped and specialized humanitarian logistic companies in Jos and Maiduguri Nigeria is not responsible for the delay or untimely commodity supply and distribution to IDP camps in Jos and Maiduguri Nigeria.

**Table 8.**

| VARIABLE | FREQUENCY | PERCENTAGE |
|---|---|---|
| YES | 15 | 25% |
| NO | 45 | 75% |
| Total | 60 | 100% |

Sources: Research finding from field survey, 2017.

**$HA_2$:** Lack of well-equipped and specialized humanitarian logistic companies in Jos and Maiduguri Nigeria is responsible for the delay or untimely commodity supply and distribution to IDP camps in Jos and Maiduguri Nigeria.

Chi Square $(X^2)$ calculations.

**Table 9.**

| RESPONSES | O | E | O – E | $(O – E)^2$ | $(O – E)^2/E$ |
|---|---|---|---|---|---|
| YES | 15 | 30 | -15 | 225 | 7.5 |
| NO | 45 | 30 | 15 | 225 | 7.5 |
| Total | 60 | | | | 15.0 |

**Sources:** Research finding from field survey, 2017.

The calculated Chi Square value of 15.0 in table 9 above is higher than the table value of 3.84. Therefore H02: Lack of well-equipped and specialized humanitarian logistic companies in Jos and

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Maiduguri Nigeria is not responsible for the delay or untimely commodity supply and distribution to IDP camps in Jos and Maiduguri Nigeria is rejected and HA2: Lack of well-equipped and specialized humanitarian logistic companies in Jos and Maiduguri Nigeria is responsible for the delay or untimely commodity supply and distribution to IDP camps in Jos and Maiduguri Nigeria, is accepted.

Conclusion: Specialized humanitarian logistic companies in Jos and Maiduguri Nigeria must be well equipped with latest logistic tools if they are to respond very promptly and adequately to all emergencies created by disasters.

**Hypothesis three**

**Null hypothesis (H0)**

**$H0_3$:** Low capacity of state and non-state actors on humanitarian logistic systems is not responsible for the delay or untimely commodity supply and distribution to IDP camps in Jos and Maiduguri Nigeria.

**Table 10.**

| VARIABLE | FREQUENCY | PERCENTAGE |
|---|---|---|
| YES | 14 | 23% |
| NO | 46 | 77% |
| Total | 60 | 100% |

**Source:** Research finding from field survey, 2017.

**$HA_3$**: Low capacity of state and non-state actors on humanitarian logistic systems is responsible for the delay or untimely commodity supply and distribution to IDP camps in Jos and Maiduguri Nigeria.

Chi Square ($X^2$) calculations.

**Table 11.**

| RESPONSES | O | E | O – E | $(O – E)^2$ | $(O – E)^2/E$ |
|---|---|---|---|---|---|
| YES | 14 | 30 | -16 | 256 | 8.53 |
| NO | 46 | 30 | 16 | 256 | 8.53 |
| Total | 60 | | | | 17.06 |

**Source:** Research finding from field survey, 2017.

The calculated Chi Square value in table 11 above is17.06. It is higher than the table value of 3.84. Therefore the Null Hypothesis (HO): Low capacity of state and non-state actors on humanitarian logistic systems is not responsible for the delay or untimely commodity supply and distribution to IDP camps in Jos and Maiduguri Nigeria is rejected and the Alternative Hypothesis (HA): Low capacity of state and non-state actors on humanitarian logistic systems is responsible for the delay or untimely commodity supply and distribution to IDP camps in Jos and Maiduguri Nigeria is accepted.

Conclusion: The capacities of both the state and non-state actors involved in humanitarian aid commodity logistics must be thoroughly built in order to ensure timely and proper deliveries to IDP camps in Jos and Maiduguri Nigeria.

## Summary of findings, conclusions and recommendations

### Summary of findings

The aim of the research study is to evaluate the supply chain management and logistics practices in the supply of humanitarian aid commodities to IDPs in Jos Plateau State and Maiduguri Borno State Nigeria, especially and by extension the whole of the country. The researcher found out during

the course of the study that majority of the respondents were familiar with supply chain and logistics processes with regard to how they are applied in their organizations commercially but lacked the technical skill, equipment and policy backup required in humanitarian logistics for effective and efficient performance. This is reflected in the observed wide knowledge gap among respondents on the differences commercial and humanitarian logistics. The state and non-state actors asked and observed in this study were using rudimentary knowledge of commercial logistics to perform pure humanitarian logistics activities by virtue of their job descriptions in the organizations. The organizations appear to erroneously assume that knowledge of commercial logistics is adequate for humanitarian logistics job. The researcher found out that these organizations spend little or nothing on capacity building, adequate equipment, strategic or sustainable planning and information gathering that will promote timely flow of information and materials in a humanitarian aid supply chain system.

The research study specifically revealed the following:

(i) IDP need assessment before commencement of operations: 80% of the 60 respondents agreed that state and non-state actors do not conduct initial need assessment of IDPs before commencing humanitarian aid commodity logistics and supply chain operations. 20% said the initial need assessment is usually conducted. The respondents that said they don't do initial IDP needs assessment agreed that they lacked the capacity to do so while those that agreed that they are doing it said that they are using their knowledge of commercial logistics.

(ii) Lack of national sustainable disaster response plan: 90% of the 60 respondents said that a national sustainable disaster response plan on IDP needs in Jos and Maiduguri especially and Nigeria generally, is lacking. The remaining 10% said there is a sustainable response plans for IDPs in Jos Plateau state and Maiduguri Borno state Nigeria. The researcher combed available reference books/materials in the offices and the website of the organizations-state and non-state actors and found no document on sustainable humanitarian logistics plans for IDPs in Nigeria. The non-availability of this document left the organizations in their silos planning differently to carry out the same activity anytime disaster strikes. The researcher found out from most of the respondents that their work will be made easier if a clearly outlined sequence of actions exist for humanitarian logistics workers/organizations before a disaster. The researcher also found out that those respondents that claimed existence of a sustainable response plan could not lay hand on any document at the time of visit.

(iii) Low capacity of state and non-state actors: 77% of the 60 respondents in this study agreed that the capacity of state and non-state actors in humanitarian logistics is low. 23% of the respondents disagreed saying that their capacity is adequate for the job. The research found out that most employees of NEMA and humanitarian organizations did not display a clear understanding of their job roles in an emergency situation. They do not know the difference between commercial logistics and humanitarian logistics. The researcher noticed that emergency supplies are been scheduled as normal ones based on instructions from above. Most of the employees of never expressed readiness for capacity building but expressed fears that the state may not be willing to spend much money on them. The respondents that claimed to have been trained were explaining humanitarian logistics processes with the commercial logistics idea. The researcher found out that the capacities of the non-state actors were slightly better than that of their state counterpart.

(iv) Humanitarian logistics companies not well equipped: 75% of the 60 respondents in this study agreed that humanitarian logistics companies working in Jos Plateau state and Borno state Nigeria are not well equipped for the operations. 25% of the respondents disagreed saying that they are well equipped for the emergency operations. The researcher observed the offices and their environments and found no sophisticated equipment apart from the delivery vans, trollies and weighing balances. The researcher wanted to know if there are other sophisticated equipment packed somewhere and was told none. The lack of specialized equipment the study revealed delay in delivery, poor storage and dysfunctional distribution network all these impacted negatively on the ability to deliver aid in difficult terrain.

(v) The first of the three Hypothesis were tested using the Chi Square statistical method. The Null Hypothesis that lack of sustainable disaster response plans is not responsible for the delay or untimely

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commodity supply and distribution to IDP camps in Jos Plateau state and Maiduguri Borno state Nigeria was rejected based on the test. The Alternative Hypothesis which states that lack of sustainable disaster response plans is responsible for the delay or untimely commodity supply and distribution to IDP camps in Jos Plateau state and Maiduguri Borno state Nigeria was accepted.

(vi) The second Hypothesis was also tested and based on the test the Null Hypothesis that lack of well-equipped and specialized humanitarian logistic companies in Jos Plateau state and Maiduguri Borno state Nigeria is not responsible for the delay or untimely commodity supply and distribution to IDP camps in the two Nigerian states was rejected. The Alternative Hypothesis which states that lack of well-equipped and specialized humanitarian logistic companies in Jos Plateau state and Maiduguri Borno state Nigeria is responsible for the delay or untimely commodity supply and distribution to IDP camps in the two Nigerian states.

**(vii)** The third Hypothesis was tested and the Null Hypothesis that low capacity of state and non-state actors on humanitarian logistics is not responsible for the delay or untimely supply of humanitarian aid commodities was rejected. The Alternative Hypothesis which states that low capacity of state and non-state actors on humanitarian logistic systems is responsible for the delay or untimely commodity supply and distribution to IDP camps in Nigeria was accepted after the test.

## Conclusion

The data collected and analysed by the researcher in this study revealed that the supply chain and logistics processes of delivering humanitarian aid commodities to IDP camps in Jos Plateau state and Maiduguri Borno state Nigeria need to be significantly improved upon in order to enable victims of any disaster or adversity receive aid support on time. Need assessments of the IDPs currently absent must be done as a matter of priority and of first step in any planned emergency operations. This is hardly the case at the moment in the areas covered by this study. The current practice where by emergency supplies are commenced before conducting needs assessment is affecting the effectiveness of humanitarian logistics operations. Based on the findings of this study the researcher believed that a rapid needs assessment can be carried out at the initial phase of the operations. This can be reassessed as the operation progresses. The researcher found out that the existing humanitarian logistics responses are largely reactive rather than been proactive and this does not give room for robustness in planning and execution. In the opinion of the researcher pro activity on the part of all stakeholders will ensure a detailed operational, tactical and strategic plans for humanitarian logistics services. The humanitarian logistics skills of the state and non-state employees charged with the responsibility of carrying out emergency logistics operations were found to be inadequate and this has continued to impede efficient and effective deployment of personnel, materials and equipment in humanitarian logistics operations. There cannot be better planning without the requisite skills of all employees of government and the humanitarian organizations. Though specialized and modern equipment required for emergency operations are costly procuring them will be mandatory for seamless humanitarian logistics operations. Finally, this research study showed that a well-articulated initial need assessment of the IDPs is mandatory alongside a sustainable plan of action on the humanitarian logistics systems. This is closely followed by building the capacity of the state and non-state actors and provision of equipment for humanitarian logistics companies. It can therefore be further concluded that humanitarian logistics and supply chains of commodities delivery to IDP camps in Jos Plateau state and Borno state Nigeria will improve if all the findings of this research study are put into practice.

## Recommendations

The following recommendations are based on the research findings:

i. Supply of aid commodities to IDP camps in Jos Plateau State and Borno state especially and Nigeria generally must be based on initial IDP needs assessment.
ii. The state and non-state actors charged with the responsibility of planning and delivering of aid commodities to IDP camps must be properly trained before been deployed for the task. Refresher courses should also be built into the system so that emerging new skills can be acquired by the state and non-state actors.

iii. There should be a sustainable plan of action in place at all levels of humanitarian logistics operations to enable rapid and adequate responses in all emergencies. That is, all actors must pro-actively develop operational, tactical and strategic humanitarian aid response plans that is robust enough to absorb any form of emergencies.
iv. State of the art equipment for humanitarian logistics operations must be procured by the state and non-state actors. The Standard Operating Procedures (SOPs) for these equipment must be clearly understood and the equipment strategically positioned for rapid deployment in all emergencies.
v. Finally, the researcher strongly recommends that delivery of humanitarian aid commodities must commence immediately a disaster struck without any form of bureaucratic bottlenecks or red-tapism that usually render IDPs very vulnerable to all forms of abuses.

### Contribution to knowledge

This study has among others added to existing knowledge on humanitarian logistics that expertize in commercial logistics does not translate to successful humanitarian aid operations. The commercial logistician hired to deliver to disaster affected area/s need to acquire unique skills on humanitarian logistics, develop a sustainable plan of action, conduct a need assessment exercise and deploy better equipment on time. This is what was lacking in most of the humanitarian logistics operations planned to deliver aids to the IDP camps in Plateau state and Borno state Nigeria. Most of the state and non-state actors misconstrued humanitarian logistics for commercial logistics and went into operations with the skills acquired from the latter. This study has therefore added a new knowledge that commercial logistics knowledge is not the same as humanitarian logistics knowledge. They are only related.

### Suggestion for future research

In the course of conducting this research"An Evaluation of the Supply Chain Management and Logistics Strategies for Commodities Supply to Internally Displaced Persons Camps in Jos Plateau state and Borno state Nigeria." I am of the opinion that further research be conducted in this field on the role of the private sector in effective humanitarian logistics operations, as most existing studies are still in infancy stage, there is need for empirical research to test the concepts and models of humanitarian logistics too. Another research opportunity in humanitarian logistics is in the upstream sector, because a large proportion of the existing studies has focused on the "downstream" part of the whole relief chain (e.g. last mile delivery problems). The status quo has supported hot topics such as logistics issues in disaster region, local area coordination during humanitarian relief, etc. while studies on inter modality in humanitarian logistics, fund-raising and donation management are sparse.

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