



ARCJN Journals
Africa Research Corps Network
Publication & Research

Africa Research Corps Network (ARCJN)

ISSN: 2360-9923 | Volume 13, Issue 4 | June - December 2021
www.arcnjournals.org

International Journal of Business Systems and Economics



IMPACT FACTOR RATING IS 4.6
Visit www.arcnjournals.org for more details

Special Edition

© 2021, Africa Research Corps Network (ARCJN)

Strictly as per the compliance and regulations of:





Special Edition

International Journal of Business Systems and Economics

ISSN: 2360-9923 | Volume 13, Issue 4 | June to December 2021

Published by
Africa Research Corps Network (ARC�)
www.arcnjournals.org



Special Edition

International Journal of Business Systems and Economics

ISSN: 2360-9923 | Volume 13, Issue 4 | June to December 2021

Published by

Africa Research Corps Network (ARC�)

www.arcnjournals.org

Africa Research Corps, 172 Jose Marti Crescent, Abuja, Nigeria

In Association With

International Academic Journal for Global Research

995 Memorial Boulevard Lakeland Florida, U.S.A.

Copyright © 2021 Africa Research Corps Network (ARC�)

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, or stored in any retrieval system of any nature, without prior written permission, except for permitted fair dealing under the law relating to copyright. Open Access authors retain the copyrights of their papers, and all open access articles are distributed under the terms of the Creative Commons Attribution license, which permits unrestricted use, distribution and reproduction in any medium, provided that the original work is properly cited and not distorted.

Disclaimer

The Journal and the Editorial Board do not bear responsibility for views expressed by the authors in this Journal. Any problem relating to the articles (i.e. plagiarism, grammatical errors, lexicon errors, spelling mistakes, publishing articles in more than one journal, etc.) is the sole responsibility of the authors and the Journal bears no responsibility for that. The use of general descriptive names, trade names, trademarks, and so forth in this publication, even if not specifically identified, does not imply that these names are not protected by the relevant laws and regulations. While the advice and information in this Journal are believed to be true and accurate on the date of it going to the press, neither the authors, the editors, nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Submissions

Manuscripts adhering to author's guideline should be submitted for double-blind peer-review process to the Editorial Board. Manuscripts should be submitted electronically to:

- journals@arcnjournals.org
- arcnjournals@gmail.com
- Uploaded via our website: <http://arcnjournals.org/index.php/submit-manuscript>

Editorial Board

Editor

Dr. Kenneth Heilman, Department of Economics and Statistics, Tshwane University of Technology Business School

Associate Editors

Prof. Tracy R. Lewis, Departments of Economics, Tumaini University Makumira, Tanzania

Prof. Jeff Gill, College of Statistics, University of Florida

Prof. Paul A. Mount Kenya University, Kenya

Dr. Bertha Munpamtzholimbe, department of Business Administration, National University of Lesotho

Dr. Ndiyah, Faith, Catholic University of Cameroon, Cameroon

Dr. Ibrahim Gambo, Kano State University, Kano, Nigeria

Dr. Mostafa Salim, The British University, Egypt

Dr. Beatrice Momoh, A & M University, Texas, USA

Dr. Orlando, P.G., Mount Kenya University, Kenya

s/n	Contents	Pages
1	Effects of Bureaucratic Corruption on Service Delivery in Maiduguri Metropolitan Council, Borno State , Hajja Bintu Bukar	1-26
2	Performance Appraisal and Employee Performance: A Study of Selected Banks in Awka Anambra State, Nigeria , Dr. Emeka S. Arinze	27-52
3	Effect of Insurgency on Socio Economic Activities in Borno State , Babagana Mohammed	53-73
4	Investigation of the Effects of Age, Season and Quaility of Leachate (Contamianant) Transport in Bulumkutu Open Dumpsite, Maiduguri , Engineer Abdullahi Muhammad Abba	74-88
5	Feasibility of Greywater Reclamation Using Local Plant Material in De-Centralised Recycling Systems for Maiduguri and its Environs , Abubakar Muhammad Rufai, Yagana Bukar and Zarah Ali Lawan Maryam Baba Bukar	89-110
6	Effectiveness of Indirect Error Correction on the Writing of Higher National Diploma Students of Ramat Polytechnic Maiduguri , Hajja Karu Ahmad Sheriff	111-119
7	Understanding the Appropriateness and Implementation of Consumer Protection Laws in Nigeria , Shehu Usman Ali	120-125
8	Empirical Investigation into Determinants of Non-Farm Entrepreneurial Activities among Internally Displaced Persons: Evidence from Borno State, Nigeria , Bashir Kachalla Mohammed, Mohammed Mai Bukar and Ali Mustapha	120-136
9	Effects of Micro-Entrepreneurial Skills Acquisition of Trained IDPS towards Economic Self-Reliance , Ruth Asur, Yusuf Anuwa & Bashir Kachalla Mohammed	137-152
10	Involvement Culture and Corporate Sustainability of Oil and Gas Firms in South-South, Nigeria , Diboye-Suku, Zion Alaso1 & Adekemi. D. Alagah (Ph.D.)	153-168
11	Sense-making and Employee Deviant Behaviour in Deposit Money Banks in Rivers State, Nigeria , Yakie, Ebisidor Favour, Nkpolu- Oroworukwo and M.D. Tamunomiebi PhD	169-181

12	Help Desk Operations Management and Service Quality of Telecommunication Companies in Rivers State , Henry Oghenewaire Udoro	182-196
13	Improving the Effectiveness of Local Government Administrators through Office Virtualization in the Era of Covid-19 , Chux-Nyeche, Gloria Chinyere (Ph.D) & Egeonu, Ahuruezeama Favour	197-210
14	Compensation and Organizational Citizenship Behaviour in Courier Service Companies in Rivers State , Kingsley I. Amadi PhD and Geoffrey Bakebiokroma Enyindah Obinna (PhD)	211-244
15	Payroll Outsourcing and Employee Commitment in the oil and Gas Sector in Rivers State, Nigeria , Ojo, Monday Isiramen PhD and Jonah Charles Tambari PhD	225-242
16	Digitization of Human Resource Practices: The Realities in the New Normal Okoronkwo, Grace I.	243-261
17	Assessing Compensation Policy on Staff Attraction and Retention in Deposit Money Banks in Nigeria , Ejike, Ifeyinwa Justina, Ajike, Ada Kalu and Chukwujama, Ngozi Comfort	262-275
18	Government Expenditure and Inflation Rate in Nigeria , K.C. Akobi, Prof. C.E. Umeora, & Dr. C.L. Atueyi	276-293

Effects of Bureaucratic Corruption on Service Delivery in Maiduguri Metropolitan Council, Borno State

Hajja Bintu Bukar

Department of Public Administration, Ramat Polytechnic Maiduguri, Borno State | Email:
hajjabintubukar054@gmail.com

Abstract: One of the major problems that has been identified as a setback to the progress of local government in terms of provision of services to the people in Nigeria is bureaucratic corruption. Several efforts have been made by both the federal, state, and local governments to curb the menace of Bureaucratic Corruption at the Local Government levels in Nigeria, through their different agencies, yet the people living at the Local Governments level were unable to have good health care services, potable water supply, better education, access roads, and improved sanitary conditions and so on. Therefore, this paper assessed the effect of Bureaucratic Corruption on Service Delivery in Maiduguri Metropolitan Council of Borno State. This is a survey research and data were source from primary data. Consequently, a total of 357 structured questionnaires were designed and distributed to the Local Government workers in the various departments but 341 were retrieved and used for analysis while 18 community leaders were interviewed. The inferential statistics (ANOVA) was used to test the hypotheses formulated in this paper. The paper revealed that ghost workers on payroll have significantly affected the provision of service delivery such as potable water supply, better education, access roads, and provision of bursary in MMC, Borno state. Similarly, outright embezzlement has significantly affected the provision of service delivery in MMC, Borno state. Furthermore, misappropriation of funds greatly affects the provision of effective service delivery in MMC, Borno state. The paper concludes that bureaucratic corruption has affected service delivery in Maiduguri Metropolitan Council. The paper recommends amongst others that Local Government officials have to desist from inflation of salaries and both the state and the local government has to take necessary measures that will stop the local government officials from doing this. This can be in the form of computerizing the payment system and conducting biometric data verification at the local government level so that strict adherence to the salary package shall be ensured.

Keywords: Bureaucratic, Corruption, Effects, Service Delivery.

INTRODUCTION

Corruption is a global phenomenon, and as old as man. It is therefore, common in all countries, irrespective of their stages of development. However, its nature, density and dimensions differ largely from country to country and from one environment to another. Corruption is one of the dangerous social ills of any society. This is because corruption, like a deadly virus, attacks the structures that make for society's progressive functioning, thus putting its very existence into serious danger. This is particularly true of developing countries that have limited but valuable funds and resources. These funds which are initially earmarked for industries, hospitals, schools and other infrastructure are

embezzled, misappropriated, or otherwise severely depleted by lark backs and over-invoicing by agents of the government.

Bureaucratic corruption is a very serious problem facing local government systems in Nigeria. It has reached the level where most scholars are now interested in the rise and development of bureaucratic corruption in the local government systems in Nigeria. This is as a result of the nature and composition of local government systems in Nigeria that has made them closer to the people at the grassroots. Consequently, bureaucratic corruption had become a burden on the side of progress and almost slow down the rate of development at the local government level. This means that local government system is the third tier of government is charged with the responsibility of handling projects which directly affect the masses at the grassroots. However, bureaucratic corruption is seen by many as unescapable outcome of modernization and development and this has made the term to be more general, covering the misuse of authority resulting to outright embezzlement, fraud, misappropriation of fund, placing ghost workers on payroll, use of budgetary expenditures, too much inflation of contracts, lack of following due process, and generally lack of internal control and checks and balances at the local government system. These factors among other ones have characterized the operation of the local governments resulting in poor service delivery.

Despite the politics of power play of who actually owns the local governments in Nigeria in terms of its constitutional basis, Local Governments were supervised by both the federal and the state governments and to some extent by some agencies of the federal government such as the Revenue Mobilization and Fiscal Commission (RMFC), Code of Conduct Bureau (CDB), Budget Office of the Federation (BOF) among others. Apart from this since 2003 the federal government has launched anti-corruption agencies like the Economic and Financial Crimes Commission (EFCC), Independent Corrupt Practices Commission, (ICPC), among others. These bodies have a direct connection to tackling bureaucratic corruption at the local government level as well.

Despite the effort made by these bodies in tackling bureaucratic corruption at the local government level, the impact of local governments in terms of providing effective service delivery remains to be very minimal. This can be based on the fact that most local governments in Nigeria were said to be underperforming in terms of service delivery as characterized by poor water supply, poor health care systems, unimproved agricultural production, poor education, lacked the means of transportation or poor access roads, and comparatively low level of income among other conditions.

This is in spite of the efforts made by both the States and the local governments particularly Borno state by establishing Ministry for Local Governments Affairs, Local Government Service Commission and Local Government Audit Department which were charged with the responsibility of checkmating the affairs of the Local Governments especially in providing effective service delivery and combating corruption at the local Government level. This is done by appointing zonal inspectors to the Local Governments who from time to time provide a stewardship report of the Local Governments. Similarly, there is also the Office of the Internal Auditor at the Local Government level who are responsible for regulating the affairs of the Local Governments in the state.

PROBLEM STATEMENT

Because of the importance of Local Governments in the overall development in Nigeria, the 1979 and 1999 constitutions of the Federal Republic of Nigeria respectively have provided in section 7 for Local Government to strive to be the third tier of government. This has manifested into unprecedented expectations on the part of the people living at the local level who expect effective service delivery that will enhance their living standard. However, the high expectation of the people had turned out to be frustration due to bureaucratic corruption. There were a lot of efforts being made by the Federal, States, and Local Governments to curb the menace of Bureaucratic Corruption at the Local Government levels in Nigeria, through agencies like the Economic and Financial Crimes Commission, Code of Conduct Bureau, Independent Corrupt Practices Commission, and Revenue Mobilization Allocation and Fiscal Commission among others at Federal level. At the state level there are Ministries for Local Government Affairs, Local Government Service Commission, and Local Government Audit Department among others. Yet the people living at the Local Government level were unable to have access to good health care services, potable water supply, better education, roads, and improved sanitary conditions. This is in spite of the efforts made by the Local Government through the office of the Internal Auditors, Local Government Councilors and Houses of assemblies. Still there were no laudable successes recorded in terms of effective service delivery. Furthermore a commission of enquiry indicted most staff of Local Governments who were involved in bureaucratic corruption. This was revealed by the commission of enquiry into the financial status of Local Government headed by Abba Kyari in 2004 which indicted most of the personnel as guilty of bureaucratic corruption (Kyari, 2004).

Similarly, Salihi (2001) explicitly indicated that despite the efforts in enhancing the performance of the Local Governments through various reforms, Local Governments have continued to perform poorly in the area of development projects such as housing, water supply, education, roads and so on. Similarly, report of the Technical Committee on the Review of the structure of Local Government Councils in Nigeria chaired by Ndayako (2003) has revealed that Local Governments have failed in terms of meeting the demands of the people. Furthermore, several studies have been conducted on Bureaucratic Corruption and Service Delivery in Nigeria such as that by Ahmed (2015) "Assessment of the effects of Bureaucratic Corruption on Service Delivery in Local Government Areas of Borno state"; Aliyu (2015) "effect of Bureaucratic Corruption on the Development of Borno State Agency for Mass Literacy Maiduguri" and so on. However, these studies did not cover some basic variables for measuring Bureaucratic Corruption such as ghost workers on the payroll, outright embezzlement, misappropriation of funds, and the use of unbudgetary expenditures at the Local Government level. In view of the above, this study assesses the effect of Bureaucratic Corruption on Service Delivery in Maiduguri Metropolitan Council (MMC) of Borno State.

RESEARCH OBJECTIVES

The main objective of this research work was to examine the effect of Bureaucratic Corruption on Service Delivery in Maiduguri Metropolitan Council (MMC) of Borno State. The Specific objectives were to:

- i. examine the effect of ghost workers on the provision of Service Delivery;

- ii. examine the effect of embezzlement on service delivery; and
- iii. assess the effect of misappropriation of funds on Service Delivery.

LITERATURE REVIEW

Local Government refers to the third level of Government besides the Federal and State Governments in Nigeria that operate at a level close to the mostly residing in town, communities and villages. It is the level where the majority of the people lives and often engages in agricultural occupations. According to Lawal, (2000) Local government can also be defined as that tier of government closest to the people, 'which vested with certain powers to exercise control over the certain powers to exercise control over the affairs of people in its domain'. Similarly, Murtala (2007) sees local government as "the unit of public administration below Regional or State Government which has the obligation to provide a special range of social services to a community and has instrument establishing it and authorizing it to provide these services among other functions, not only does it have legal authority to perform the functions, it also possess sanction to enforce its decisions."

The Report of the Political Bureau (1987), in Nigeria sees local governments widely acknowledged as a viable instrument for rural transformation and for the delivery of social services to the people. A local government may be seen as "a segment of a constituent state or region of a nation-state", established by law to provide public service and regulate public affairs within its area of jurisdiction (Ikelegbe, 2005). The above presupposes that it is the closest level to the people with powers to perform functions and mandates over its finances and manpower. It is on the strength of the above that (Ikelegbe, 2005) says that, "it is a government under the responsibility of the local people and in the interest of the local population by local representative bodies"

In Nigeria we have 774 Local Governments out of these numbers: Borno State has twenty-seven (27) Local Governments recognized by the 1999 Constitution. These 27 Local Governments are as follows: Askira/Uba, Bama, Biu, Mobbor, Damboa, Dikwa, Gubio, Gwoza, Hawul, Kaga, Konduga, Kukawa, Kwaya-Kusar, Mafa, Magumeri, Maiduguri, Marte, Monguno, Ngala, Nganzai, Shani, Jere, Abadan, Chibok, Guzamala, Kala/Balge and Bayo. The essence of these Local Governments are to provide services to the people by effectively implementing policies, programmes and projects to improve the quality of life of citizens and to bring about development. Some of these projects in facilitating rural transformation are as follows:

Local Governments are now responsible for the bulk of administrative and political processes within their respective areas of jurisdiction. Various reports point improved local decision-making, improved accountability and ownership of public investments under local government control. There have also been improved local administrative and planning capacities. In addition, elections of Local Government Council leaders by universal adult suffrage, is a regular occurrence.

Despite the achievements, many challenges have been faced. These include; inadequate capacity in Local Governments to handle the devolved functions and responsibilities, reduced locally raised revenue in Districts and corruption. The major forms of corruption include abuse of office; fraud and embezzlement; misappropriation of public funds and assets; paying for

goods/services not delivered ('air supply'); paying salaries to non-existent workers ('ghost employees'); bribery and extortion; nepotism and favouritism.

The Local Government appears to be a citadel for corrupt officials, Chief executives of Local Governments often bribe their way to that position. Having attained that height, they surround themselves with their own men and then perpetuate their corrupt practices which take the form of inflated contracts, kickbacks, illegal authorization and withdrawal of public funds and even misappropriation of physical assets in local government stores to themselves.

Corruption is a social problem that has interested many scholars. According to Kligaard and Sahai (1988) as quoted in Cavil and Sohail (2007) that corruption occurs when an Agent betrays the principal's interest in pursuit of one's own interest. They also referred to corruption as behaviour that breaks some rule, written or unwritten, about the proper purpose to which a public office has been put. Similarly, Orukowu (2012) views corruption as effort geared towards securing wealth and power through illegal means for private gains at public expense and danger. It is also a misuse of public power for private benefits, the violation of established rules for personal gains and profit. Duruji and Azuh (2013) also view corruption as "outright theft, embezzlement of funds or other misappropriates of state property, nepotism and the granting of favour to a personal acquaintance and the abuse of the public authority to exact payments and privileges. Viewed from this angle, the general public is seen as the principal victim and the public officials as the Agent.

Kayode *et al.* (2013), also define corruption as the misuse of entrusted power for private gain. This definition agreed with earlier definitions that corruption is a selfish and dishonest act that deprives a vast majority (apart from the perpetrators and their cohorts) of desire benefits i.e. social, economic, political, and other legitimate benefits. It is obvious from aforementioned definitions, that corruption has an emphasis on personal interest as against the public interest/good. The public institutionalism perspective derives its interest from the fact that all public enterprises are established for the people, thus, what officials do should be a reflection of their characteristics. In fact, the veil of secrecy in the public services has to be removed. The interest-maximizing perspective (a market-centered approach) accuses officials of converting public resources into goods needed to initiate and maintain corrupt relations while the political economy perspective highlights that the state is the mechanism to accumulate wealth.

There are many unresolved problems in Nigeria, but the issues of the upsurge of corruption are troubling. In addition, the damages it has done to the polity are -astronomical. The menace of corruption leads to slow movement of files in offices, police extortion, toll gates and slow traffics on the highways, port congestion, queues at passport offices and gas stations, ghost workers syndrome, election irregularities, among others (Lawal and Tobi, 2006). Even the mad people on the street recognize the havoc caused by corruption- the fund allocated for their welfare disappear into the thin air, thus, it is believed by many in the society that corruption is borne of Nigeria. Consequently, the issue keeps reoccurring in every academic and informal discussion in Nigeria. And the issue will hardly go away (Dike, 2010). Corruption has been discovered to take two major directions when it is been discussed in relation to government, i.e. political corruption and bureaucratic corruption. The problem of Bureaucratic and political corruption has been a long

drawn issue in Nigerian politics. It has been acknowledged by several observers of Nigerian politics as a hidden disease of democracy and slowed down development in the country (Kirfi and Ajadi, 2013).

Moreover, Ogundiya, (2009) further stressed that the pathological effects of corruption-democratic instability, low level of governmental legitimacy, poverty, infrastructural decay, electoral crisis, contract killing, political assassination, insecurity and generally developmental problems- have been very devastating. The fact that corruption is anathema to all forms of development is not elusive to the successive Nigerian rulers both military and civilian. What was astonishing is the fact that most of them (the Nigerian rulers) that came in as physicians have come out as patients. It was pointed out by Ogundiya (2009) that allegations and charges of corruption now play a more central role in politics than at any other time. Governments have fallen, a current of world-renowned public figures ruined, and reputations of well-respected organizations and business firms badly tarnished on account of it (Myint, 2008).

In the light of this study, the emphasis will be on the bureaucratic corruption and the operational definition to guide this research is borrowed from the statement of Duruji and Azuh (2013) where corruption is viewed as outright theft, embezzlement of funds or other misappropriates of state property, nepotism and the granting of favour to personal acquaintance and the abuse of the public authority to exact payments and privileges. This is believed to be the cause of declining service delivery in most government ministries, department and agencies (MDA).

Bureaucratic Corruption in public offices in Nigeria is linked to the power that public officials have on managing public affairs. Officials in the position of authority or influence yield more power due to patronage systems prevailing in Nigeria today. Hope and Chiluka (2000) states that public officials business conduct is not subject to public scrutiny hence officers can conduct public affairs in the way that benefits themselves. But nowadays as a result of the series of awareness on the part of the citizen in Nigeria, there is an increasing concern every now and then that the activities of the public officers need to be checkmated and necessary action is taken to deal with bureaucratic corruption.

This made the United Nations Development Programme (2004) posit that Bureaucratic corruption arises when public officials have uncontrolled authority, little accountability and unjust incentives or when their accountability responds to informal rather than formal terms of regulations (UNDP, 2004). This can be supported in the words of Heyman and Liprete (1999) that the culture of governance in which political leaders and senior public officials set an example of self-enrichment or ambiguity over public ethics, is one major cause of Bureaucratic Corruption in public enterprises. In such a culture, the internal rules formal ones and legal principles and procedures are stripped of their authority. The relative secrecy which surrounds the conduct of work by public involvement in decision making in public enterprises is almost zero despite the fact that the public has a right to know all the activities in public entities. To this end, Gorodema (2000) adds that Public officials are vested with high levels of discretionary authority which is exercised in a circumstance in which either close supervision is not possible or accountability is very low.

Gbega (2006), linked the concept of bureaucratic corruption with the illegal activities of bureaucrats. He added that, traditionally, the concept use to denote the practices of buying favour from bureaucrats who formulate and implement government economic and political policies. The concept however, transcends the buying of favour, it refers to the violation of public duty by bureaucrats or public officials. Bureaucratic corruption as we have conceived can simply be seen as a conscious practice by the bureaucrats that transcends to a deliberate deviation from an original norm of an organization for material or non-material, financial or non-financial selfish purposes.

Corruption arises because of an opportunity for bureaucrats to appropriate public funds by misinforming the government about the cost of quality of public goods provision. The incentive for each bureaucrat to do this depends on the economy-wide outcomes which, in turn, depend on the behaviour of all bureaucrats. We establish the existence of multiple development regimes, together with the possibility of multiple frequency-dependent equilibria.

Whichever way one views corruption, particularly bureaucratic corruption, it involves a violation of public duty or deviation from high moral standards in exchange for (or in anticipation of) personal pecuniary gains. It concerns with moral and dishonest acts. D J Gould cited in categories of concentration practice in developing nations which are very much visible in the Nigerian states and local governments. These include bribery, ghost workers on the payroll, outright embezzlement, salary computation fraud, unbudgetary expenditure misappropriation of funds among others.

Bureaucratic corruption is linked with the activities of bureaucrats. Traditionally, the concept was used to denote the practice of buying favour from bureaucrats who formulate and implement governments' economic and political policies. The concept however transcends the buying of favour; it refers to the violation of public duty by bureaucrats or public officials. If bureaucratic corruption can be viewed in this way, then it can be argued that, since bureaucracy is the engine of growth of the state, the pervasiveness of corruption in the institution has the capacity of undermining development. More so, if corruption has already permeated the bureaucracy, for any development to take place the institution must as a matter of fact be purged of all corrupt practices. The higher the levels of corruption the lower are the level of wages and interest rates. Since incomes are lower as a result, a bureaucrat who is corrupt stands to lose less if he is caught so that the incentive to be corrupt is stronger. In this way a bureaucrat's compliance in corruption may depend critically on the compliance of others- hence the possibility of contagious behaviour.

The reasons people engage themselves in bureaucratic corruption are myriads. Researchers have attributed this causes/reason to see many things. Tanzi (1998), identified regulations and authorization as a major cause of bureaucratic corruption; in many developing countries (Nigeria inclusive) the role of the state is often carried out through the use of numerous rules or regulations. Tanzi (1998) explained that, in these countries license, permits, and authorization of various kinds are required to engage in many activities. Tanzi (1998) opined that, when the situation gets to this level, they can their public power to extract bribes from those who need the authorization or permits. Agbo (2009), posit that there is the emergence of broad social classes within the same state, with one directly involved in the production of primary goods, while the other group is

engaged in the production of secondary services. To this end, the decision-making authority is vested in the second group and they also become the rules. The authority itself become exploitative to the extent that members of this ruling class turn the coercive apparatus of the state to the individual and group advantages by allocating more of the social wealth to its members. To this end, Atatlas (1990), attributed the causes of bureaucratic corruption to “statism”. He noted that the development model adopted by the developing countries (including Nigeria) is a serious cause of the level of corrupt practices few found us today. Statism as a model has to do with government ownership as well as control of the major productive sectors of the economy. The outcome of it however, amounts to the numerous abuses that are common to many contemporary developing countries.

Lipset and Lenz (2000), observed that those going through corrupt means (through the back door, so to say), to achieve their objectives have little or no access to opportunity structure. This resentment to the economic opportunity could be as a result of the race, ethnicity, lack of skills and other human resources. They noted that, a culture that stresses economic successes as an important goal and strongly restricts access to opportunities will have higher levels of corruption. This incidentally explains why the higher incidence of corruption in Nigeria. Many Nigerians are highly achievement-oriented, but they have relatively low access to economic opportunities. For instance, many civil and public servants for months without getting paid as at when due. This action only encourages nothing but corrupt practices which consequently retards the growth of the entire economy. However, there are myriads of reasons why people do what they do such as; poor reward system, Influence of extended family syndrome, the pressure to meet family obligations and greed.

Bureaucratic corruption as a complex phenomenon is irregular, ranging from manifestation at lower levels in actions such as giving a small fit for a secretary to have her arrange an appointment with her boss, to higher levels influencing legislative processes for private ends. That is, it is exhibited at all levels, in varying degrees, small changes in initial conditions result in the amplification of the final results of a complex system such as corruption. The complex adaptive nature of bureaucratic corruption, its manifestations and non-linear trajectories (consequences) are not centrally controlled but evolve due to intense local interactions and negative and positive feedback the incidence and extent of bureaucratic corruption are everywhere a function of prevailing levels of political and economic competition. In well-developed democracies with heightened political competition, corruption is relatively rare, and in cases where there is strong evidence of it, the effects are often economically insignificant. This is because corruption is bred and nurtured in secrecy; where there is openness in government coupled with political competitions, the rule of law is closely observed, and corruption reasonably contained (Werlin, 1973). This observation aside, there is, however, ample evidence of bureaucratic corruption in advanced democracies such as the US anecdotal evidence import, however, is the observation that corruption invariably flourishes in autocratic and despotic regimes where, because of their inherent characteristics, the apparatus and mechanisms are properly matched to the important requirements for bureaucratic corruption, unaccountability, transparency, and suppression of political competition, the liberating ideals of Confucianism, and religions modulating effects such as

Buddhism, Islam, Christianity, Judaism and so on. Notwithstanding, the noxious effects of corruption are equally present in developing countries of Asia. Shortly after the ouster of President Suharto of Indonesia in 1998, The Economist observed that some of the sins lay at the doors of the region's economic system looks suspiciously like Asian values gone wrong.

An example set by few corrupt officials at the top (minor inputs) might set off a chain of actions that can end up in a tremendous, chaotic situation (the proliferation of corruption in society becomes systemic corruption). Experience shows that corruption breeds more corruption. Conversely, because of strategic anti-corruption measures, a small reduction of corruption may also facilitate significant reduction of corruption. Likewise, the whole (as the consequences of corruption) can be indicated as more than the sum of its parts (amounts of money misappropriated by corrupt agents). The amount of money lost due to corruption from protects (e.g. leakage from the health and educational systems) will have a ripple effect that extends over generations. The consequences of corruption are simplified and give rise not to one but too many social ills including crime, terrorism, bad governance and poverty. The attachment to the family becomes nepotism. The importance of personal relationships rather than formal legality becomes cronyism. Consensus becomes wheel greasing and corrupt politics.

Bureaucratic corruption may mean different things to different people, however for the purpose of this study, only three of the constituent elements of bureaucratic corruption will be considered. This includes ghost workers, outright embezzlement and misappropriation of funds.

Kayode *et al.* (2013) posits service delivery to imply tangible and intangible goods and services provided by the government in order to improve the well-being of the citizenry. They also conceptualized Service Delivery as the relationship between policymakers, service providers and poor people. According to them, it encompasses services and their supporting systems that are typically regarded as a state responsibility. These include social services (primary education and basic health services), infrastructure (water, sanitation, roads and bridges).

Agba *et al.* (2013), agree with this understanding of Service Delivery when they noted that local service delivery is the provision of services intended to alleviate human suffering and by extension, enhance the quality of life of the citizens. According to Agba *et al.* (2013), the founding fathers of Nigeria local government's system had good intentions. Their major aim was for this third tier of government to positively affect the lives of the people at the grassroots. But the system, unfortunately has been 'hijacked' by politicians and senior bureaucrats for personal enrichment. Thus local government in Nigeria can be sarcastically described as a place where the chairman and other key officials meet to share monthly. Reasoning along this description Agba *et al.* (2013) opined that, the provision of basic social services such as education, health, maintenance of roads, and other public utilities within the jurisdiction of most local government in the country is both a myth and mirage; as the tenure of local government chairmen are primitively conceived as a period of wealth accumulation and not about service delivery to the people. The effect of this is that in spite of the fact that 70% of Nigeria populations are found in the rural areas Agba *et al.* (2013) acknowledge, that average residents at the grassroots level are still suffering from lack of potable water, inadequate health facilities, poor hygiene condition and unemployment.

Local Government often plays a prominent role in managing the delivery of services to

citizens, including for registration and licensing, road maintenance, city planning and public utilities.

- i) In many countries, local bodies also deliver core services such as public security, health facilities, education and water supply and can hold cross-cutting responsibilities for economic development or poverty alleviation.
- ii) As a result, local government is often a citizen's first and direct contact point with the state and may be the only linkage that people have with those who govern them.

This problem appears to be an endemic one for basic service delivery in Nigeria (with similar problem of non-payment of primary school teacher salaries creating a public outcry in the 1990s), and has been argued to the result of the federal institutional arrangements where local governments are overwhelmingly dependent on federal revenue transfers for the discharge of their responsibilities. While some argue that the problem is lack of adequate resources transfers to local governments on federal transfers has undermined local accountability and created perverse incentives at the local level to misallocate public resources (Kayode *et al.* 2013).

El-Rufai (2013) lamenting on poor service delivery stated that; the primary responsibility of Local Governments as enshrined in the constitution is rural, urban and community development. However, rather than working to reduce poverty by providing these services to their people. Thus, public service delivery can be regarded as providing citizens with services of public interest (Ajibade and Ibieta, 2016). Examples of these services of public interest include; security, education, energy, water, public transport and healthcare.

According to Zakari (2010) as quoted by Agba *et al.* (2013), the founding fathers of Nigerian Local Governments system had good intentions. Their major aim was for this third tier of government to positively affect the lives of the people at the grassroots. But the system, unfortunately, has been "hijacked" by politicians and senior bureaucrats for personal enrichment. The inadequacies of strategic vision and the absence of clear rules, codes of ethics and poor working conditions characterized by few incentives or rewards for effective and efficient performance in public enterprises has led to poor service delivery. For efficient and effective service delivery, then accessibility of the services must be guaranteed. Thus, service delivery that is not available, affordable or both are afflicted by corruption. When services become inaccessible, the quantities decline and revenue are lost leading to poor service delivery (Bears, 2000). Thus, Local Governments in Nigeria can be sarcastically described as a place where the chairmen and other key officials meet to share money monthly. Reasoning along this descriptions, our local government areas contribute a negligible percent of our GDP and employ less than 2 percent of the employed population. The United States, countries which are the equivalent of our Local Governments contribute about 20 percent of the GDP and employ about 10 percent of the employed population. Everything from elementary schools to international airports is developed and under the control of countries, municipalities and city councils in the US!

In South Africa and Indonesia, Local Council has the responsibility to provide an expansive range of services like those in Nigeria, but they are large, fiscally and politically autonomous, as only about 14 percent of their revenue comes from central government transfers, compared to the almost 90 percent in Nigeria. The instances above, point to the direction of reform of our broken

and dysfunctional Local Government system. The overall performance of Local Government Areas has slipped considerably from about 40 percent in 2005 when the average Local Governments received 60 million nairas monthly from the centre, to less than 10 percent in 2011, when they got an average of N100 million monthly from the federation account. It is therefore no surprise that our rural areas are so underdeveloped.

Within the context of this study, the public service delivery will be regarded. This takes the form of provision of both tangible and intangible goods as well as services by the government in order to improve the well-being of the people. These include provision of water, rural electricity, schools, market stall and bursary for the students.

Ghost Workers and Service Delivery

The effects of ghost workers on payroll have been a menace to African countries for years which have been affecting many economies. A study conducted by Amoaka-Tuffor (2002) linked ghost workers and payroll fraud to the level of the wage bill in the public sector in Ghana. The Ghanaian government pays about 5.5% of its monthly salaries to ghost workers every year. Consequently, the Ghana wage bill does not reflect the true size of the public sector and its quality of service delivery to national income. Similarly, in Nigeria, millions of Naira is syphoned from government coffers through salary payments to non-existing employees who have fraudulently been listed in the payroll system. Some of these employees may include retired civil servants, deceased staffs and or pure fiction as names. One major cause is the absence of civil service regulations, which allows corrupt civil servants to increase government expenditure through the placement of ghost workers on the payroll, especially the diversion of public funds to private pockets by government functionaries. In fact, the recent computerization of the payroll system in the affected ministries, departments and agencies revealed that names of nonexistent workers were padded on the list on behalf of officials in those organization.

Therefore, mere discovery of ghost workers is only a first step toward addressing the problem. The government should go a notch higher by properly investigating why it has become a recurring problem in the public service across the state. The problem of ghost worker is an organized crime known to the government, yet over time the authorities show no commitment to tackling the problem. That, it must be stated, is one of the main reasons why problem continued to flourish even with the knowledge of government and those who formulate policies in the public service.

Description of Ghost Workers Fraud

1. Creating the Ghost
2. Generating false time sheets
3. Collecting and converting payment.

The goal is for an employee to collect the wages paid for the ghost. This theft of money given the total wages paid to an employee during the year can be high, the cumulative loss over a year of one or more ghost workers.

The fraud is usually done in business with a large number of employees, particularly when employees are spread over a number of physical locations and where the payroll process is

managed by one person and that person either is the fraudster or does not pay much attention to the payroll process. The employee will usually need some access to the payroll system to add the ghost. The fraudster may be done by any employee but the fraud will be more difficult the more remote he or she is from payroll process. The risk of a ghost being added increases when there is a high turnover of staff. The dishonest employee may not have to take any action to generate the payment if the ghost is paid a salary.

It was observed by Thusten (2012) that many countries have a high percentage of ghost workers on their payrolls and that people who are not working are being paid from funds that should have been used to provide services such as education and healthcare and also pay people who are living wage. This can further be supported in the words of Gee (2010) when he stated that salaries paid to ghost workers deprive governments of funds needed to provide services for citizens. Undoubtedly, this has been a major factor that has retarded the speed at which Local Governments are developing in Nigeria. This has made Amaoku and Tufer (2002) opine that Nigeria's public services continue to suffer from ghost workers despite efforts made by the government to address the problem. The inability of the government to effectively deal with ghost workers in the public services was due to inadequate knowledge about the phenomenon itself, which is the result of inadequate research on payroll fraud in Nigeria.

To eliminate fraud, it is necessary to understand the nature of the fraud and how it is committed and concealed (Hassel and Andrew, 2012). Accurate information on fraud is therefore essential in planning to minimize the fraud losses (Gee, 2010). Nigeria can draw from the experience of other countries by using statistically valid methods to measure the level of losses. However, studies on ghost workers in Nigeria are inadequate in Nigeria, apart from the Auditor General who reports cases of ghost workers in the public services; there has not been any known scholarly work on the level of ghost workers in the public services of Nigeria, a situation that created the need for this research.

The Nigeria Minister of finance in February, 2011 revealed that the pilot implementation of the integrated personnel and payroll information system (IPPIS) in sixteen ministries, departments and agencies (MDAs) saved the nation over N12 billion between 2007 and 2010. This pilot implementation was necessitated considering the fact that government wage bill had constituted a huge check of recurrent expenditure at 58 percent of the annual budget. More so, the Minister of finance observed in 2014 that as part of a measure aimed at cushioning the effect of drilling oil revenue accruing to the government resulting to 30 percent fall in the price of oil in the international market, the government saved 160 billion nairas by weeding out 60,000 ghost workers from the payroll. This is also excluding the 46,821 ghost workers identified in 215 ministries, department and agencies in 2013.

Hence, the consistent staff screening in government ministries, departments agencies both at the federal, states and local government is the manifestation of the level of ghost workers syndrome in the public services. The Nigerian Unemployment rate increased to 23.9 percent in 2011 from 21.0 percent in 2010, and averaged 14.6 from 2006. And in 2014, 80 percent of Nigerians were unemployed. More so, this affects the socio-economic fortunes of the citizens and the rate of corruption is obviously the causes of this trend compared to other nations such as China

with 4.1 percent rate of unemployment (National Bureau of Statistics, 2012). The United Kingdom with 5.5 percent unemployment rate and the United State of America with 5.5 percent unemployment rate yet, with a low level of corruption (National Bureau of Statistics, 2008). For example the staff audit exercises conducted in the federal capital territory in 2013 revealed that out of 26,017 on the payroll, 6000 were fictitious. Hence, the audit exercise further exposed the extent of monumental corruption, theft and financial irregularities that could be agreed if the electronic payroll system is fully implemented in the public services. Despite the provision of financial regulations of 2009 part 1, which stipulates that all public servants, shall have their salaries and allowance paid through a named bank on completion of Treasury form. It is obvious that such provision is handicapped to empower the organization to carry out a centralized payroll system.

However, Letsula and Egwemi (2013) noted that corruption did not begin today but ancient civilization and traces of widespread illegality and corruption. Though Local Government created by Federal Government to draw administrator closer to the people, the Functions of Local governments fall under the efficiency services drive to remove the administrative bottleneck and bureaucratic complicities aimed at promoting governance, efficiency and service delivery. Through adequate reward system but ghost workers syndrome in recent time have threatened this objective hence the application of intergraded personnel payroll and information system with the expository evidence being showcased of its efficiency in curbing ghost workers syndrome will serve as an antidote to addressing this negative trend.

In a nutshell, the problem of ghost workers is a serious issue to deal with in that the crime mostly is an organized type and unveiling such culprits are usually met with resistance from those benefiting from the outcome. Even though such phenomenon has a negative backlash on the level of service delivery in government institutions. It is only a committed government that can take a drastic action to overhaul such situation.

Embezzlement and Service Delivery

Embezzlement is misappropriation when the funds involve having been lawfully entrusted to the embezzler. One of the most harmful effects of embezzlement is that it skews any evaluation of government economic standing, the act of embezzlement also assumes a pretence that the government willingly to address the need of the perpetrators, supposedly leaving the embezzling employee no other options. Initial decades of industrial revolutions in most presently-industrialized countries as well as a period of rapid growth in East Asia, China and India have been characterized by high levels of embezzlement. In all these societies, the possibilities of economic expansion created the fuel for embezzlement to grow. British had more embezzlement in the eighteenth century and American in Nineteenth-century than in adjoining centuries (Jain, nd.).

Cases of embezzlement of public funds by public office holders are very rampant nowadays in the African Sub-region. Depletion of the public purse is no longer a new scenario. Most public office holders venture into this sector and come out unprecedentedly rich. Astonishing, is the way the undesirable elements embezzle these funds and go scot free. Nigeria is known as one of the foremost in the corrupt nation in the world is not an overstatement. This is largely as a result of

financial impropriety that is ravaging the public sector. When it comes to public funds, people seem to put aside their moral values. Financial integrity is hardly seen in the public sector. Worst still is the effrontery being exhibited by these perpetrators even when caught red-handed. The then president Obasanjo in decrying the high incidence of financial impropriety said that it is only in Nigeria that you will catch a thief and he takes you to court (Obuah, 2010).

It seems that there is an unusual rash of an embezzlement scandal, the organization, and revenue receivers reconciling their drawers, treasurers collecting cash, making their own deposits and journal entries and payroll clerks printing checks and electronically signing them without careful oversight. Some conditions that could raise warning flags and several procedures that will discourage even the most victims and persistent embezzler.

- i) Let the government make a model public denouncement of every infraction.
- ii) Hold management responsible, if fiscal officer delegates tasks to a lower level employee he/she should be equally held responsible for illegal after perpetrated by the employer.
- iii) Accountability procedures must be in place. Accountability is a good first step in discouraging mischief.
- iv) Maintain records if records are being undertaken it is important not to destroy possible trial of money mismanagement.

Good management protects the fiscal health of a local government and protects the integrity of its employees. The computer can be a vehicle effective security controls, or it can be a gateway to embezzler paradise. Computer software has yet to be embedding the intelligence wrought from a careful understanding of the weak management and human desire that can result in concealed transactions, and opaque rather than transparent reporting.

If any officer, agents, or employee of the state, or other person having or holding in trust for the same any bonds issued by the state, or any security or other property and effects of the same, shall embezzle or knowingly and willfully misapply or convert. The same to his own use, or otherwise willfully or corruptly abuse such trust; such offender and all persons knowingly and willfully aiding and abetting or otherwise assisting therein shall be guilty of a felony. If the value of the property is one hundred thousand dollars or more, a violation of this section is a class C felony (Constitution, 1999).

It is difficult to acknowledge that theft, fraud, and embezzlement are pervasive in today's society. In many cases, the person who commits these acts is someone you know, like, and trust. Convincing a non-profit organization to prosecute is often difficult. A nonprofit duty to its members the community and its donors are significant and this should have strong consideration when determining whether to prosecute or not. Officers and chairpersons must constantly be on the lookout for fraud, theft and embezzlement.

The Problem of Fraud, Theft and Embezzlement in PTAS across the Country.

Fraud costs U.S organizations over 400 billion annually. The average organization losses approximately 6% of its total annual revenue to these abuses and these abuses are perpetrated at all levels of the organization.

- i. Every organization should have a strong system of internal controls without good internal controls it could take months to become aware of a problem.

- ii. Internal controls a process designed to provide reasonable assurance regarding: reliability of financial reporting, effectiveness and efficiency of operations compliance with applicable laws and regulations.
- iii. Provide assurance that fraud will be discovered on a timely basis, perpetrators will be identified, Act as a strong deterrent to improper activities that loss will be. Good internal controls will have away from the opportunity needed by desperate people to commit a crime. What will cause a normally good person to reach this point? Debts, divorce, illness, drug problems, peer pressure, and work layoffs are some of the reason that is given when people are questioned about these abuses
- iv. Open and review bank statements-someone independent of the check processing should receive the unopened bank statement and review the activity before passing it on the treasure for reconciliation. The person initially checking bank statement should be identified (by positioned) in the money management policy. This individual should sign the bank statement or make notations (as appropriate) before turning over the treasurer. If regularities are noted, report immediately to the PTA president. A report should also be made to the board to Reconcile bank accounts monthly. The importance of bank reconciliations should not be overlooked. They should be completed monthly and presented to the executive committee. It is the responsibility of members to question an explained reconciling item. Verify wire transferred-work with the bank to set up a system of verification of wire transfers. Avoid wire transfer transactions are at all possible.

Misappropriation of Funds and Service Delivery

Misappropriation of funds is the intentional, illegal use of the funds of another person for one's own use of or another unauthorized purpose particularly by a government official, is also considered as a form of theft, argument countering charges of theft can be modified and utilized against misappropriation. But when prosecutors being a charge of misappropriation, they must convince a judge or jury, that the following happens true: -

- i) **Control but not Ownership:** the prosecutor must show that the owner of the property, whether its person, organization or group, entrusted or gave the money to the defendant.
- ii) **Intent:** First, a person must knowingly misappropriate the money and cannot commit the crime by making a mistake or error. A person who misappropriates funds doesn't have to intend to actually physically take the money.
- iii) **Conversion:** In order to commit misappropriation of funds, a person must not only take the money but must use it for his own purposes.
- iv) **Return:** A person who misappropriates funds with the intent to later return the money to the rightful owner is still guilty of misappropriation. It also doesn't matter if the misappropriation only lasted for a short period of time.

Misappropriation of funds conviction can lead to significant penalties. States allow for both felony and misdemeanour charges of theft, embezzlement and misappropriation crimes. What separates a misdemeanour offence from a felony offence often depends on the values of the funds that were misappropriated as felonies or misdemeanour.

Misappropriation of funds charges being with them significant potential punishments and anyone charged with this crime needs to speak with an experienced criminal defence attorney. A budget helps compare what a person makes to what a person spends. Without a budget, there is no disciplined approach to keeping spending in line with income and ultimately facing the threat of a significant financial crisis, a non-budgeting can prevent someone from setting and achieving key financial goals also spending without discipline may cause someone to splurge on less more important living expenses and disciplinary items. This can start a domino effect that escalates because monthly debt obligations continue to rise and create even greater demands on income.

Budgets are also important to save medium-term goals and long-term retirement. Spending without a budget presents some from setting aside funds for these purposes. Additional effects of not having a budget including the inability to build wealth overtime and significant stress that results when bills and debts escalate. It is difficult to visualize how this will be done. The other than salary budget heads include transportation, stores, works and other expenditure revised estimates.

Tax expenditures are comparable to entitlement expenditures. The treatment of setbacks and windfalls (lower or higher expenditures than estimated in the budget) in entitlement expenditures differ between countries that use nominal or structural deficit or operation/current balance rules. In general, it would seem logical that overspending on expenditure due to setbacks would have been compensated under nominal rules and that it could be left uncompensated under structural rules.

Expenditures often fluctuate with the business cycle and structural and tax expenditure often fluctuates with the government, windfalls need to allow new expenditure. The cap for total expenditures is usually divided over sectors or ministries. The sectoral or ministries sub caps can be changed in the annual budget process through reallocation to accommodate new development.

All expenditures in the budget to be made during a certain period of time (usually one or two years) and all revenues in the budget to be collected during that period should be presented to the budgetary authorities for the purpose of decision making in a single document (Constitution,1999). Expenditures and revenues should be specified separately in the budget (gross recording) and at a level of detail required by the budgetary authorities, in spite of the gradual development of budget institutions in accordance with these budget principles.

1. Off-budget funds
2. Direct loans
3. Guarantees
4. Public-Private Partnerships (PPP)

Off-budget funds are special funds owned by the government that are not part of the budget and that receive revenues from earmarked levies, possibly next to other sources such as fees and contributions from the general tax fund. Earmarked levies are different from fees in that they do not reflect the market value of the services that are financed from fees in that they do not reflect the market value of the services that are financed from the revenues. In Particular they may be lower or higher in view of social consideration (capacity to pay or equality regardless of cost).Off-budget funds can mainly be found in European member's countries of the countries that provide

information to this project. Off-Budget and Tax Expenditure financed by taxes or levies should be in the budget. However, even in countries adhering to this tradition, expectations occur. For examples, in the United States two off-budget funds were created in the 1980s to resolve the problems of failed thrift institutions (Saving and loans) in the continental traditions, off-budget funds are numerous and based on principled argument. The clearest cases are the social security and public healthcare funds; in these cases, the reasoning is that the premiums are paid by the social partners are often represented on the board of the funds.

Even In the continental traditions not all expenditures that are wholly or partially financed by earmarked levies are off –budget. If revenue from the levy constitutes a relatively small contribution to the funding of the services if there is no clear, organized segment of the population that pays the levy and benefits from the services, the expenditures are usually on budget, regardless of whether the agency supplying the services is an independent public corporation in the legal sense.

The protection that off-budget funds offer to those who have paid the earmarked levies need not be eliminated, but ought to depend on a strict condition, namely that expenditures and revenues of the funds are subjected to regular budgetary control. This implies among other things that expenditure and revenue are published in the budget documentation, that the totals area subjected to the prevailing fiscal rule, that the rules of budgetary discipline regarding the compensation of overspending apply, and that expenditures and revenues of the funds are subject to annual review as part of the budget process.

Direct Expenditure direct expenditure can be used as an instrument of government policy and may often be substituted for direct expenditures. At the beginning of the 1970s, only Germany and the United States recorded tax expenditures in special accounts and reported them to parliament. By 1983, Austria, Canada, France and Spain were also regularly identifying tax expenditures reporting them. In 1996, almost all OECD members' countries reported tax expenditures. The published studies on direct expenditures in 1984 and 1996 issued a special feature about direct expenditures and tax/GDP ratios in 2003 editions of the revenue statistics and that may tax a number of different forms: exemptions; allowance; credits; rate relief, tax deferral.

As far as the macroeconomic function is concerned, it is important that tax expenditures do not escape the control of the fiscal rule.

1. Nominal Overall deficit rules
2. Structural overall rules
3. Medium-term deficit rules with multi-annual expenditures caps
4. Nominal operating or current 22 balance rules
5. Structural operating or current balance rules
6. Medium-term operating or current balance rules with multi-annual expenditure caps.

These fiscal rules offer different opportunities to escape budgetary control through the use of tax expenditures. Under nominal or structural deficit or operating /current balance rules (types 1, 2, 4, and 5) a total expenditures cap is set annual in view of tax revenue estimates. Since tax expenditures are reflected in revenue estimates, they cannot escape the fiscal rule if changes in estimates are taken into account when the expenditure cap is set. However, during budget

formulation, expenditures tend to be treated differently than revenues. In general, taxes are less flexible than expenditures, and in periods of fiscal stress the first effort is usually directed at the adjustment of expenditures rather than of revenues. Also, overspending on expenditures during the fiscal year or budget is treated differently than shortfall of revenues, it is therefore important that under such rules tax expenditures are included in the total expenditures cap or what amounts to the same that a special cap is set for tax expenditures and that under nominal deficit and operating /current balance rules, overspending on tax expenditures during the fiscal year or budget period is fully compensated.

Under medium-term rules with multi-annual expenditures caps, the caps for total expenditures cannot be changed in the annual budget process.²⁴ the annual deficit or operating /current balance is allowed to fluctuate (possibly under the provision that a critical ceiling is not exceeded).²⁵ without special provisions, tax expenditures under such rules can escape the control of the fiscal rule. Therefore, it is necessary that under such rules tax expenditures are included in the total expenditures cap of each year or what amounts to the same that a separate cap is set for total tax expenditures for each year and that all changes in tax expenditures are fully compensated, at least in so far as they originate in policy change (change of the tax laws) ²⁶ and regardless of whether they occur during the fiscal year or budget period or in the annual budget process.

METHODOLOGY

A survey designed was used in this research work, to assess the effect of bureaucratic corruption on service delivery in Local Government Areas of Borno state. Consequently, a total of 357 structured questionnaires were designed to be distributed to the Local Government workers in the various departments. Similarly, structured interview was conducted with the 18 community leaders in order to complement the opinion of the respondents. . To achieve the sample for local government staff, proportionate sampling technique was used to select the local government staff from each department while simple random sampling technique was used to select the sample from the register. Similarly, the community leaders also were stratified according to the fifteen wards of MMC. These are: Shehuri North, Shehuri South, Hausari, Mafoni, Fezzan, Lamisula, Bolori 1, Bolori 2, Gwange 1, Gwange 2, Gwange 3, Maisandari, Gamboru, Limanti and Bulabulin. Two community leaders were conveniently selected from each of the wards, making the sample size of 30.

The sample size for the local government was obtained using Yamane (1967) formula as presented below.

$$n = \frac{N}{1 + N(e)^2}$$

Where

n---Sample size

N---Population

e---level of significance (5%)

(e)²--- (0.05)²

Therefore,

$$n = 6100 / 1 + 6100 (0.05)$$

$$n = 6100 / 1 + 6100 * 0.0025$$

$$n = 6100 / 16.25$$

$$n = 375$$

Data collected in this research work were analysed using descriptive and inferential statistics. The descriptive statistics consist of frequency table and percentage in the presentation of the data.

DATA ANALYSIS

The data obtained from the respondents were organized, analysed and presented using frequency distribution table while the hypotheses formulated were tested using ANOVA. To assess the effect of Bureaucratic corruption on Service Delivery in MMC, a total of 357 structured questionnaires were designed and distributed to the local government workers in Maiduguri Metropolitan Council, Borno State where only 341 questionnaires were properly filled and returned valid. Similarly, interviews were also conducted with 18 community leaders out of the 30 drawn from the sampling frame in MMC. The analyses of data collected in this research work were made based on the specific objectives outlined in line with the valid questionnaires returned.

Effect of Ghost Workers on Payroll on the Provision of Service Delivery

The research work sought to know whether the number of ghost workers on payroll affects the provision of service delivery such as water, rural electricity, schools, market stall and bursary for the students in MMC, Borno state. The essence is to determine the level at which the local government payroll is dominated by ghost workers and how it affects the provision of service delivery.

Table 1: Ghost workers on Payroll and Service Delivery

Variables	Frequency	Percentage
Strongly Agreed	16	4.69
Agreed	238	69.79
Undecided	37	10.85
Disagreed	43	12.60
Strongly Disagreed	07	2.05
Total	341	100%

From Table 1: it can be observed that 16 respondents (4.69 %) strongly agreed that ghost workers on payroll affect the provision of service delivery in MMC, Borno state whereas 238 respondents (69.79%) agreed, while 37 respondents (10.85%) remained undecided. Similarly, 43 respondents (12.60%) disagreed that ghost workers on payroll affect the provision of service delivery in MMC, Borno state whereas 07 respondents (2.05%) strongly disagreed. However, the percentage of agreement shown by the respondents is much higher, it can therefore be concluded that ghost workers on payroll grossly affects the provision of service delivery in MMC, Borno state. This can be supported by the words of Thusten, (2012) who stated that many countries have high percentages of ghost workers on their payrolls and that people who are not working are being paid from the funds that should have been used to provide services such as education, healthcare and so on. Similarly, this is also in agreement with an interview conducted to the community leaders

where one village head stressed that most of the local government workers have little or no contribution to the workforce rather ended up in consuming a huge sum of money meant for service delivery

such as good roads, education, housing and so on were consequently diverted to the payment of salaries for unproductive men and women.

Level of ghost workers in MMC and its effect on the provision of Service Delivery

This study sought to know whether there are ghost workers on the payroll in MMC and how it affects the provision of service delivery. This is to find out from the reliable source whether there are ghost workers at the payroll in MMC or not. This will also assist the study in achieving its objective of examining the effect of ghost workers on the payroll on the provision of service delivery in MMC, Borno state.

Table 2: Level of ghost workers and service Delivery

RESPONSE	FREQUENCY	PERCENTAGE
Strongly Agree	11	3.22
Agree	142	41.64
Undecided	60	17.59
Disagree	15	4.39
Strongly Disagree	112	32.84
TOTAL	341	100%

Table 2 revealed that 11 (3.22 %) of the respondents strongly agreed that there are ghost workers in MMC while 142 (41.64%) of the respondents agreed and 60 (17.59%) of the respondents remained undecided. However, 15 (4.39%) of the respondents disagreed that there are ghost workers on payroll while 112 (32.84%) of the respondents strongly disagreed. Therefore, from the findings of this table it can be said that there are ghost workers on the payroll and it has affected the provision of service delivery in terms of provision of water, rural electricity, schools, market stall and bursary for the students where most of the local government funds were channelled for the payment of workers' salaries than for the provision of effective service delivery. This can be corroborated by the words of Andrew (2012) who stated that, annually millions of naira is syphoned from government coffers through the payment of salaries to non-existing employees who have fraudulently been listed in the payroll system. In addition to this it was revealed in the report of the Auditor General for local governments in Borno state that local government payroll in Borno state is characterized by nonexistent of workers and mostly underaged and retirees who are not supposed to be in the payment system and by implication this has resulted in the local government to become overstaffed and deny its ability to provide effective service delivery in areas such as healthcare, housing, potable water supply and so on.

Effect of Outright Embezzlement on the Provision of Service Delivery

This research work sought to know the effect of outright embezzlement on the provision of service delivery in MMC, Borno state. This is to determine whether the monies meant for the provision of service delivery by the local government were outrightly embezzled by the local government

officials or not in Maiduguri Metropolitan Council, Borno State.

Table 3: Outright Embezzlement and Service Delivery

VARIABLES	FREQUENCY	PERCENTAGE
Strongly agreed	7	2.05
Agreed	60	17.59
Undecided	96	28.15
Disagree	92	26.97
Strongly disagree	86	25.21
Total	341	100%

Table 3 shows that 7 (2.05 %) of the respondents strongly agreed that outright embezzlement affects the provision of service delivery in MMC, Borno state, 60 (17.59%) of the respondents agreed, 96 (28.15 %) were undecided. This is contrary to 92 (26.97 %) of the respondents who disagreed that outright embezzlement affects the provision of service delivery in MMC; whereas 86 (25.21%) of the respondents strongly disagreed. Therefore, from the viewpoint of the respondents it can be said that outright embezzlement has no effect on the provision of service delivery in MMC. The view of the respondents here is contrary to the provisions of the local government financial memoranda and the constitution of the federal republic of Nigeria (1999) where it clearly points out that any officer, agents or employee of a state who knowingly or willfully shall embezzle or convert and misapply public trust issued by the state or corruptly abuse such trusts shall be guilty of a felony. However, in a related interview with the community leaders one of the youths emphasized that one major area that is affecting service delivery in MMC is hinged on the problem of outright embezzlement where monies were embezzled on political reasons without channelling it to effective service delivery that will impact on the lives of the environs.

Level of Outright Embezzlement and its Effect on the Provision of Service Delivery

This study sought to know the level at which outright embezzlement has affected the provision of service delivery in MMC. This is to determine whether local government officials spent monies without following due process in MMC, Borno State.

Table 4: Outright Embezzlement and Service Delivery

RESPONSE	FREQUENCY	PERCENTAGE
Strongly Agree	7	2.05
Agree	36	10.55
Undecided	44	12.90
Disagree	49	14.36
Strongly Disagree	205	60.11
Total	341	100%

From Table 4 it can be discerned that 7 (2.05%) of the respondents strongly agreed that the use of outright embezzlement affects the provision of service delivery in MMC, while 36 (10.55%) of the respondents agreed, and 44 (12.90%) of the respondents remained undecided. This is in disagreement with 49 (14.36%) of the respondents who disagreed that the use of outright

embezzlement affects the provision of service delivery in MMC, Borno state. While 205 (60.11%) of the respondents strongly disagreed. Based on the percentage of the disagreement which is higher than that of the agreement, it can be concluded in this study that the respondents did not agree that use of outright embezzlement affects the provision of service delivery. This is quite different from the viewpoint of Egwemi (2013) that without a budget there is no disciplined approach to keeping spending in line with income and untimely facing the threat of financial crisis. This is also similar to the response of one community leader interviewed in MMC who states that even the budgets of the MMC are not properly channelled for effective service delivery to his understanding because you can hardly see capital projects executed by the local government because they don't have discipline in budget preparation and implementation. Another traditional ruler states that in those days before the coming of the fourth republic there is remarkable achievements that were seen by the efforts of the local government and expenditures were budgetary. Evident by a lot of services provided that have touched the lives of the people. He said today most of the environs in the metropolis depend on the state for their service delivery. By implication this shows that the use of budgetary expenditure will give the government direction and financial discipline of keeping in line with income thereby avoiding a threat to the financial crisis and this will lead to serious outright embezzlement at the local government level.

Effect of Misappropriation of Funds on the Provision of Service Delivery

The local government workers were asked whether misappropriation of funds hinder the provision of effective service delivery in MMC. This is to determine the extent to which the local government funds were channelled for effective service delivery in MMC, Borno state.

Table 5: Misappropriation of funds and Service Delivery

VARIABLES	FREQUENCY	PERCENTAGE
Strongly agreed	36	10.55
Agreed	184	53.95
Undecided	50	14.66
Disagree	14	4.10
Strongly disagree	57	16.71
Total	341	100%

Table 5 shows that 36 (10.55%) of the respondents strongly agreed that local government funds were properly channelled toward the provision of effective service delivery in MMC, and 184 (53.95%) of the respondents agreed. While 50 (14.66%) of the respondents remained undecided. Similarly, 14 (4.10%) of the respondents disagreed that local government funds were properly channelled towards the provision of service delivery in MMC and 57 (16.71%) of the respondents strongly disagreed. Therefore, it can be said that local government funds in MMC were properly channelled towards the provision of service delivery. The result obtained from this table is quite different from the findings of Ahmed (2015) who stated that the performance of local governments generally in Borno state in all sectors there is nothing to write about especially in areas of primary health care, agriculture, education and so on are better rated as inefficient. While corroborating

this with a related interview there is two different understanding among the community leaders with regard to the misappropriation of funds in MMC, some village heads stated that the local government is channeling resources on effective service delivery while some chairmen of youth and women groups stated that the local government is not channeling its resources towards the provision of effective service delivery such as primary health care, primary education, improved agricultural production, potable water supply and so on. Therefore, from the opinion of these community leaders and the viewpoint of Ahmed (2015) it can be said that misappropriation of funds greatly affects the provision of effective service delivery in MMC, Borno state. Consequently, reducing or completely avoiding it will go a long way in providing effective service delivery at the local government level.

Level of Misappropriation of Fund on the Provision of Service Delivery in MMC, Borno State

The research work sought to know the areas of priority in the local government budget so as to ascertain the extent to which capital expenditures that ensure effective service delivery like water, health roads and so on are reflected in the local government budgets. Again this will assist the study in achieving one of its objectives of assessing the effect of misappropriation of funds on service delivery in MMC.

Table 6: Misappropriation of funds and Service Delivery

RESPONSE	FREQUENCY	PERCENTAGE
Strongly Agree	6	1.75
Agree	50	14.66
Undecided	141	41.34
Disagree	12	3.51
Strongly Disagreed	132	38.70
Total	341	100%

It was revealed in Table 6 that 6 (1.75%) of the respondents strongly agreed that most of the budgets in MMC were prioritized on welfare services and poverty reduction rather than the provision of capital projects like roads, health care services, water and so on while 50 (14.66%) of the respondents agreed and 141 (41.34%) of the respondents remained undecided. This is contrary to the views of 12 (3.51%) of the respondents who disagreed that the local government budgets were prioritized by issues related to poverty reduction and welfare services than capital projects while 132 (38.70%) of the respondents strongly disagreed. In spite of the large number of respondents who remained undecided, from the analysis of this table it can be said that local government budgets in MMC were not prioritized by issues of poverty reduction and welfare services. These findings can be corroborated by the findings of Table 5 where the majority of the respondents agreed that local government's funds in MMC are effectively channelled for the provision of service delivery. Therefore, it can concur with the viewpoint of some of the community leaders who were on the opinion that local government funds in MMC were effectively channelled for the provision of service delivery.

CONCLUSION

Ghost workers on payroll have a significant effect on the provision of service delivery in MMC, Borno state. This comes in form of inflation of salaries, too much unproductive workers and generally greater percentage of the local government funds were channelled for the payment of salaries for the local government workers.

It was also concluded that outright embezzlement has significant effect on the provision of service delivery in MMC, Borno state, where most respondents attributed this to inflation of contracts, lack of technical competence among the local government workers, overemphasis on politicization of the local government work, and lack of managerial competence amongst others.

Furthermore, this research work concludes that misappropriation of funds has a significant effect on the provision of service delivery in MMC, Borno state. However, most of the respondents attributed this to lack of following budgetary provisions, focusing much on areas of poverty reduction and welfare services rather than the provision of capital projects, and over-dependence on external sources of funding rather than prioritizing revenues internally amongst others.

RECOMMENDATIONS

Based on the conclusions of this research work the following recommendations were made.

Local Government officials have to desist from inflation of salaries and both the state and the local government has to take necessary measures that will stop the local government officials from doing this. This can be in form of computerizing the payment system and conducting biometric data verification at the local government level so that strict adherence to the salary package shall be made computerized. This can go a long way in checkmating the problem of too many unproductive workers and channelling most of the local government funds on the payment of salaries at the local government level. Therefore it is the view of this researcher that the above recommendations be taken care of, then it will go a long way in providing a solution to the problem of ghost workers on payroll at the local government level in MMC, Borno state.

Again, there is a need for the Local Government to embark on a massive training and retraining programme to the local government workers. This can be in form of sending the local government workers for schools, seminars, conferences, workshops, and all sorts of training that will make the local government workers be competent in terms of technical and managerial.

More so, the spirit of not politicizing the local Government work should be inculcated to the local government workers which will be in form of making them aware of the work ethics, and generally focusing on the provision of service delivery at the local government level in MMC, Borno state. Therefore, it is the view of the researcher that the above recommendations are taken care of, it will go a long way in providing a solution to the problem of outright embezzlement at the local government level.

Finally, Local Government officials have to be dedicated to following budgetary provisions and to ensure that their budgets were dominated by the service delivery aspects such as; education, feeder roads, potable water supply, housing, improved agricultural production and so on rather than focusing on the areas of poverty reduction to dominate their budgets. Similarly, strengthening the internally generated revenue base of the local government in MMC has to be encouraged by

the officials this can be done through empowering the revenue sources available at the local government such as; cattle tax, motor park levy, tenement tax, mass transit and liaise strictly with the traditional rulers and the security men to compel residents of MMC, to be paying the taxes promptly. Therefore it is the view of the researcher that the above recommendations be taken care of, it will go a long way in providing a solution to the problem of misappropriation of funds at the local government level in MMC, Borno state.

Therefore, it is the view of the researcher that should the above recommendations be effectively implemented, they will go a long way in reducing bureaucratic corruption and improving service delivery in Maiduguri Metropolitan Council, Borno State.

REFERENCES

- Agba M. S., Akwara A. F. and Idu, A. Y. (2013). Local Government and Service Delivery in Nigeria; A Content Analysis. *Academic Journal of Interdisciplinary Studies*, MCSERCEMAS Sapienza University of Rome. 2(2): 2281-4612.
- Agba, M. S; Ogwu, S. O and Chukwurah, D. C. J (2013) "An Empirical Assessment of Service Delivery Mechanism in Idah Local Government of Kogi State, Nigeria from 2003 – 2010". *Mediterranean Journal of Social Science* MCSER-CEMAS- Sapienza University Rome. ISSN.2039-2117(online) Vol. 4 No. 2. pp. 621- 636.
- Agbo, A. (2009), A Catalogues of Failure, *Nigerians Independent Weekly Magazine*, No. 2 June 3rd.
- Ahmed, F. (2015). An Assessment of the Effect of Bureaucratic Corruption on Service Delivery in Local Government Areas of Borno State, Nigeria. Unpublished M.Sc. Dissertation Department of Public Administration, University of Maiduguri.
- Aliyu, U. (2015). Effective of Bureaucratic Corruption on the Development of Mass Literacy Borno State, Nigeria.
- Amaoku, C. O. and Tuber U. (2002) Local Government System Discipline in A Case Study of Corruption and Public Accountability in Nigeria.
- Appadorai, A. A. (2004), *The Substance of Politics*, Oxford University Press, London.
- Atatlas, S. H. (1990), *The Sociology of Corruption*, Singapour, Times Books.
- Bearse, P. Glomn, G. and Jenaba, E. (200). Why Poor Countries Rely Mostly Redistribution in Kind. *Journal of Public Economics*. 75: 463-481.
- Carlson, C., Lamalle, J.P., Fustakian, S., Katy, N.J., Sibbons, M and Sondorp, E. (2005). Improving the Delivery of Health Education Services in Difficult Environment: Lesson from the Case Studies, DFID Health Systems Resources Centre London.
- Dike, V.E (2010).Corruption in Nigeria. A New Paradigm for Effective Control, (www.africaeconomicalanalysis.org).
- Durujo, A. A. and Azuh, B. (2013) Corruption and Local Government Accountability in Nigeria Public Sector.
- El-Rufai, N. A. (2013). "Local Government: the Missing Tier of Government Columnist (Internet material download Feb,10,2014).
- Farrell, M. (1957).The Measurement of Production Efficiency.*Journal of Royal Statistic Society. Series A* Grant 1120 partIII:253:281.
- Gbega, K. (2006) Concept of Bureaucratic Corruption: A Panacea to the Menace of Illegal Activities in Nigeria.
- Gee, A. S. (2010) The Evolution of the Nigerian Local Government System in Nigerian Local Government. Ile Ife, Department of Local Government Studies, Obafemi Awolowo, University.
- Hassel, A. E and Andrew, M. (2012) The Modern Africans State and Corruption Syndrome. A Theoretical and Empirical Consideration in Corruption and the Challenges of Human Development. Babcock University Press. School of Management and Social Science.
- Heymans C, and Lipirete, B. (1999). Corruption and Development: Some Perspectives. Monograph series.
- Hope, K.R and Chikulo, B.C. (2000).Corruption and Development in Africa : Lesson from Country Case Studies. London; Macmillan Press Limited.
- Kayode, A; Adagba, S. O and Anyio, S. F (2013) "Corruption and Service Delivery" *Woodpecker Journal of Public*

- Administration Vol. 1(1). pp 001 – 006.
- Kirfi, M. M. W. and Ajadi, I. A. (2013), Blue Ocean Strategy: A panacea to the Menace of Bureaucratic corruption in Nigeria. *ISOR Journal of Business and Management* 11(1): 19-20.
- Kligaard, P. and Sohail, T. (2007), Corruption and Democracy in Nigerian Civil Services.
- Kolo, S. (2006) Assessment of Factors affecting Local Government on Community Development in Geidam Local Government of Yobe State.
- Kyari, A. (2004), The Financial Status of Local Government Administration in Nigeria.
- Lawal, M.M., Musa, W.K and Aliyu, B. (2013).Bureaucratic Corruption and Service Delivery in Nigeria.The 21st Century Dilemma of the Nigerian Public Service. *International Journal of Innovative Research and Development*, 2(80 16-169).
- Letsula, J. and Egwemi, C. (2013) Accountability Arrangement to Combat Corruption Water, Engineering and Development Center. Long Borough, University Lekestershire, UK.
- Lipset and Lenz (2000), “Corruption, Culture and Market”, in *Culture Matters*, L.E. Harrison & S.P Huntington (Eds), New York, Basic Books.
- Mabogunde, W. (1995).Corruption, Definitions, Theories and Concepts. *Arabian Journal of Business and Management Review*.Pp 37-45.
- Myint, H.(2008). Corruption, Causes, Consequences and cures. *Asia Practice Development Journal*, 8(2):33-58.
- National Bureau of Statistics NBS (2008).National statistic Bulletin, Abuja, Nigeria.
- Ndayawo R. A. (2003) The Rules and Performance of Local Government Administration in Nigeria.
- Ogundiya, I.S (2009). Anti corruption reforms in Nigeria, Challenges and Failures in Assessment of Democratic Trend in Nigeria. New Delhi; Gyan Publishing House.
- Oluwu, O(2002), Local Government Administration and Challenges of Rural Development in Nigeria.
- Orekoya H. and Agbugba, A (2001) Local government, Corruption and Democracy in Nigeria.
- Rao. V.V. (2008) Bureaucratic Corruption in the, Public Service: A Case Study of the Nigeria Local Government.
- Salihi, H. (2001), Local Government as the Third Tier of Government in Nigeria.
- Shuhu, L. (2001). Corruption and Development in Africa; Challenges for Political and Economic Change. *Humanity and social science journal*,2(1): 01-07.
- Selznick, P. (1948). Foundation of Theory of Organization. *American Sociological Review*,13(1): 25-35
- Tanzi, V. (1995), “Corruption, Causes, Consequences and Agenda for Further Research”, IMF/World Bank, Finance and Development.
- Thusten, R. A. (2012). Corruption and Local Government Accountability in Nigeria Public Sector.
- UNDP (2004).Incentive Systems; Incentives Motivation and Development Performance. Conference Paper No.8 Working Draft.
- Weber, M.(1946). *Essays in Sociology*. Translated by H.H Gerth and C.W Mills New York; Oxford University Press.
- Wesley John (2014), The Impact of Primary Health Care Service Delivery in Adamawa State, Nigeria.

Performance Appraisal and Employee Performance: A Study of Selected Banks in Awka Anambra State, Nigeria

Dr. Emeka S. Arinze

Department of Business Administration
Chukwuemeka Odumegwu Ojukwu University Igbariam, Anambra State, Nigeria

Abstract:

The study examined the effect of performance appraisal process on employees' performance in the organization, using selected banks in Awka, Anambra State, Nigeria as the study area. Many organizations do not take the issue of employee performance appraisal serious instead, they see it as mere routine that is not used for any meaningful purpose. The study tries therefore to determine the effect of effective appraisal process on employees' performance by using some intervening variables such as appraisal criteria, feedback, frequency and rewards as the regressors. The study adopted descriptive survey method. Data analysis through the application of Pearson correlation and multiple regression presented some preliminary results which showed at F-Statistic is statistically significant with the value of 32.224 and that regression coefficient of 0.591 showed that 59.1 percent relationship exists between dependent and independent variables. Similarly, the coefficient of determination of 0.485 shows that 48.5 percent variation in the dependent variable can be explained by the independent variables. Major findings are that appraisal criteria, feedback, frequency and rewards have significant positive effect on employees' performance in the banking industry. The study concludes that employee performances appraisal as a means of identifying employees' strengths and weaknesses should be seen beyond routine exercise but a serious component of personnel /human resource management in the organization. It was recommended among others that rewards should be given to high performers in the organization after every appraisal exercise.

Keywords: Performance Appraisal, Employee Performance, Selected Banks and Anambra State

INTRODUCTION

1.1 Background to the Study

Performance appraisal is an essential tool of personnel management across different organizational culture, it is designed to identify employee's current level of job performance, identify his/her strengths and weaknesses, enable employees to improve their performance and provide the basis for reward or penalty in relation to the contribution or lack of it to corporate goals. Performance appraisal equally serves the purpose of identifying training and development needs, identifying potential performance, provide information for succession planning, validate selection process and training, encourage supervisory understanding of the subordinates (Shehu, 2008). This, perhaps is the reason

that performance appraisal has been identified as being at the heart of personnel management. As one of the most important functions of the human resource manager, it is concerned with identifying, measuring, influencing and developing job performance of the employees in the organization in relation to set norms and standards for a particular period of time in order to achieve set goals in the organization (Singh, Kochar and Yukseh, 2017).

Performance appraisal mechanism is one of the basic tools that make workers to be very effective and active at work. As a matter of fact, a good performance appraisal process can reveal the need for training, motivation, rewards, development and human relationship in the organization (Gichuhi, Abaja and Ochieng, 2012). It is about getting optimum use of available knowledge, skills and abilities in the workforce to optimize employees' productivity and give an organization the desired competitive advantage. The purpose of performance appraisal according to Gichuhi et al (2012), is to assess employees' performance as objectively as possible with a view to using the results in setting the direction for the individual performance development by bringing out both performance strengths and weaknesses and subsequently developing action plan to facilitate the desired development. Employee productivity centers on this development which is concerned with the accumulation of new capabilities within the organization. It is equally designed towards improvement in the managerial, administrative and decision-making capabilities and competencies of the employees for the overall growth of the organization. It further involves the acquisition of capabilities (technical, managerial, behavioural and administrative) that will enable a person to know the role he/she is expected to play at any time and even that which he/she is likely to render subsequently (Rao and Rao, 2013).

Performance appraisal provides a rational medium or instrument for measuring individual worker contribution to corporate goals achievement and success. It is a complex management function which demand for extra-maturity, fairness and objectivity is assessing individual worker's job performance based on explicit job related criteria. In the opinion of Nurse (2014), appraisal results provide vital information about a workers strength and weaknesses, training, needs and reward plans such as advancement, promotion, pay increase, demotion and work or performance improvement plans. It has equal probability of having a bad impact on the organization as well as employee performance. It is also known as a formal in which employees are told the employer's expectations. They are used to support decision making mechanism, including promotions, terminations, training and merit pay increases. It is an employer's way of telling employees what is expected of them in their respective jobs and how well they are meeting the expectations.

The role of performance appraisal has gone beyond a tool of assessing employee's performance only, it has rather become also a means of achieving desired behaviour and competent performance from the employees. It has equally become the most powerful single instrument for mobilizing employees in a sophisticated and well managed organization in order to achieve strategic goals (Singh et al, 2010). It is a universal phenomenon which serves as a basic element of effective work performance which is essential for effective management and evaluation of staff. It aims at improving the organizational performance as well as individual development. It is necessary for increasing the performance of the employees and the organization to check the progress towards desired goals (Gichuhi et al, 2012). There is hardly any program in the portfolio of personnel management that is essential to individuals and organizational growth than performance appraisal management. At it is, in dual employees and process that leads to productivity need to be evaluated against established goals or definite set of required conducts.

As Mayokun (2015) notes, effective performance appraisal is designed to perform two main functions namely; evaluative and development functions. An evaluative tool, it serves as a basis for rewarding employees for their performance levels. Reward in form of promotion or pay rise for good performance or sanction in form of demotion, dismissal or termination for bad performance. Appraisal, according to him, helps in the audit of management talents, to evaluate the quality and capabilities of the organization's present supply of human resource for the purpose replacement planning. On the other hand, as a developmental tool, performance appraisal facilitates the identification of individual's strengthened weaknesses. For instance, in job skills, job knowledge and other related fields of work that may result to poor performance so as to determine the suitable training and development programme needed to address such weaknesses or deficiencies in the employees. It equally motivates employees towards higher performance when the positive results are communicated to them. In the light of the above, the study examines the effect of performance appraisal process on employees' performance by looking at the effect of some specific factors such as appraisal criteria appraisal feedback, appraisal frequency and appraisal reward on employee performance.

1.2 Statement of the Problem

The main objective of any organization is to achieve set goals. In order to do this performance of the employees is of utmost importance. Therefore, objective appraisal of employees' performance to identify gaps and potentials and to establish grounds for reward and sanctions are quite necessary. Unfortunately, many organizations, especially those in the service industry where output per person are sometimes difficult to measure, have

subjectively carried out the appraisal process with the consequence of wrong results being realized from the exercise. In some cases too, the process of appraising the performance of employees is made difficult by the fact that the criteria for measuring performance for which an individual is responsible are often unclear and evaluations tend more often than not to be based not on measurements to actual performance but on the perceptions and judgements of an employee's immediate superior. Some of those vague and ambiguous as well as judgmental characteristics of performance appraisal in organizations are doing more harm than good to the exercise.

Furthermore, the intense competition in the global business environment which has been and is still being reinforced by the innovations in technology has left businesses struggling for the limited space. Consequently, only the organizations with efficient workforce can gain competitive advantage in the struggle. The satisfaction of employees is key. It can only be guaranteed through acceptable performance appraisal result. There have been instances where employees spend over five years on a particular position without promotion or advancement thereby promoting job dissatisfaction and consequently negative work attitudes in the organization.

Past studies in the area had concentrated on performance appraisal as a process of evaluating employees' performance in the organization without actually measuring the effect of some moderating variables such as appraisal criteria, feedback, frequency and rewards on the performance of employees. This study has been designed to close such obvious gap in addition to resolving the conflicting results that have emanated from different studies on effect of performance appraisal on employees performance/productivity.

1.3 Objectives of the Study

The main objective of this study is to examine the effect of performance appraisal on employee's performance in the organization, using selected banks in Awka, Anambra State, Nigeria as the study area. However, the specific objectives are to:

- (i) Determine the effect of appraisal criteria on employees' performance in the organization.
- (ii) Ascertain the effect of appraisal feedback on employees' performance in the organization.
- (iii) Examine the effect of appraisal frequency on employees' performance in the organization.

- (iv) Evaluate the effect of appraisal reward on employees' performance in the organization.

1.4 Research Questions

The following research questions were raised to guide the study:

- (i) What is the effect of appraisal criteria on employees' performance in the organization?
- (ii) What is the effect of appraisal feedback on employees' performance in the organization?
- (iii) How does appraisal frequency affect employees' performance in the organization?
- (iv) How does appraisal reward affect employees' performance in the organization?

1.5 Statement of Hypotheses

The following null hypotheses were formulated to guide the objectives and strengthen the analysis of the study:

- (i) Performance appraisal criteria does not have significant positive effect on employees' performance in the organization.
- (ii) Performance appraisal feedback does not have significant positive effect on employees' performance in the organization.
- (iii) Performance appraisal frequency does not have significant positive effect on employees' performance in the organization.
- (iv) Performance appraisal reward does not have significant positive effect on employees' performance in the organization.

1.6 Significance of the Study

The study has both theoretical and empirical significance. From the theoretical significance perspective, the study will enrich the existing stock of literature thereby expanding the frontiers of knowledge. From the empirical significance, the findings of the study will be of immense benefit to categories of people which includes the management of the organization, the employees, students/researchers and of course, the general public.

1. The Management: The management would be sufficiently enlightened on how to best manage the employee for optimum performance through appraisal results.
2. The Employees: The employees are the second category of people that will benefit from the study because they would be taught how to respond to appraisal feedback and other outcomes.
3. Students/Researcher: Students/researchers who might want to carry out further studies in the area would find the report very useful because it will serve as a good starting point.
4. The General Public: The general public will benefit from the improved services that will follow from the employees efficient performance.

1.7 Scope of the Study

The study covered the senior employees of some selected banks in Awka, Anambra State, Nigeria. The study examines the effects of performance appraisal on employees' performance by investigating the effect of appraisal criteria, feedback, frequency and reward on employees performance in the organization.

REVIEW OF THE RELATED LITERATURE

2.1 Conceptual Review

2.1.1 Performance Appraisal

In simple terms, performance appraisal may be defined as the assessment of an individual's performance measured against such factors as job knowledge, quality and quantity of output, initiative, leadership abilities, supervision, dependability, cooperation, judgement, versatility, health and the likes (Wurim, 2012). To Okeke and Egboh (2009), it can be referred to as a process of systematically evaluating performance and providing feedback on which performance adjustment can be made. Shen (2014) defines performance appraisal as the process of identifying, observing, measuring and developing human resource in an organization setting. In order for the appraisal system to be effective, the system needs to be accepted and supported by its employees. Ali, Mahdi and Maliha (012) define it as the measurement of work and its results by using the scale and index that we can measure the desired quantity and quality with precision and free of personal judgements and vague criteria of evaluation.

Moses (2013) defines performance appraisal as the process of evaluating the performance and qualifications of the employees in terms of the requirements of the job for which they were employed for the purpose of administration, including placement. Selection, and other actions which require preferential treatment among members of a group as distinguished

from actions in respect of their current performance as well as their potential for future development. Thus, performance appraisal has to do with the assessment of employee's performance in an organization with a view to determining strengths and weaknesses, performance gap and potential for development. Bolajo and Ekpu (2015) define performance appraisal as the formal appraisal of non-managerial workers at least once in a year and it is reported that this monitoring of employees is associated with shorter-tenure workers and workers who have greater influence over productivity. Certain human resource management practice were equally found to associate with increased use of performance appraisal and conversely for union density. In a related development, the United States Office for Personnel Management practices defines performance evaluation as all periodic written assessments of job performance measured against responsibilities, goals and/or tasks, specific duties assigned and agreed to as well as identification of strengths and weaknesses demonstrated by employee's potential and training or development needs (US/OPM, 1980 in Uwa, 2018). The most endearing aspect of this latest definition is that it conceives of performance evaluation as a regular and continuous exercise which the quality, quantity and level of performance and the various factors that influence performance are assessed and recorded. It also involves an evaluation of the growth potential of an individual, with a view to providing the organization with information that could lead to positive actions and also ensure that individuals are provided with necessary feedback for performance improvement, personal growth and job satisfaction.

2.1.2 Employee Performance

Performance entails meeting pre-determined and acceptable standards concerning a given task, while utilizing available resources efficiently and effectively within the changing environment (Ngwa, Adeleke, Agbaeze, Ghasi and Imhanrerialena, 2019). Aguinis (2009) opines that the definition of performance does not include the results of employees' behaviour, but only the behaviours themselves the behavioursexhibited in achieving the result are considered. Therefore employee's performance according to him, is all about behaviour or what employees do and not just about what they produce or outcomes of the work, he added. Anya, Umoh and Worlu (2017) posit that performance should be related to such factors as increasing profitability, improved service delivery or obtaining best results in the activities of an organization. The definitions offered above by various scholars testifies to the fact that at all levels, employees in an organization are the building blocks of the organization. As Noe (2006) notes, the most valuable/value-adding possessions (assets) available to any organization, business enterprise or firm of any shape are its workforce. The performance of the workforce is the driving force behind the survival

of any business undertaken. Furthermore, Noe (2006) stresses that well performing employees contribute significantly to the success of the organization.

2.2 Theoretical Framework

The theory considered appropriate for analyzing the phenomenon under investigation is the expectancy theory developed by Victor Vroom in 1964. The theory states that a person's motivation towards an action at any time is determined by an individual's perception that a certain type of action would lead to a specific outcome and his personal preference for this outcome. Expectancy is the probability that particular action will lead to a desired reward. Thus, if an individual has a particular goal, some behaviour must be produced in order to achieve that goal. He will weigh the likelihood that various behaviours will achieve the desired goals and if certain behaviour is expected to be more successful than others, that particular behaviour will be preferred by the individual (Vroom, 1964). Employees are motivated to put more effort so as to produce better results because of the expected reward.

Vroom contends that motivation is produced by the anticipated worth of an action to a person's perception of the probability that his goal would be achieved. The theory can be stated thus:

$$\text{Motivational Force} = \text{Valency} \times \text{Expectancy}$$

Expectancy is the perception that a particular outcome will occur as a result of certain behaviour or while valence is concerned with how much value an individual places on a specific outcome. Both must be present before a high level of motivation can occur (Ile, 1999). In its form, the theory is concerned more with choice behaviour of both management and the worker, which can lead to desired outcome of regards (Peretomode, 1991). According to Ejiofor (1984) in Muanya (2014), the theory states that motivation force which an employee exerts to do his job depends on both expectancy and valence.

2.3 Theoretical Exposition

Armstrong (2009) cited in Muanya (2014) observes that in the field of human resource management, performance evaluation is the foremost in trying to measure the performance and potential of the workers in any organization. He posits further that the purpose of measuring performance is not only to indicate whether things are not going according to plan but rather to also identify why things are going well where they are so that steps may be taken to build on successes achieved. The goals of performance and development of future work, performance goals and expectations. Egboh and Okeke (2009) posit that it is a process of systematically evaluating performance and providing feedback on which performance adjustment can be made. Cash (2013) opines that from the employee's point of view, the purpose of performance appraisal is in three folds; tell me what you want me

to do, help me to improve my performance and then reward me for doing well. He reiterates that performance appraisal is an important human resource function in the field of management which provides management with a systematic basis for effectively recognizing and evaluating the present and potential capabilities of human resource.

2.3.1 Performance Appraisal Criteria and Employee Performance

Shehu (2014) states in his book titled “Manpower Planning and Administration” that an effective appraisal system would specify what to measure in the appraisal form such as quality and quantity of output, service and requisite job behaviour, talents and attitudes in all unambiguous terms. Different jobs should have different performance measurement criteria. Caution is always exercised not to use one system of criteria for measuring performance of different professions and skills like in the civil service where APER form is used as a standard criterion to measure all job in the service whether applicable or not, assessments just have to be carried out, it does not make sense. At the end of the exercise, there are often no cohesive results with which judgement can actually be made about the employees’ performance. This, perhaps, is the reason that Cintron and Flaniken (2013) posit that for a performance appraisal system to be effective, there must be an organized training for the raters. The raters should be aware of the skills necessary for evaluation of employees’ performance. The training should be on goal setting, coaching employees, providing feedback to them. Sajuyigbe (2017) observes that ambiguous or vague criteria brings about distorted performance results which understate or overstate the performance of the appraisee and it is a situation which works against the purpose of the appraisal exercise. Therefore, the importance and usefulness of clearly defined performance appraisal criteria to the evaluation exercise cannot be overstated. As it is, criteria that are alien to the employees cannot adequately assess their performance on the job and the consequence of wrong appraisal is negative work behaviour from the employees which impacts negatively on productivity in the organization.

2.3.2 Performance Appraisal Feedback and Employee Performance

A very important condition in appraisal is that it provides clear performance-based feedback to the employees (CarollSchneier, 2002 in Gichuhi, Abaja and Ochieng, 2012). There is always a workflow which tracks feedback sessions. When a mistake is detected for instance, it immediately provides remedial steps to be taken to address the issue with minimal chances of loss to the organization. Providing an employee with feedback is widely recognized as a precautional measure that is very crucial in encouraging and enabling self-development which also is very instrumental to accomplishing success in the entire organization. It has equally been noted that effective performance appraisal feedback between employees and their supervisors is the key to successful organizational

productivity (Salmon and Podqursky, 2016). They reiterated that regular feedback, especially when the appraisal results are still fresh in mind, help employees focus their work activities. It is one of the ways the employees, the departments and the entire organization can achieve desired goals. Although, there have been situations where some managers intentionally holdback employees' feedback report/comments due to the fact that such organizations do not regard it as a policy in the organization. In some organizations, it is a serious misconduct to do so. Banker (2011) states that change in times has made it compulsory for manager/supervisors to desire more formalized feedback system given its potency in addressing employees' inefficiency. Managers have also realized that they need to tell their workers/subordinates when they have done well and when they have not done well also. In this instance, silence is not golden as in some cases.

Employee feedback improves efficiency and effectiveness and help in decision-making within the organization. The feedback directs the individual to the organization's mission and objectives. In the ideal situation, the employee receives information about how he/she is performing and where he/she could improve the performance to enhance productivity. Schraeder et al (2015) have suggested that performance feedback which serves as a way of knowing employees' strengths and weaknesses, should be made a compulsory component of human resource management. To Kin and Schriesheim (2012), employees' feedback system is highly recommended for employees' efficiency and improved performance on the job. Therefore, performance appraisal feedback is very important to the employee who is being appraised because it is only through such practice that the employee will know the areas he/she need to put more effort to perform up to expectations.

2.3.3 Frequency of Performance Appraisal and Employee Performance

Denisi (2006) observes that frequency of performance evaluation just like its feedback, is very crucial and that it can influence future performance of the employee in the organization. Frequency means the number of times the assessment is carried in an organization within a specified period of time. In some organizations, especially the public sector organizations, it is done annually hence it is called the annual performance evaluation report (APER). But in other organizations, particularly those in the private sector, the interval of appraisal could be less. It all depends on the choice of the organization and the management style that is operational in the organization. Butali and Njoroge (2017) note that shorter appraisal inter is better than the prolonged because of the critical importance of follow-up. To them, when appraisal is carried out in quick successions, it makes correction remain fresh in the minds of the employees thereby enhancing performance in the organization. They remarked that feedback is meant to communicate to the employees, their rating by their supervisors and for those who are

having issues with their performance to make the necessary adjustments that are required for improved performance. It implies then that another appraisal exercise would be conducted to ascertain whether there has been any improvement from the employee given his/her performance during the last exercise. In situations too, it is actually the appraisee and their line managers that agree on the date for next appraisal exercise. Therefore, frequency of appraisal is also very important in determining employees' performance in an organization because the more frequently it is done, the better improved the employees becomes in performance criteria.

2.3.4 Performance Appraisal Rewards and Employees' Performance

Onyije (2015) points out that reward system is the instrument used to increase employees' performance which seeks to attract and retain suitable employees, encourage good management, minimize tensions and conflicts as it deals with all forms of final returns, tangible services and mechanisms for good relationship. It is of a truth that industrial conflict is usually based on the fact that employees feel their benefits are being denied and as such compensation is to provide a good platform for equity and fairness. Employee reward system refers to programs set up by organizations to reward performance and motivate employees on individual and/or group levels. It is normally considered separately from salary; it can be monetary in nature or otherwise but it must have a cost to the organization. It is often used by firms as a tool for luring top employees in a competitive job market as well as in increasing employees' performance and productivity.

Mcbeath and Rands (1976) cited in Gichuhi, Abaja and Ochieng (2012), while discussing salary administration observe that equitable salary relationship depends on sound job classification, periodic salary survey of competitive levels, employee performance appraisal and effective salary planning. Randell (2019) reports that if good performance is observed from the result of an appraisal and got such an employee/employees rewarded, the chances are that such an impressive performance would be repeated in another period. Thus reward can be used to appreciate good performance or arouse interest to perform better. Therefore, tangible and intangible rewards enhance motivation when they are offered to people for completing their jobs on schedule or for attaining or exceeding specified performance standard. Rewards given for creativity encourages more creativity in other tasks and reward system are administered to enhance employee productivity. Finally, both extrinsic and intrinsic rewards can be used to encourage a performing employee to obtain more improve performance from him/her in the organization.

2.4 Empirical Review

In a study conducted by Osabiyen (2014), he investigated the effectiveness of performance in enhancing employees' performance. The study adopted descriptive survey design and found from the analysis of data that often time, managers allow bias factors such as race, ethnicity, appearance, sex and personal likeness or hatred to influence their rating of the employee thereby losing the essence of the appraisal exercise. It was concluded that ratings must be based on actual job performance only if the exercise is to achieve the purpose for which it is being carried out. In a related study, Ibrahim and Daniel (2019) did a study on the impact of performance appraisal on employee productivity in Nigeria Breweries PLC. The study used descriptive survey design and the result showed that objective and well planned appraisal process encourages high performance of the employees. The study concludes that training and consistent retraining are necessary in achieving high productivity from the employees and that those involved in the appraisal exercise should equally be trained regularly.

Chaponda (2014) investigated the effect of performance appraisal on employee motivation, using the slum-based non-governmental organization in Nairobi as the study area. The study adopted descriptive survey design. Findings suggest that determination of clearly defined appraisal criteria is key to a successful appraisal exercise and that good performance evaluation process motivates employees to higher performance. The study concludes that the manager's ability to address skills gap can have a significant impact on employees' productivity. Kairuki (2017) carried out a study on effect of performance appraisal on employees' performance in Barclay's Bank of Kenya. The study adopted survey design and the result indicate that effective reward system is associated with employees' enhanced performance in the organization. In a related study, Nadeem, Naveed, Zeeshan, Yumma and Qurat (2013) conducted a study on the impact of performance appraisal exercise on employees' performance in the organization. The study which was designed as a descriptive survey used a sample of 150 bank employees from Dera Ghazikhan District of Pakistan. The analysis presented strong positive correlation between employees' performance appraisal feedback and employees' performance in the organization. The study concludes that when an appraisal process is integrated into the company policies, employee performance would be enhanced. In a similar vein, Odhiambo (2015) investigated the effect of performance management practices on employees' productivity, using Schindler Ghana limited as the study area. The study made use of descriptive survey design and found from the analysis that when appraisal is done at a regular intervals and in quick succession as well as rewarding high performers accordingly, productivity per individual employees tend to increase substantially. The study concludes that employees want their performance and progress to be monitored regularly so that

rewards can be administered accordingly. Also, Akinyele (2010) investigated the impact of performance appraisal system on employees' productivity in the private universities in Nigeria, using Crawford University as the study area. The design for the study was descriptive survey and the result of the analysis showed that appraisal is the only tangible metric way of knowing the level of performance of the diverse members of the organization. Finally, Neelam, Israr, Shahid and Muhammed (2014) examined the impact of training and feedback mechanism on employee performance in United Bank Peshawar City Pakistan. Through the use of a descriptive survey design, the study found that feedback after the appraisal exercise, impacts significantly on employees' performance. It was concluded that training and feedback after the appraisal enables the employees to adjust their performance rate where necessary.

METHODOLOGY

3.1 Research Design

The study adopted descriptive survey design because it intends to generalize the sample result for the entire population of interest. Besides that, survey method is always preferred in studies of this nature where necessary data are not readily available. Therefore, primary data collected from sample survey becomes the best alternative (Obasi, 2000).

3.2 Area of the Study and Population

The study is conducted in AwkaAnambra State. In an attempt to determine the effect of performance appraisal on employees' performance in the service industry, few banks in Awka metropolitan were studied. The variables (independent) variables are appraisal criteria, appraisal feedback mechanism, appraisal frequency and reward system. The study made use of primary as well as secondary data in investigating the relationship between the variables mentioned above and the performance of the employees in the organizations. The population consisted of 1,973 senior employees of the selected banks in Awka. It is presumed that this category of employees would be able to discuss effectively all issues relating to the appraisal process and employees' performance.

3.3 Sample Size Determination and Sampling Technique

Sample size of the study was determined through the application of Taro Yameni's Statistical formula for determining sample size from a finite population. The procedure is as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

- n = Sample size to be determined
- N = Entire population of interest
- e = Error margin (0.05)
- 1 = Constant (unity)

Substituting the values in the formula, we have

$$n = \frac{1,973}{1 + 1973(0.05)^2}$$

$$n = 332.574799831$$

$$n = 333 \text{ (Nearest whole number)}$$

Therefore, the sample size for the study is 333.

With regard to sampling technique, systematic sampling technique was used in selecting the units of observation because of its attributes of random start and sampling interval which enables it to spread the sample evenly across the population.

3.4 Instrument for Data Collection and Reliability

An item structured instrument designed to reflect the options of strongly agree, agree, disagree, strongly disagree and undecided popularly referred to as the modified five (5) point Likert scale was used by the researcher to elicit information from the respondents across the banks. It was validated by the experts in the field in both face and content. The reliability test was conducted on it through the method of test re-test and the exercise returned coefficients of 0.80, 0.83, 0.73 and 0.90 (see Appendix II for details) for the four researcher questions respectively with an average coefficient of 0.815 thus indicating that the instrument is 82 percent reliable and it was consider very adequate.

3.5 Method of Data Collection and Analysis

The data were collected through direct questionnaire distribution approach. The approach afforded the researcher the opportunity to do explanations/clarifications on issues that are not quite clear. It also reduced the volume of non-response that often associate with surveys of this nature. Out of the 333 copies of the questionnaire that were distributed, 279 were completed and returned thus showing a response rate of 83.8 percent.

In term of method of analysis, quantitative method was used through summary statistics of percentages, inferential statistics of Pearson Correlation and Ordinary Least Squares (OLS) multiple regression analysis. All tests were carried out at 0.05 level of significance.

3.6 Specification of the Model

In trying to estimate the effect of performance appraisal process on employees' performance, the following functional relationship was constructed:

$$\text{Employee Performance} = f(\text{PAC}, \text{PAF}, \text{PAQ}, \text{PAR})(1)$$

Specifying equation (1) econometrically, we have

$$EP = \alpha_0 + \alpha_1 \text{PAC} + \alpha_2 \text{PAF} + \alpha_3 \text{PAQ} + \alpha_4 \text{PAR} + \mu_t \quad (2)$$

Where:

EP = Employee Performance

α_0 = the intercept

μ_t = Stochastic error margin or white noise

PAC = Performance appraisal criteria

PAF = Performance appraisal feedback

PAQ = Performance appraisal frequency

PAR = Performance appraisal rewards

The expected signs of the coefficients or *a priori* are:

$$\alpha_1 > 0, \alpha_2 > 0, \alpha_3 > 0 \text{ and } \alpha_4 > 0$$

$$\alpha_i's > 0$$

Where α_i 's are the coefficients of the variables.

From the above specifications, employee performance is the dependent variable while the variable of appraisal process are the independent variables.

DATA PRESENTATION AND ANALYSIS

4.1 Demographic Features of the Respondents

We analyzed the demographic characteristics of the respondents in this section with the purpose of establishing their suitability in discussing all issues relating to appraisal exercise and their effect on employees performance within the context of this study. The personal data being analyzed includes: gender of the respondents, age bracket, educational qualification and organizational tenure.

Table 4.1: Demographic Features of the Respondents

S/N	Demographic Features	Response	Frequency	Percentage of Total
1.	Gender:	Male	156	56.0
		Female	123	44.0
		Total	279	100.0
2.	Age bracket:	18-27	42	15.0
		28-37	126	45.3
		38-47	86	30.7
		48-57	20	7.1

	58 & above	5	1.0
	Total	279	100.0
3. Educational Qualification:			
	OND/NCE	45	16.1
	HND/First degree	181	64.9
	Masters degree	50	17.9
	Ph.D	3	1.1
	Total	279	100.0
4. Organizational Tenure (in years):			
	Below 5 years	39	14.0
	5 – 10 years	71	25.4
	11 – 15 years	89	31.4
	16 and above years	80	29.2
	Total	279	100.0

Source: Field Survey, 2021

The analysis of the respondents personal data shows that 156 representing 56 percent of the sample are male respondents. It shows also that age bracket of 28 to 47 years constitutes 212 respondents and it represents 76 percent of the sample. In terms of educational qualification, the analysis shows that 181 of them representing 64.9 percent of the entire sample have qualifications of Higher National Diploma, First degree or their equivalence. It is also interesting to note that up to 240 of them representing 86 percent of the sample have worked in the banking sector for upward of five (5) years and above. The implication of the result is that the respondents are suitable for the intended discussions judging from their educational background and organizational tenure.

Table 4.2 Correlation Analysis

		Correlation Matrix				
Variables		Employee Performance	Performance Appraisal Criteria	Performance Appraisal Feedback	Performance Appraisal Frequency	Performance Appraisal Rewards
Employee Performance	Pearson	1	.495**	.567**	.511**	.703**
	Correlation					
	Sig.(2-tailed)		.000	.000	.000	.000
	N	279	279	279	279	279
Performance Appraisal Criteria	Pearson	.495**	1	.401*	.307*	.209*
	Correlation					
	Sig.(2-tailed)	.000		.000	.013	.001
	N	279	279	279	279	279

Performance Appraisal Feedback	Pearson Correlation	.567**	.401*	1	.106*	.508**
	Sig.(2-tailed)	.000	.000		.000	.000
	N	279	279	279	279	279
Performance Appraisal Frequency	Pearson Correlation	.511**	.307*	.106*	1	.323*
	Sig.(2-tailed)	.000	.013	.005		.000
	N	279	279	279	279	279
Performance Appraisal Rewards	Pearson Correlation	.703**	.209*	.509**	.323*	1
	Sig.(2-tailed)	.000	.001	.000	.000	
	N	279	279	279	279	279

**.: Correlation is significant at 0.05 level (2-tailed).

*.: Correlation is Significant at 0.01 Level (2-tailed).

Table 4.2 presents the correlation matrix of employee performance, appraisal criteria, appraisal feedback, appraisal frequency and appraisal rewards. The analysis shows that positive and fairly strong relations exist between and among variables. As could be seen there are no multicollinearity or orthogonal relationships and as such multiple regression analysis was further performed on the data.

Table 4.3: Model Summary of Dependent and Independent Variables
ANOVA^b

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio	Sig.
Regression	4	189.725	47.431	32.244	.000 ^a
Residual	95	145.657	1.471	-	
Total	99	335.362			

a. Predictor: (constant), appraisal criteria, appraisal feedback, appraisal frequency and appraisal rewards

b. Dependent variable: Employee Performance

The result of ANOVA presented in Table 4.3 shows F-Statistic is 32.244 and it is statistically significant because $P \leq 0.05$ is greater than 0.000 significance level.

Table 4.4: Summary of Regression Result

Model	R	R ²	Adjusted R Square	Standard Error of the Estimate	Durbin Watson
I	0.591 ^a	0.485	0.411	0.39253	1.872

a. Predictor: (constant), appraisal criteria, appraisal feedback, appraisal frequency and appraisal rewards

Regression results presented in Table 4.4 shows that regression coefficient represented by 'R' with the value of 0.591 is an indication that 59.1 percent relationship exists between

dependent and independent variables. In the same vein, the table shows also that coefficient of determination represented by 'R²' with the value of 0.485 means that 48.5 percent variation in the dependent variable can be explained by the regressors. The Durbin Watson Statistic of 1.872 means that is no serial autocorrelation in the model.

Table 4.5: Summary of Coefficients of Regression, t-value and Probability Levels

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	β	Std. Error	Beta		
1 (Constant)	.173	.209	-	-.750	.372
Appraisal Criteria	.516	.053	.42	10.103	.000
Appraisal Feedback	.409	.067	.581	4.521	.000
Appraisal Frequency	.528	.061	.493	3.256	.001
Appraisal rewards	.604	.058	.609	2.748	.020

a. Dependent Variable: Employee Performance

4.2 Test of Hypotheses

In order to give interpretation to results presented in Table 4.5, the hypotheses formulated for the study were restated and tested at 0.05 level of significance in this section of the analysis as follows:

- H₀: Performance appraisal criteria does not have significant positive effect on employees' performance in the organization.

H₁: Performance appraisal criteria have significant positive effect on employees' performance in the organization.
- H₀: Performance appraisal feedback does not have significant positive effect on employees performance in the organization.

H₁: Performance appraisal feedback have significant positive effect on employees' performance in the organization.
- H₀: Performance appraisal frequency does not have significant positive effect on employees' performance in the organization.

H₁: Performance appraisal frequency have significant positive effect on employees' performance in the organization.
- H₀: Performance appraisal reward does not have significant positive effect on employees' performance in the organization.

H₁: Performance appraisal rewards have significant positive effect on employees' performance in the organization.

Interpretation of Regression Coefficients

The coefficient of performance appraisal criteria represented by α_1 as presented in Table 4.5 is 0.422 and it means that when unambiguous appraisal criteria are increased by one unit employees' performance will increase by 42.2 percent if other variables in the model are held constant. With t-value of 10.103 and the corresponding significance value of $P_{0.000}$, the coefficient is significant because $P_{0.000}$ is less than $P \leq 0.05$. Consequently, the null hypothesis was rejected while the alternative which suggests that performance appraisal criteria have significant positive effect on employees performance was accepted.

In the same vein, the coefficient of performance appraisal feedback represented by α_2 have a value of 0.581 and it means that when appraisal feedback is increased by one unit, employees' performance will increase by 58.1 percent when other factors in the model are not allowed to vary. With a t-value of 4.521 and corresponding significance value of 0.000, the coefficient is significant because $P \leq 0.05$ is greater than 0.000 probability level. Therefore the null hypothesis was rejected while the alternative which suggests that performance appraisal feedback have significant positive effect on employee performance was accepted.

Similarly, the coefficient performance appraisal frequency represented by α_3 with a value of 0.493 means that when appraisal frequency increase by one unit, employees' performance will increase by 49.3 percent if other variables in the model are held constant. With t-value of 3.256 and corresponding probability of 0.001, the coefficient is significant because $P \leq 0.05$ is greater than 0.001 significance level. Consequently, the null hypothesis was rejected while the alternative which suggests that performance appraisal frequency have significant positive effect on employees' performance in the organization was accepted.

Finally, the coefficient of performance appraisal reward represented by α_4 with the value of 0.609 means that when appraisal rewards are increased by one unit, employees' performance will increase by 60.9 percent if other variables in the model are held constant. The t-value of 2.748 and the corresponding significance level of 0.020 shows that the coefficient is significant because 0.020 is less than 0.05. On the basis of this, the null hypothesis was rejected while the alternative which says that performance appraisal rewards have significant positive effect on employees' performance was accepted.

4.3 Discussion of Research Findings

The result of the first test of hypothesis shows that unambiguous appraisal criteria have significant positive effect on employees' performance in the organization. It is a finding which is in line with that of Chaponda (2014) when he found from his study that the determination of clearly defined appraisal criteria is key to a successful appraisal exercise and consequently its impact on employees' performance. Just like Shehu (2014) has noted, a good appraisal system will start by clearly specifying what to measure in the exercise. Appraisal form would clearly state the elements/variables to be measured such as quality and quantity of work, service and requisite job behaviour, talent and skills level. An ambiguous/vague criteria of measurement does not give the true picture of the employees' performance and at the end, the employees are left very unsatisfied with the appraisal process thereby hampering performance.

The result of the second test of hypothesis showed that performance appraisal feedback has significant positive effect on employees' performance in the organization. The result supports the finding of Nadeem et al (2013) when they found from their study that strong and positive correlation exists between performance appraisal feedback and employees' performance in the organizations based in Pakistan. Appraisal feedback improves efficiency and effectiveness as well as helps in decision-making within the organization. Feedback often redirects the employees to the organization's mission and objectives. It points out to the employee the areas that should be worked on in the employees' skill level and performance level. It is a mechanism that exposes employees' performance gap. It enables the employee to make the need adjustment to be able to attain the expected performance level in the organization.

The result of the third test of hypothesis showed that performance appraisal frequency has significant positive effect on employees' performance. Again, the result is in line with that of Odhiambo (2015) when he found from his study that when appraisal is carried out at a regular interval and quick succession as well as rewarding performance accordingly productivity per individual employee tend to increase substantially. Employees want their progress and performance monitored and measured regularly so that appropriate rewards can be administered accordingly to arouse their interest and motivate them to higher performance. Therefore, the number of times an appraisal or performance evaluation exercise is carried an organization within a specified period, matters a lot to the employees, especially to the high performing ones. Frequency of appraisal and employees' performance are positively and strongly related.

The result of the fourth test of hypothesis showed that appraisal rewards have significant positive effect on employees' performance in the organizations. The result supports the work of Karuiki (2019) when he found that effective appraisal reward system is associated with employees' enhanced performance in the organizations when an appraisal exercise identifies an employee as a high performer on the assigned task and the organization goes ahead to recognize the employee with adequate rewards whether tangible or intangible, such an employee always, sees reason to do more. Reward plays a vital role in employees' motivation but many organization fails to recognize the potency of rewards in enlisting the cooperation of the workers to bring out their inner ability to work for the organization. Organizations are encouraged to reward their employees' performance to received more enhanced performance from them.

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Summary of Findings

Preliminary results of the study show that F-Statistic with a value of 3.244 is statistically significant, valid and fit for predictions because 0.000 probability level is less than 0.05. The result showed equally that the regression coefficient represented by 'R' with a value of 0.591 indicates that 59.1 percent relationship exists between dependent and independent variables. Similarly, the coefficient of determination represented by 'R²' with a value of 0.485 showed that 48.5 percent variations in the dependent variable (employee performance can be explained by the independent variables (regressors). However, the values of R and R² may have been affected by non-inclusion of some other variables that are supposed to be in the model. Nevertheless, it is sufficient to observe that a well-designed performance appraisal process can be effective in enhancing employees' performance in the service industry such as the banking sector. The rest of the results are as summarized below:

1. Performance appraisal criteria have significant positive effect on employees' performance in the organization.
2. Performance appraisal feedback mechanism have significant positive effect on employees' performance in the organization.
3. Performance appraisal frequency have significant positive effect on employees' performance in the organization.
4. Performance appraisal rewards system have significant positive effect on employees' performance in the organization.

5.2 Conclusion

The study examined the effect of performance appraisal on employees' performance in the service industry using selected banks in Awka, Anambra State as the study area. Some variables that we identified as the intervening variables were appraisal criteria, appraisal feedback mechanism, appraisal frequency and appraisal rewards system. Each of the variables were found to have significant positive effect on employees' performance in the organization. Identification of individual's volume of work and consequently performance are often not quite easy in the service industry where outputs are not measure per unit. However, it will not be a problem identifying an employee that is committed to the realization of the set goals of the organization for adequate rewards to be administered on such an employee.

5.3 Recommendations

Performance appraisal process has been identified as a very critical component of human resource management. In the light of the above, the following recommendations were made to strengthen the practice of performance appraisal in organizations, especially in service industry.

1. Performance appraisal criteria should be made very unambiguous so that the appraisees would be clear of what the appraisal needs so that employees can be appraised accordingly.
2. Appraisal feedback is very important to the appraisees because it is the most effective way of communicating the appraisal results to the employees. Appraisal feedback should always be given to the appraisees because it enables correction to be done for better performance.
3. Appraisal frequency is important because the more it is carried out at regular intervals the faster the employees are able to adjust for better performance. Therefore, we recommend that appraisals should be done at regular intervals to enable employees perform optimally in their respective organizations.
4. When appraisal result is favourable, the employees expect that their efforts should be rewarded. To encourage employees to do more, the issue of performance reward should be carried out always to encourage the employees to put in more effort at their duty posts.

REFERENCES

Aguinis, H. (2009). *Performance management*. Upper Saddle River, N.J.: Pearson Prentice Hall.

- Akinyele, S.T. (2010). Performance appraisal systems and employee performance in private universities in Nigeria: a study of Grawford University, Igbesa, Nigeria.
- Ali, S.B., Mahdi, A. and Malihe, J. (2012). The effect of employees' performance appraisal procedure on their intrinsic motivation. *International Journal of Academic Research in Business and Social Sciences*, 2(12), 161-168.
- Any, A., Umoh, R. and Worlu, S. (2017). Human resource planning and organizational performance in oil and gas firms in Port Harcourt. *International Journal of Advanced Research in Social and Management Sciences*, 3(9): 110-129.
- Armstrong, M.A. (2009). A handbook of human resource management practice, 9th edition. In Muanya, C. (ed). The impact of performance on workers productivity in tertiary institution: a study of Federal Polytechnic, Oko. Master Degree Thesis in Public Administration Department, ChukwuemekaOdumegwuOjukwu University, Igbariam Campus.
- Banker, R.D. (2011). An empirical analysis of improvements following the implementation of a performance-based compensation plan. *Journal of Accounting and Economics*, 30(2): 315-350.
- Butali, P. and Njoroge, D. (2017). Effect of performance appraisal on organizational performance. *International Journal of Science and Research (IJSR)*, 7(9): 685-690.
- Cash, B. (2013). *Human resource management handbook*. Harvard Business School Review, May/June, Vol. 3.
- Chaponda, N.C. (2014). The effect of performance appraisal on employee motivation: a survey of slum-based non-governmental organizations in Nairobi. Thesis in United States International University, Africa.
- Cintron, R. and Flanikan, F. (2013). Performance appraisal: a supervision or leadership tool? *International Journal of Business and Social Sciences*, 2(17): 29-37.
- Egboh, E.A. and Okeke, I.M. (2009). *Foundations of personnel management in Nigeria*. Enugu: Bismark Publications.
- Gichhi, A.W., Abaja, P.O. and Ochieng, I. (2012). Effect of performance appraisal on employee productivity: a case study of supermarkets in Nakuru Town, Kenya. *Asian Journal of Business and Management Science*, 2(11): 42-58.

- Ibrahim, A.U. and Daniel, C.O. (2019). Impact of performance appraisal on employee productivity in Nigeria Breweries PLC. *The International Journal of Business and Management*, 7(5): 206-211.
- McBeath, G. and Rands, D.N. (1976). Salary administration, business books. Gichuhi, A.W., Abaja, P.O. and Ochieng, I. (eds.). Effect of performance appraisal on employee productivity: a study of supermarkets in Nakuru Town, Kenya. *Asian Journal of Business and Management Sciences*, 2(11): 42-58.
- Moses, M. (2013). *Analyzing performance problems or you really oughtawanna*, Second Edition. Published by Pitman Management and Training of Belmont, C.A.
- Muanya, C. (2014). The impact of performance management on workers' productivity in tertiary institutions: a study of the Federal Polytechnic, Oko. Unpublished M.Sc Thesis, ChukwuemekaOdumegwuOjukwu University, Igbariam Campus.
- Nadeem, I., Naveed, A., Zeeshan, H., Yamma, B. and Qurat, U. (2013). Impact of performance appraisal on employees' performance involving the moderating role of motivation. *Arabian Journal of Business and Management Review (OMAN Chapter)*, 3(1): 37-36.
- Neelam, J., Israr, K.Y., Shahid, J. and Muhammad H. (2014). The impact of training and development on employee performance and productivity in United Bank Limited, Peshawar City, KPK, Pakistan. *International Journal of Academic Research in Business and Social Sciences*, 4(4): 88-98.
- Ngwa, W.T., Adeleke, B.S., Agbaeze, E.K., Ghasi, N.C. and Imhanrenialena, B.O. (2019). Effect of reward system on employees' performance among selected manufacturing firms in the Litoral Region of Cameroon. *Academy of Strategic Management Journal*, 18(3): 1-16.
- Noe, R.A. (2006). Employee training and development, 4th ed. London: McGraw-Hill Irwin.
- Nurse, L. (2014). Problems with performance appraisal systems. *Journal of Managerial Psychology*, 19(5): 256-541.
- Odhiambo, E.O. (2015). The effect of performance management practices on employee productivity: a study of Schindler Ltd. A Thesis submitted to United States International University, Africa, Fall, 2015

- Onyije, O.C. (2015). Effect of performance appraisal on employee productivity in a Nigeria University. *Journal of Economics and Business Research*, 21(2): 65-81.
- Sajuyigbe, A.S. (2017). Impact of performance appraisal on employee performance in Nigeria telecommunication industry: a study of MTN, Nigeria. *International Journal of Economics and Business Management*, 3(1): 80-90.
- Schraeder, M., Becton, J. and Portis, R. (2009). A critical examination of performance appraisals. *The Journal of Quality and Participation*, 21(1): 20-25.
- Shehu, M. (2014). The impact of compensation and rewards system. *The Journal of Public Personnel Management*, 27(2): 223-230.
- Wurim, B.P. (2012). Talent management and employee productivity in public sector organizations of Nigeria. *Journal of Management and Corporate Governance*, 4(2): 251-269.

Appendix II

Reliability Test for the Instrument

The reliability test was carried out through the application of Spearman rank order correlation coefficient. The estimation procedure is as shown below:

$$r = 1 - \frac{6 \sum d^2}{n(n^2 - 1)}$$

Where:

- r = the coefficients to be determined
n = Number of response options
d = difference in rank order
1 and 6 = Constants

The value of the coefficient ranges from -1 to +1

Reliability Estimation for Research Question I

Response Option	Results of 1 st responses	Results of 2 nd responses (y)	Rx	Ry	Rx – Ry (d)	d ²
Strongly	5	6	2	1	1	1
Agree	7	5	1	2	-1	1
Disagree	4	3	3	4	-1	1
Strongly disagree	3	4	4	3	1	1
Undecided	1	2	5	5	0	0
Total	20	20				4

$$r - 1 = \frac{6(4)}{5(5^2 - 1)} = 0.80$$

Reliability Estimation for Research Question II

Response Option	Results of 1 st responses	Results of 2 nd responses (y)	Rx	Ry	Rx – Ry (d)	d ²
Strongly	6	7	2	1	1	1
Agree	7	5	1	2.5	-1.5	2.25
Disagree	4	5	3	2.5	0.5	0.25
Strongly disagree	2	2	4	4	0	0
Undecided	1	1	5	5	0	0
Total	20	20				3.5

$$r - 1 = \frac{6(3.5)}{5(5^2 - 1)} = 0.83$$

Reliability Estimation for Research Question III

Response Option	Results of 1 st responses	Results of 2 nd responses (y)	Rx	Ry	Rx – Ry (d)	d ²
Strongly	7	5	1	2	-1	1
Agree	5	6	2	1	1	1
Disagree	4	3	3	4	-1	1
Strongly disagree	2	4	4.5	3	1.5	2.25
Undecided	2	2	4.5	5	0.5	0.25
Total	20	20				5.5

$$r - 1 = \frac{6(5.5)}{5(5^2 - 1)} = 0.73$$

Reliability Estimation for Research Question IV

Response Option	Results of 1 st responses	Results of 2 nd responses (y)	Rx	Ry	Rx – Ry (d)	d ²
Strongly	7	6	1	1	0	0
Agree	6	5	2	2	0	0
Disagree	4	3	3	4	1	1
Strongly disagree	2	4	4	3	1	1
Undecided	1	2	5	5	0	0
Total	20	20				2

$$r - 1 = \frac{6(2)}{5(5^2 - 1)} = 0.90$$

Effect of Insurgency on Socio Economic Activities in Borno State

Babagana Mohammed

Department of Public Administration, School of Management
Ramat Polytechnic Maiduguri | Email: mohammedbabagana7@gmail.com

Abstract: *The study examined the effects of insurgency on socio economic development in the selected local government areas of Borno state. It concentrates on indicator such as means of livelihood, education and transportation. Frustration aggression theory was adopted as a theoretical guide for the study. By the way of methodology, the researcher uses survey method of data collection through the instrument of questionnaire administered to the target respondents. The sample size of the study is (800) administered as questionnaire to the respondents. 697 were returned as valid which was used for the analysis. The sampling technique is simple random. From the analysis, the result showed that the activities of insurgents has affected the means of livelihood, education and transportation. Based on the findings of this study, Government should intensify tied security that will reduce the attacks and risks on the high ways by the insurgents to which it will enhance facilitation of socio economic activities.*

Keywords: *Education, Insurgency, livelihood, & Socio Economic*

INTRODUCTION

The menace of insurgency has been existing throughout history. It has earlier started in the nineteenth century which occur between Percia and Rome (Brice, 2003). In the Middle East, a breakthrough reaction against Israeli domination by Palestine and perceived injustice as well as the over bearing presence of the United States in the region. The consequent of the September 11, 2001 attacks on the US and others across the world have increased the tempo of insurgency across the world moving from the Middle East to North Africa called the Arc of Instability. These has pave the way for Insurgents groups such as; the Al-Qaeda; Al-Shabab; ISIS; Taliban that engaged in unsavory activities such as: kidnapping of innocent people as hostages; suicide bombing; incessant shooting of victims at close range; throat slitting and nocturnal attacks (Taiwo, 2016). The majority victims are predominantly the most vulnerable of the society-children and women many of whom have been orphaned and widowed. These pose great challenge to socio economic development as it relates to loss in the means of livelihood of populace as well as the; destructions of teaching and structures and facilities which rendered educational goal defeated and which affects the socio economic development which thrives in situations where socio-economic

exclusion, mal-administration, marginalization of the majority by a privileged few, oppression globally.

In the recent past, countries of Africa have witness numerous discontent and disenchantment among the various communities because of the inability or refusal of successive governments to resolve grievances arising from the state's unresponsiveness and insensitivity to the people's plight over long periods (Shehu, 2009). This generates despair and frustration in which leaders capitalize on to organize acts of defiance or incipient lawlessness. Activities of the insurgent groups like the Al-Qaeda, Al-Shabab, Islamic Salvation Front, the Central Africa Republic's Seleka coalition, the Tuareg rebels in Mali, Somali pirates, National Liberation Force in Burundi, Congolese Revolutionary Forces (DR Congo), Forces for the Liberation of Rwanda, West Sid Boys (Sierra Leone) the Lord's Resistance Army (Uganda) and Movement for the Emancipation of the Niger Delta (MEND) are the clear instances explaining how insurgency affect the socio economic development of most of this affected nations (Fafowora, 2012). These resulted in countless number of death and injuries, psychological stress and loss of means of livelihood. Africa had now become the theater of war and much more favorable for the insurgent activities to rein in countries like Sudan, Somalia, Burundi, Rwanda, Kenya, Algeria, Morocco, Tchad, Mali and Nigeria is no exception (Marc-Antoine 2014). The primary insurgents groups primary aims has in most cases to do with ethnicity; some religious; while others can be traced to political ideology resulting to The destruction of homes, community structures, wells, food production/crops, livestock, personal assets combined with restricted access to humanitarian aid and continuing violence, loss of thousands of lives and properties; as well as rendering refugees and internally displace persons. However in Nigeria, history reveals that insurgency is not entirely new, the genesis of insurgency can be traced to the movement to liberate the Niger Delta person headed by major Isaac Jasper Adako Boro, who is from Ijaw ethnic background from Niger Delta region of the nation. He was the first person to declare the Republic of Niger Delta (Muzan, 2014). The July 6, 1967 civil war was more of ethno-religious conflict and socio economic golf over the control of economic resources. Mr. Uwanrzurike's Movement for the Actualization of the Sovereign State of Biafra (MASSOB) which led to the upgrade of Biafran national flag and also the introduction of their local currency note as legal tender (Muzan, 2014). In the late 1970s and 1980s, there were intra-religious campaign in the northern Nigeria between Maitatsine sects let by Sheikh Muhammadu Maruwa, the Jos indigene/settler crisis, the Southern Kaduna-Fulani cattle rustlers crisis, Offa-Erinle communal dispute in Kwara State, Benue-Fulani herdsmen crisis, Warri in Delta state including control of territory, ethnic hegemony and political, economic, socio-cultural as well as religious which has long gestation period.

Meanwhile, the desolation and destruction of human lives and properties by the insurgents group (Boko haram) through it indiscriminate activities such as kidnapping of innocent citizens; suicide bombing; destructions of building structures in schools, market places and places of worship, residents; attacks on highways; incessant shooting of victims at close range, bombing of private, public, religious and government properties and throat slitting has resulted in fear, anxiety, trauma,

emotion and psychological disturbances which lead to shutting down most of the activities that will contribute to socio economic development adversely affects the socio economic development of Maiduguri metropolitan council, Borno state. The dangerous nature of insurgents attacks has it impact on student education by instilling fear and anxiety; and thereby rendering the children not to develop interest in joining school; and some drop out of the school. It also affects the schools calendar through it unwanted activities thereby created fear, anxiety, trauma, emotion and psychological disturbances which lead to shutting down school for some certain period in their studies and lack of certainty of life. It is against this background that the study will assess the effect of insurgency on socio economic activities in Borno state.

Statement of the Problem

The threat and carnage caused by Boko haram insurgents through it unsavory and indiscriminate acts ranging from kidnapping of innocent citizens; suicide bombing; destructions of building structures in schools, market places and places of worship, residents; attacks on highways; incessant shooting of victims at close range and throat slitting has resulted in making people homeless, children and women to becoming orphans and widows. These have serious implication on socio economic activities of Maiduguri metropolitan council, Borno state. However, despites the efforts made by Government such as public enlightenment campaign against violence and conflict; deploying of troops to the affected areas; and Amnesty given by the government insurgents, the problem still persists. This problem adversely impacted on socio economic activities as it relates to loss of means of livelihood, education and transportation in Maiduguri metropolitan council, Borno state. It is in the light of the identified problem that the study will assess the impact of insurgency on socio economic activities in the state, especially, in Maiduguri metropolitan council, Borno State.

Although, multitude studies by different authorities have been conducted as regard the issue of insurgency. Othman, Sule & Singh (2015) on effects of Boko haram insurgency on business entrepreneurship environment in Nigeria. The researcher based his study by the utilization of secondary data and structural violence theory was adopted to guide the study. The study reveals that, business and entrepreneurship have been affected by the deadly activities of the Boko haram insurgency. Emmanuelar (2015) study insurgency and humanitarian crises in Nigeria. The study was guided by fragility theory, survey method involving the use of questionnaire and in- depth interview was utilize. The finding of the study reveals that, there is a significant relationship between Boko haram insurgency and humanitarian crises, Shuaibu, Saleh & Shehu (2015) conducted a study titled “effects of Boko haram insurgency on Nigerian national security. The study isolates poverty theory as a guide, The findings of the study reveals that, the Boko haram insurgent has really made effective security a challenging task to provide for the nation. & Abdurashed (2015) conducted a study on effects of Boko haram insurgency on universal basic education in Borno state. Lev vygotsky’s socio constructivist theory was adopts as a guide as well as survey and the use of secondary data was utilized as a methodology. In his study, The findings reveals that majority of schools have been closed indefinitely while most basic school teachers

working in the affected areas had escaped death during series of attacks on their communities. The studies previously conducted are limited to assess its Impact on loss of means of livelihood, education and transportation which serve as the gap that this study will want to fill in. Therefore, it is against this background that this study will assess the effect of insurgency on socio economic activities in Borno State.

Objectives of the Study

The main objective of this study will assess the effect of insurgency on socio economic activities in Borno state. While, the specific objectives are to:

- i. examine the effect of insurgency on means of livelihood;
- ii. identify the effect of insurgency on Education; and
- iii. assess the effect of insurgency on transportation.

Concept of Insurgency

There are divergent approaches to conceptualizing insurgency. According to Stillman (2013), insurgency is an instrument, design for the attainment of some political, religious, or ideological goal. Paust (2011), views insurgency as a purposive use of violence or the threat of violence by the precipitators against an instrumental target in order to communicate to a primary target a threat of future violence so as to coerce the primary target into behavior or attitudes through intense fear or anxiety in connection with a demanded power outcome. Metz (2014), sees Insurgency as a strategy used by groups which cannot realize their political aims through conventional means of seizure of power. These strategy used is characterized by continued, asymmetric violence, ambiguity, the use of complex terrain such as jungles, mountains, urban areas; psychological warfare, and political mobilization which are designed to protect the insurgents and eventually affect the balance of power in their favor. Gompert & Gordon (2012) sees insurgency as an instrument which seeks to overthrow an existing order with one that is commensurate with their political, economic, ideological or religious goals. This implies that insurgency is an activities of a faceless group intended to take over power from an existing government by replacing it with it political, economic, ideological and religious inclination.

In the same light, Şehirli, (2010), observes insurgency as any kind of act done by one or more persons belonging to an organization with the aim of changing the characteristics of the Republic as specified in the Constitution, its political, legal, social, secular and economic system, damaging the indivisible unity of the State with its territory and Nation, endangering the existence of the Turkish State and Republic, weakening or destroying or seizing the authority of the State, eliminating fundamental rights and freedoms, or damaging the internal and external security of the State, public order or general health by means of pressure, force and violence, terror, intimidation, oppression or threat. Mullins, (2017) sees insurgency as "the unlawful use or threatened use of force or violence by an individual or an organized group against property or even people with the intention of intimidating societies or governments, often for achieving certain ideological, economical, and political reasons".

Furthermore, Jones & Smith (2015), views insurgency as a political-military campaign by non state actors who seek to overthrow a government or secede from a country through the use of unconventional and sometimes conventional- military strategies and tactics. From the studies reviewed, conclusions has been drone from the findings of scholars. Paust (2011), Jones & Smith (2015) and Gompert and Gordon (2018) are conformity, who view insurgency as an attempt applied through violent means to undermine the state in various ways ranging from carving a local criminal niche in society to total overthrow of state. While Stillman (2013), and Şehirli, (2010) view goes contrary to the opinion of Paust (2011), Jones & Smith (2015) and Gompert and Gordon (2018) who observed insurgency not as a protracted violent conflict but an instrument, design for the attainment of some ideology with or without violence. The study goes in conformity with the view of Paust (2011), Jones & Smith (2015) and Gompert and Gordon (2018) who define insurgency as an attempt applied through violent means to acquire socio political and economic power. Therefore, within the context of this study, insurgency can be seen as the activities of Boko haram such as killings, suicide bombing, destruction of educational infrastructure, kidnapping of innocent people which has an effect on education especially in the areas of students enrolment and students' academic performance.

Concept of Boko Haram

Studies previously conducted have established their findings regarding the concept of Boko haram. According to Alexander (2015), Boko haram is a terrorist group that earlier applies violent attack against security forces, politicians. However, at later time the groups attack changes to public places such as mosque, churches, schools, markets and any public gathering. Abugu (2009) contends that, Boko haram sect are people with little or nothing to or for, who have no hope for, or faith in a better tomorrow, who feel shortchanged by life are almost always likely to offer themselves for use for nefarious purposes by persons who often masquerade as religious men but who only hide under religion to exploit others 'weaknesses for personal aggrandizement. He maintained that, the sect is not actually rebelling against western influence in their lives as much as they are rebelling against the system that made it difficult for them to have access to the opportunities for a better life inherent in western education, a system that drove them to the periphery of life while a few of their compatriots sometimes even from the same neighborhood, lived in unimaginable privilege. Adetiloye (2014), establish that Boko haram sect violently attacked churches, mosques, schools, police station, public owned facilities and any public gathering. In his study, he concluded that the sect is among the most dangerous insurgent group of the world.

In the same line, Umar (2012), views Boko haram as a fundamentalist group but not a problematic one. This is so because its leader and members do promote and adhere strictly to the doctrinal ideology. He rightly concludes that, fundamentalism may lead to violence but not necessarily in all cases. In finding of his study, the mediating variables preventing a turn towards violence are factors such as socio economic opportunities, the provision of social services by the state and the

way the state responds to dissidence. Okoro (2012), pointed out that, Boko haram sect is deadly group which appears to see western attribute such as education, culture and modern science as sinful act. Peterside (2014) sees Boko haram as a movement which condemns western cultures and education. These redirect their target towards every individual that result in the bombing of mosques and churches, police stations, educational institutions, government and private establishments, killings and abduction of innocents citizen as a measure of fulfilling their unclear objectives.

Causes of Insurgency

Scholars have provides multitude points of view as regard the causes of insurgency. According to Lawson (2001), the resistance against an oppressor is the major cause that will lead to insurgency. He remarks that, the dominance of insurgents land and their people from any oppressor are apparent to have high chances of outbreak of attacks by the insurgent's members. Keet (2003) observes that, social stratification and disproportion of division of limited resources such as food, water and clothing is among the major causes of insurgency. Borum (2004) opines that, the remedies of an injustice were the essential motivation for insurgency as it can help them to get their revenge back and the best motivation is to help others to avenge but not themselves. The need of belonging that was remarked earlier on has great impact on radical extremist groups as they felt connected and associated with the group. Multiple reasons are listed here, of which some seem to be more applicable than others, and some others tend to go together for identification of more or less convincing causational factors these includes; Ethnicity, nationalism/separatism Probably the most contested cause of insurgency (Freewoman, 2001). Nwagu (2014) who attributes the cause of insurgency to control of valuable resources by powerful people thereby denying the less privileged access. The disadvantaged segments of the societies thus resort to fighting to what they believed belonged to them.

Similarly, Newman (2006) suffices that, factors such as poverty, population explosion, social inequality and exclusion, dispossession, urban migration, political grievance as well as oppression and human right abuse falls among the crucial causes of insurgency. Bjorgo (2005) opines that the causes of insurgency is categorize into (4) four levels these includes; Structural cause, Facilitator, Motivational and Trigger causes. The structural cause are causes which affect people's live in ways that they may or may not comprehend at a rather abstract macro level such as increasing individualism with rootlessness and atomization and relative deprivation. Facilitators are the second category which insurgency attractive and possible. These include the evolution of modern news media, weapons technology and weak states controls of territory. Motivational causes are the actual grievances that people experience personally which drive their motive to develop the negative ideology. Trigger causes, are the direct precipitant of insurgency. These include factors such as leadership, Funding, state sponsorship, political upheaval serves as the causes of insurgency.

Furthermore, Ahmad (2013) posits that, the underlying causes of insurgency include political, administrative and legal vacuum; illiteracy, unemployment and underdevelopment and legacy of the past policies. Insurgency, restiveness, terrorism and the like are as a result of frustration and apathy among majority of the citizenry which often leads to unimaginable anti-social activities. Furthermore, Briscoe & Van Ginkel (2013), opines that, insurgency in many societies came on board as a result of stimulated drive related to economic deprivation, abject poverty and economic dislocation of livelihoods. This has drastically reduced the options of many youth. Deducing from the structural violence paradigm, individual and group grievances, such as poverty, unemployment, illiteracy, discrimination, and economic marginalization, can be used as mobilizing instruments by sinister groups to find support and recruits for insurgents agenda. Mohammed (2012) asserts that, one of the immediate causes of insurgency was the restriction of movement of motor cycles at night, the attempt at enforcing the use of crash helmets and the shooting by the policemen to the 17 unarmed people who are on their way to a funeral erupted the group to be ready for a confrontation. From the studies reviewed, this research goes in conformity with the view of Ahmad (2013) and Briscoe & Van Ginkel (2013), who observed the root causes of insurgency as the structural violence paradigm, individual and group grievances, such as poverty, unemployment, illiteracy, discrimination, and economic marginalization.

Insurgency on means of livelihood.

Scholars have pointed out their view on how insurgency affects means of livelihood. According to Shumba (2009), insurgency has resulted to poverty, hunger, frustration, and idleness, which in turn post negative impact on means of livelihood in general. The destruction of lives and properties by the insurgents has contributed to the declining of basic needs of life such as food, shelter, health, and education usually in the affected area. Collinson & Sarah (2003) asserts that, Livelihood damage may be protracted, with repeated shocks gradually breaking down resilience, eventually causing destitution and large-scale human suffering. In his study, he itemize the area in which insurgency affects livelihood, the include; Interrupting food production, Restricting access to land grazing, Restricting access to water and other natural resources, Collapsing the labor market, Preventing markets from operating, causing price spikes, or destroying or blocking market and trade routes, Disrupting government, services, as a result of capacity failure, Stripping, burning or looting assets of marginalized or targeted groups, Displacing civilians, Destroying infrastructure, Encouraging or enabling sexual violence against women and girls, The breakdown of law and order.

Insurgency on Education

Education is an integral component socio economic development in every existing society. Scholars have pointed out their opinion on how insurgency affects education. According Emeosoba and Iro (2015), the activities such as Maiming, kidnapping, suicide bombing, burning, attacks, destruction of schools, killings of teachers and students of the insurgents groups have posed great challenges to educational programmes. They make it clear that schools were whether burnt, damaged, or destroyed by the insurgents. These destructions have grossly reduces the

availability of access to education of many families. Ogwunba and Odom (2014) contends that, access to education requires sufficient and proper learning facilities and services put in place and that students can have access to adequate books and materials that will facilitate teaching and learning. They concludes schools are not only burnt down, but also the teaching materials, equipment and school records leaving children with nowhere to learn and teachers nowhere. Justino (2011) asserts, that insurgency affects education through direct and indirect channels. The former, may have effect through destruction of educational infrastructure and facilities, loss of teacher as a result of intimidation and lack of secure environment, displacement of students and their families and the creation of climate where parent are afraid to let their children leave their home. While the indirect include: the reallocation of resources within the household for example, student needing to find work to replace lost of family income which may in turn affect their educational aim to be realized. Similarly, Malley (2010) opines that insurgency through its persistent activities such as destruction of school building and facilities, killings of students and teachers, abduction of students and kidnapping of teachers as well, sexual violence against female students which as a result contribute to traumatization of students, anxiety and fear consequently affect the education objective to be attained.

Furthermore, Aldeman, Hoddinott and Kinsey (2006) founds that Zimbabwean children affected by war in 1970s started school later than those not affected by the war because trauma, anxiety and fear which consequently displaces people out of their homes cannot be enrolled in schools. Students enrolment into schools in Afghanistan has increased dramatically in spite of ongoing conflict with about six (6) million in 2001 to about eight (8) million in 2012 (Jones & Naylor, 2014). A cross-country analysis by Lai and Thyn (2006) shows that countries experiencing civil war suffer a decline in student enrolment by 1.6 to 3.2 percent. A recent study, using household survey data between 2000 and 2008 from 25 conflict-affected countries found that conflict leaves a legacy of fewer average year of education, decreased literacy rate and a smaller share of the population with no formal schooling as students are not enrolled in schools (Andrew & Saumik, 2013).

Moreover, Adam and Boscarino (2005), insurgency indiscriminate activities such as kidnapping of innocent people and demanding for ransom, suicide bombing, incessant shooting of victims at close range which contributes to fear, anxiety by the school management thereby the school for a period of time. In other word, the activities of the insurgents members resulted to shutting down of schools which consequently has implications on academic calendar of schools which technically education goals and objective to be achieved. In addition, Galea, Ahern, Resnick, Kilpatrick, Bucuvalas, Gold & Vlahov (2002) in their study reveals that, insurgency has adversely affects schools academic calendar through it indiscriminate activities such as destructions of schools structures and infrastructure; creating psychological disturbances by fear and anxiety through kidnapping/abduction of innocent student; series of bomb blast; wear and tear between the military and the insurgents members when attacking. These activities make schools to shutdown their academic activities, which affects the school calendar of events. Hoven, Duarte, Lucas, Wu,

Mandell and Godwin (2005) asserts that insurgency generate deleterious impact by causing depression, aggressive behavior, anxiety and stress, social and emotional problem which has adversely affect students performance. He went further by emphasizing that the impact of insurgency on school calendar has been categorized into two channels. These are direct and indirect channel. The former can include school absenteeism, and poor academic performance at school due to lack of focus associated with anxiety, and fear, while indirect channel can include disruption to processes of learning from parent and teachers who may experience problems themselves. Swee, (2015) is in agreement with the views of Adam and Boscarino (2005) on the impact of insurgency which is caused by the indiscriminate activities such as destruction of schools; threat faced by the personnel (academic and non academic staff) from the insurgent members which instilled fear and anxiety in them. This incidence causes the closure of the schools which disrupts academic calendar of schools.

Insurgency on Transportation

Numerous studies have been conducted concerning insurgency as it effects on transportation. According to Onuoha, (2014) Wanton attacks and killing of innocent souls on the highways has instilled fear in the minds of travelers and lead to reduction in physical mobility. Therefore, transportation of goods and services will be restricted, as the security personnel mount check points. Sherman (2013) opines that the cost of transportation in the insurgency affected area have increased which in effect the cost of goods and services, products and food prices. Bekele, (2015) asserts that, abductions and kidnapping of innocent citizens by the insurgents' members have scared off potential travelers to the affected region thereby resulting to a sharp drop in government highway revenues for the state. These have severely impacted the socio economic development of the state, as well as that of the neighboring states. Klein (2007) is of the opinion that, insurgency has indirectly affects transportation by redirecting the attention government investing in security measures than productive economic aspect which will facilitate socio economic development. Aliyu (2013), views the impact of insurgency of transportation from the angle of tax/revenue generation and source of employment as a means affecting socio economic development at large. In her study, she concluded that transportation of goods and services from other part of nation is the most challenging issue there by affecting the economic activities of the affected area. The studies reviewed have clearly explain the impact of insurgency on transportation from different point of view. Onuoha, (2014) & Sherman (2013), views it from the angle delay and restriction in the transportation of goods and services which in effect degenerate shortage and prices increase in the supply of goods and services. Bekele, (2015), the impact of insurgency on transportation from the angle of masses that frighten and panic with the attacks delivered by the insurgents. Klein (2007), view it from the angle of redirecting the attention government investment from more economic productivity such as enhancing the transportation system to measure on how bring peace to the unsecured area. Aliyu (2013), sees the impact of insurgency of transportation from the angle of tax/revenue generation and source of employment.

Theoretical framework

Frustration – Aggression Theory

Frustration-Aggression Theory of Conflict The frustration-aggression theory has its root in the works of Dollard, Doob, Miller, Mower and Sears (1939). Dollard led a research group at the Yale Institute of Human Relations and published a monograph that is useful in explaining human conflict behavior. It is based on a simple and straight forward hypothesis that human frustration may lead to aggressive behavior. Since the development of the theory, several scholars have analyzed it. For example, it was observed that frustration ultimately leads to aggression and aggression always implies that frustration has occurred at some previous time (Lawson, 1965). The theory suggests that individuals become aggressive when there are obstacles (perceived and real) to their success in life (van de Good et al., 1996). The theory indicates that aggressive behavior is not motivated by genuine hostility, but by frustration (Malici, 2007). All the discussions on the theory imply that “there is no smoke without fire” and that “an angry man is a hungry man”. At this stage, let us look at the duo concepts of frustration and aggression. Frustration can be defined as (a) an individual’s perception of a hostile environment, coupled with (b) his pessimism about the realization of goals and (c) the perception that the fate of these goals is in the hands of others (Malici, 2007). Aggression is any behavior intended to harm another person who does not want to be harmed (Bushman & Huesmann, 2010).

Frustration-aggression theory emphasizes the difference between what people feel they want and the discrepancy. However, marginal between what is sought and what they get, the greater the violent reaction. In the face of these frustrated expectations, a group is most vulnerable to embark on violent destructive behavior or be a ready army to be used to cause crisis. Central to this explanation is that aggression is the natural outcome of frustration. In a situation where the legitimate desires of an individual or group is denied either directly or by the indirect consequence of the way a society is structured, the feeling of frustration can compel such persons or group to express their anger through violence that is directed at those perceived to be responsible for their misfortune or others who are indirectly related to those frustrating their expectations (Omadjohwoefe, 2011).

The frustration aggression theory is a theory under the field of psychology that aggression is caused by blocking, or frustrating, a person's efforts to achieve a goal. According to the theory, frustration augments the probability of aggression. The theory defined frustration as "the state that emerges when circumstances interfere with a goal response." Subsequent research has found that frustration is more likely to lead to aggression when the frustrated individual believes that aggressive behavior will reduce his frustration. Aggression is defined as an action with the intent to harm, and can be physical and non- physical (Baron & Richardson, 1994). There are many areas where aggression manifests in our society today, such as domestic violence, abuse, school bullying, road-rage, and war. Many social scientists use theories to explain this phenomenon. Amongst the many different explanations, some say frustration, which is defined as the blocking of ongoing goal-directed behavior, often leads to aggression. The theory is divided into two main paradigms; Dollard’s

Frustration-Aggression Theory and Berkowitz's Cognitive Neo association Model, both illustrate how one may become aggressive through frustration. Both models have been changed and challenged; however, evidence suggests there are four mediating factors which influences frustration, nonetheless can often be the antecedent to aggression (Baron, & Richardson, 1994). This study will be guided by frustration-aggression theory to explain insurgency on socio economic activities. The relevance of this theory to the study of insurgency on socio economic activities is better appreciated when viewed against the backdrop of wide spread of poverty, illiteracy, socio-economic injustice, global terror epidemic and proliferation of arms which breeds frustrated expectations. Under this misfortunate situation, members of the sect (Boko haram) and other frustrated persons are readily available to be recruited under the auspices of Boko haram insurgent as destructive agents for disturbances and indiscriminate destruction of livelihoods and social support systems, bombing of infrastructures and facilities, displacing residents to seek refuge, incessant killings, kidnapping/abduction of innocent citizens as well which adversely affect means of livelihood, education and transportation.

Study Area

The study will be carried out in Borno State, Nigeria. Borno State shares borders with Adamawa State to the south, Yobe State to the west and Gombe State to the southwest. It also shares international borders with Cameroon Republic to the east, Chad Republic to the northeast and Niger Republic to the north. The State has a land mass of about 69,434 kilometers. Administratively, it has 27 Local Government Areas (LGAs). The State is divided into three agro-ecological zones; Sahel to the north, Sudan Savannah in the central and southern parts of the State and Guinea Savannah in the southern part. The average rainfall per annum is 300 mm in the north and about 1000mm in the south. The rainy season in the State usually starts in April and ends in October. The state is also blessed with lakes and rivers such as Lake Chad, Lake Alau, Lake Tilla, River Ngada, River Yazaram, and River Yare where irrigation farming is carried out especially during dry season. The major occupation of the inhabitants is farming. Food crops commonly cultivated include millet, sorghum, maize, groundnut, cowpea, rice and wheat. Fruits and vegetables grown include mango, orange, guava, tomatoes, onion, pepper, carrot, amaranths and garden-egg, Its major cash crops include: groundnut, cotton, cowpea, sorghum, wheat, sweat potatoes, maize and sugar cane (Third national fadama Project, 2011) The livelihood strategies for most men and women in the state are based on Agriculture, (IITA, 2006). Farming is characterised by a variety of crops and livestock based production system. Crops are mainly grown for subsistence; In the southern part of the state, maize, sorghum, cowpea rice and soybeans are major cash crops while in the central and northern part of the state are sorghum, millet, beans, groundnut and watermelon. Livestock – small and large ruminants as well as poultry are integral part of the farming system which provides income as well as safety net. The State is known for its vegetables production, which is produced throughout the year, both under irrigation and in the raining season. Most of the vegetables can be grown as sole or mixed cropping. The vegetable production is carried out during dry and cool seasons under irrigation.

Borno state has twenty-seven (27) local governments recognized by the 1999 constitution. These local governments are as follows: Askira/uba, Bama, Biu, Mobbar, Damboa, Dikwa, Gubio, Gwoza, Hawul, Kaga, Konduga, Kukawa, Kwaya-kusar, Mafa, Magumeri, Maiduguri, Marte, Monguno, Ngala, Nganzai, Shani, Jere, Abadam, Chibok, Guzamala, Kala/balge and Bayo.

Borno central senatorial zone:

Maiduguri Metropolitan Council: Maiduguri metropolitan council is local government area of Borno State Nigeria. It's headquarter is in Maiduguri it lies on latitude 100, 610N and longitude 12.1950 and has a population of 521492, and landmass area of 4 the predominant tribe are the Kanuri Mafa: Mafa is local government area of Borno State Nigeria. It headquarters is Mafa, it has a population of 103518 people and a total landmass area of 2,869km². The predominant tribe is Kanuri.

Borno North senatorial zone:

Gubio: Gubio is local government area of Borno State Nigeria. It headquarters is Gubio and has a population of 152778 people and land mass area of 2,404km². The predominant tribe is Kanuri. Monguno: Monguno local government area of Borno State of Nigeria. It has it's headquarter in Monguno, it has a population of 109851 people and land mass area of 1.913km². The predominant tribe is Kanuri.

Borno South senatorial zone:

Biu: Biu is a local government area of Borno State, Nigeria. Its headquarters is in Biu lies on latitude 100610N and longitude 120 195 and has land mass area of 4603km² with population of 176072 people. The predominant tribe is Babur Bura.

Kwaya-Kusar: Kwaya-Kusar local government area of Borno State of Nigeria. It has it's headquarter in Kwaya-Kusar, it has a population of 56,500people and land mass area of 732km². The predominant tribe is Babur Bura.

Methodology

The study is an opinion survey, where questionnaire be administered to individuals in two (2) local government from each of the three (3) senatorial constituency. The sample size is 353, while Purposive sampling is be utilize to select the respondents. The data obtained is sorted, coded and tabulated using Statistical Parkages for Social Science (SPSS) for analysis of data obtained. This will consist of simple percentage, frequency distribution and tables.

Presentation of results and analysis

This section presents data collected from local government staff and community leaders using questionnaires and interview respectively in the six (6) selected local governments. A total of three hundred and fifty three (353) questionnaires were distributed out of which three hundred and forty four (697) were retrieved as valid and used for data analysis. This section highlighted the analysis of the responses using Statistical Package for Social Sciences (SPSS Version 26) on the

questionnaire administered to the individual residing local government on effect of insurgency on means of livelihood; education and transportation.

Effects of insurgency on means of livelihood

The researcher enquired to know from the individual respondents whether insurgency has effects on means of livelihood such as agricultural goods, livestock, assets, infrastructural facilities, markets, access to portable water, hand pumps, and motorized boreholes in the selected local government areas.

Table 4.1: Effects of insurgency on means of livelihood

Variable	Strongly agreed		Agreed		Undecided		Disagreed		Strongly disagreed		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq.	%
Agricultural goods	115	33	126	36	25	7	50	14	37	10	344	100
Livestock	39	11	27	8	28	8	139	39	120	34	344	100
Houses	21	6	21	6	34	10	175	50	102	29	344	100
Assets	160	45	112	32	24	7	39	11	28	8	344	100
Infrastructural facilities	135	38	92	26	26	7	60	17	40	11	344	100
Markets	180	51	91	26	23	7	31	9	28	8	344	100
Access to potable water	61	17	65	18	27	8	109	31	91	26	344	100
Provision of Hand Pumps, dug well and motorized boreholes	57	16	52	15	27	8	122	35	95	27	344	100

Source: Field Survey, 2021.

Table 4.1 shows that 115(33%) and 126(36%) strongly agreed and agreed respectively that it has affected agricultural goods in the local government areas. It also shows that 50(14%) and 37(10%) disagreed and strongly disagreed respectively. Based on majority rule, it can be concluded that agricultural facilities has been affected by insurgency in the selected local government areas. The table also indicates that livestock has not adequately been destroyed on the response of 139(39%) disagreed and 120(34%) strongly disagreed. Analysis of the table revealed that livestock has not been destroyed by the insurgents in the selected local government areas.

Furthermore, table 4.1 showed that houses has been destroyed by the local governments. This is so because 175 (50%) and 102 (29%) strongly agreed and strongly disagreed respectively that houses were been destroyed by the insurgents in the selected local governments. In terms of assets

destruction, 160(45%) and 112(32%) of the respondents strongly agreed and agreed respectively that it has been destroyed. It can be revealed hence, that the insurgents have destroyed assets of individuals in this regard. On the aspect of infrastructural facilities, the table also showed with 180(51%) and 91(26%) of the respondents strongly agreed and agreed that infrastructural facilities have been destroyed by the insurgents. Therefore, the insurgency has affected the means of livelihood in the local government areas. Regards to markets in the local government areas, The table indicated by 180(51%) and 91(26%) strongly agreed and agreed response rate that markets have suffered destruction from the insurgents.

The table also shows that there is no access to potable drinking water in the local government areas. 109(31%) and 91(26%) of the respondents disagreed and strongly disagreed that there is no potable water. This goes to show that the activities of the insurgents has left the selected local government areas with no portable water. Hand pumps and motorized boreholes are also destroyed by the activities of the insurgents. This is indicated by 122(35%) and 95(27%) response rate of disagreed and strongly disagreed respectively that such water facilities are destroyed.

Analysis of the table shows that agricultural goods and infrastructural facilities has been seriously damaged by the insurgents. In the aspect of livestock, assets, markets, access to portable water, hand pumps, and motorized boreholes has suffered a partial destruction.

Effects of insurgency on education

The researcher enquired to know from the individual respondents whether insurgency has effects on means of education such as academic calendar, school climate for learning, quality of teaching, school infrastructure, availability of teachers, access to learning items, student turnover in the selected local government areas.

Table 4.2: Effects of insurgency on education

Variable	Strongly agreed		Agreed		Undecided		Disagreed		Strongly disagreed		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
academic calendar	32	9	46	13	22	6	131	38	113	33	344	100
school climate for learning	27	8	25	7	15	4	123	36	154	45	344	100
Quality of teaching	18	5	20	6	35	10	152	44	119	35	344	100
School infrastructure	104	30	185	54	12	3	22	6	21	6	344	100
Availability of teachers	47	14	94	27	21	6	67	19	115	33	344	100
access to learning items	223	65	70	20	8	2	22	6	21	6	344	100

access to learning items	23	7	30	9	22	6	80	23	189	55	344	100
student turnover	24	7	15	4	19	6	73	21	213	62	344	100

Source: Field Survey, 2021.

On the issue of academic calendar of schools in the local government, based on majority rule in table 4.2 of 131(38%) and 113(33%) disagreed and strongly disagreed respectively that academic calendar schools are affected by the insurgency activities in the local government areas. It also shows that 123(36%) and 154(45%) disagreed and strongly disagreed respectively that school climate for learning has been affected by insurgency. Based on majority rule, it can be concluded that there is no conducive atmosphere for learning in the selected local government areas. Analysis of the table revealed that academic calendar and climate for learning has been disturbed by insurgency in the selected local government areas.

Furthermore, table 4.2 showed that Quality of teaching in the local government has been affected by insurgency not provided by the local governments. This is so because 152 (44%) and 119 (35%) disagreed and strongly disagreed respectively. In terms of School infrastructure, 104(30%) and 185(54%) of the respondents strongly agreed and agreed respectively that infrastructural facilities have suffered damages. It can be revealed hence, that school infrastructural facilities has been destroyed by the activities of the insurgents. On the aspect of Availability of teachers, the table indicated that 67(19%) and 115(33%) of the respondents strongly agreed and agreed that teachers are not available, while 94(27%) posits that drug is available. Therefore, insurgents have affected the Availability of teachers in the local government areas. Access to learning items for schools in the local government areas indicated that 223(65%) and 70(20%) strongly agreed and agreed response rate that access to learning items is affected. Analysis of the table shows that access to learning items in the selected local government has been affected; however, in terms of.

The table also shows that student turnover has been a challenge brought by the insurgency in the local government areas. The result shows that 80 (23%) and 189 (55%) of the respondents disagreed and strongly disagreed that student turnover is affected by insurgency.

Analysis of the table shows that in terms of academic calendar, school climate for learning, quality of teaching, school infrastructure, availability of teachers, access to learning items, student turnover has been positive as insurgency has affected education in the selected local governments.

Effects of insurgency on transportation

The study enquired to know from the respondent whether insurgency has effects on transportation in the selected local government in terms of stability of transportation price, transportation productivity, time management on the highway and logistics cost in transportation.

Table 4.10: Impact of SLGJA on Payment of Workers Salary

Variable	Strongly agreed	Agreed	Undecided	Disagreed	Strongly disagreed	Total						
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
stability of transportation price	9	3	21	6	12	3	50	15	252	73	344	100
Transportation productivity	10	3	11	3	15	4	179	52	129	38	344	100
Time management	20	6	12	3	9	3	70	20	233	68	344	100
Logistic cost in transportation	18	5	20	6	4	1	100	29	202	59	344	100

Source: Field Survey, 2021

On the issue of regular price of transportation in the selected local government, table 4.10 shows that 50(15%) and 252(73%) of the respondents disagreed and strongly disagreed that there is stability in price of transportation. Based on this majority rule, it can be concluded that the price of transportation is stable. The table also shows that transportation has been affected by insurgency activities. The table shows that 70(20%) and 233(68%) of the respondents disagreed and strongly disagreed respectively.

The table also shows that 70(20%) and 233 (68%) of the respondents disagreed and strongly disagreed respectively that Transportation productivity. the revelation of the table is that production in transportation has been affected by insurgency. On the issue of Time management, the table revealed that 100(29%) and 202 (59%) of the respondents disagreed and strongly disagreed respectively that drivers cope with the regular time as per before insurgency. Analysis of the table revealed that Time management is an issue in passing through the selected local government. Furthermore, the table indicated that 80(23%) and 189 (55%) of the respondents disagreed and strongly disagreed that Logistic cost in transportation are made available. It can be deduced from this analysis that Logistic cost in transportation in the local government as a result of insurgency.

Discussion of Major Findings

The study assessed the effects of insurgency on socio economic development in the selected local government areas in Borno state. In this regard, the research objectives and questions were carefully formulated to address issues on insurgency on socio economic development as it relates to means of livelihood, education and transportation. In order to achieve the desired objectives of

the research, frequency distribution tables were used to analysed the data obtained from the respondents. This discussion and is segmented based on the objectives of the study.

Analysis of the table shows that agricultural goods and infrastructural facilities has been seriously damaged by the insurgents. In the aspect of livestock, assets, markets, access to portable water, hand pumps, and motorized boreholes has suffered a partial destruction.

Analysis of the table shows that in terms of academic calendar, school climate for learning, quality of teaching, school infrastructure, availability of teachers, access to learning items, student turnover has been positive as insurgency has affected education in the selected local governments. Analysis of the table shows that in terms of stability of transportation price, transportation productivity, time management on the highway and logistics cost in transportation has been negative. Within the purview of frustration aggression theory, that the aggrieved insurgents transfer their aggression on the society.

Summary of Major Findings

This study is carried out to assess the effects of insurgency on socio economic development in selected local government areas in Borno state. From the above analysis, majority of the respondents agreed that the activities of boko haram have distorted the means of livelihood, education and transportation.

Conclusion

From the data obtain, it is concluded that insurgency has significantly socio economic development in selected local government areas of Borno state.

Recommendations

In view of the findings made so far, the study recommends the following.

- i. Government should provide support to parents which will encourage them to enroll their children to school in order to avoid the chances of their children becoming dropout.
- ii. Government should intensify tied security that will reduce the attacks and risks on the high ways by the insurgents to which it will enhance facilitation of socio economic activities.
- iii. In an effort to address this, the government should devise strategies that reduce the fear and anxiety among the residents of the selected local government which develop psychological difficulties as a result of grief at the loss or maiming colleagues which make the staff unsecure and device strategies for addressing security challenges in the affected area.

References

- Abdulrasheed, O. (2005), Effects of Insurgency on Universal Basic Education in Borno State of Nigeria. *American Journal of Educational Research*. Vol. 3. No. 4. pp 490-494.
- Abugu, F.O. (2009): —Boko Haram: Poverty, Not Islamists on the March, *The Guardian*, August 8.
- Ackoff, R. L. & Emery, F. E. (1972). *An interdisciplinary analysis of individual and social behaviour as a system of purposeful event*: Aldine Atherton. Chicago
- Adams, R. E. & Boscarino, J. A. (2005) A structural equation model of perievent panic and posttraumatic stress disorder after a community disaster. *Journal of Traumatic Stress*.

- Adediwura, A. A. & Tayo, B. (2007). *Perception of Teachers' Knowledge Attitude and Teaching Skills as Predictor of Academic Performance in Nigerian Secondary Schools*. Educational Research and Review, 2(7): 165-171.
- Adetiloye, T. (2014), *The Root Causes of Boko Haram and Other Insurgent Groups in Nigeria-Saharareporters*.
- Ahmed, S. M. S. (1982). Factors affecting frustrating and aggression relationships. *Journal of Social Psychology*, 116 173–177. PubMed Google Scholar
- Aldeman, H. Hoddinott, J. & Kinsey, B. (2006). Long term consequences of early childhood malnutrition. *Oxford economics papers* 58 (3), 450-474
- Ali, A. Sha, M., Imran, Jan, A. & Man-U-Ddin, G. (2012), Assessing the economic effects of Insurgency on Hotelling industry of Swat, *Universal Journal of Management and Social Science* No. 2. Retrieved from www.sociologistimrangmail.com
- Andrew, D. & Saumik, P. (2012). *Estimating the casual effects of war on education in Cote D'ivoire*. HiCN working paper 2012.
- Awake (2006). *An introduction to field of web science and the concept*. Philip D. Tetlow. Retrieved from www.books.google.com
- Baker, C. (2008). Under-represented college students and extracurricular involvement: *the effects of various student organizations on academic performance* Soc Psychol Educ.
- Balami, D. H., Ogboru, I. & Talba, J. M. (2011), *The Cereal Economy in Nigeria and The Sub-regional Dimension Social Science Study Group (SSSG)*. Destiny Ventures, Makurdi.
- Barbieri, M. (2009). *Extracurricular activities*. New York, NY: St.Martin's Press.
- Baron, R. A., & Richardson, D. R. (1994). *Human aggression* (2nd ed.). New York: Plenum.
- Berdel, M. & Kenn, D. (1997), *Violence and Economic Agenda in Civil War*. Millenium plb. Vol. 26. No. 3.
- Berkowitz, L. (1969). The frustration-aggression hypothesis revisited, in: Berkowitz (ed.), *Roots of aggression*, Atherton Press, New York
- Blakely, E. J. (1994), *Planning Local Economic Development*. Third Edition. Thousand Oaks, California: Sage Publications.
- British Army Field Manual (2009). *Countering Insurgency, Army Code 71876. Volume 1 Part 10*.
- Broh, B. A. (2002). Linking extracurricular programming to academic achievement: Who benefits and why? *Sociology of Education*, 75(1): 69-95. Published by: American Sociological Association.
- Burton, J. (1990). *Conflict: Human Needs Theory*. New York: Macmillan.
- Bushman, B.J. & Huesmann, L.R., (2010). Aggression. In: Fiske, S.T., Gilbert, D.T., Lindzey, G. (Eds.), *Handbook of social psychology, fifth ed., vol. 2*. John Wiley & Sons, Hoboken, NJ, pp. 833–863.
- Collier, P., Anke H. & Dominic R. (2006), *"Beyond Greed and Grievance: Feasibility and Civil War."* Centre for the Study of African Economies, Oxford University.
- Dill, J. C. & Anderson, C. A. (1995). *"Effects of Frustration Justification on Hostile Aggression"*. *Aggressive Behavior*. 21 (5): 359–369.

- Dlakwa, H. D. (2010). *Concepts and Models in Public Policy Formulation and Analysis Maiduguri*: Pylmark Science Limited publishers.
- Dollard, J., Doob, L. W., Miller, N. E., Mowrer, O. Hobart., & Sears, R. R. (1939). *Frustration and Aggression*. New Haven, CT, US: Yale University Press.
- Dunkelberger, G. F. (1935). *Do extracurricular activities make for poor scholarships*.
- Durham, J. (2016), *The Effects of Long Commuting to Work. Safe Workers*. Retrieved from www.safeworkers.co.uk
- Emmanuellar, I. (2015), Insurgency and Humanitarian Crisis in Northern Nigeria; The Case of Boko Haram . *African Journal of Political science and international relations*. Vol. 9. (7) pp 284-296.
- Emmer, R. (2010). *Cheerleading*. New York, NY: Rosen Publishing Group.
- Fafowora, O. (2012). Understanding Insurgencies in Nigeria: Nature, Types, Dynamics and the Way Out: Keynote Address at the proceedings of the National Institute for Policy and Strategic Studies (NIPSS), Eminent Persons and Experts Group Meeting, Kuru, Nigeria.
- Foster, C. R. (2008). *Academic activities in the high school*. New York, NY: Read Books.
- Friedman, H., & Schustack, M. (1999). Personality classic theories and modern research. (Fifth ed., pp. 204-207). Pearson.
- Galea S, Ahern J, Resnick H, Kilpatrick D, Bucuvalas M, Gold J, & Vlahov D. (2002). Psychological sequelae of the September 11 terrorist attacks in New York City. *New England Journal of Medicine*.
- Gberie, L. (2005), *A Dirty War in West Africa; The RUF and Destruction of Sierra-Leon* Indiana University Press.
- Griffeth, R. W., Hom, P. W. & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator test, and research implications for the next millennium. *Journal of Management*, 26, 463-488.
- Harris, M. B. (1996). Aggressive experiences and aggression: Relationship to gender, ethnicity, and age. *Journal of Applied Social Psychology*, 26 843–870.
- Holloway, J. H. (1999). "Extracurricular Activities: *The Path to Academic Success?*" *Association for Supervision and Curriculum Development* : pp 87-88.
- Hoven, C. W., Duarte, C. S., Lucas, C.P., Wu, P., Mandell, R. D. & Goodwin, R. D. (2005). *Psychopathology among New York City public school children*. 6 months after September 11. *Archives of General Psychiatry*.
- Jones, A. & Naylor, R. (2014). *The qualitative impact of armed conflict on education: counting the human financial cost*. CFBT Education Trust
- Jones, D. M. & Smith, M. L. R. (2015), *The Political Impossibility of Modern Counterinsurgency*: Columbia University Press Retrieved from www.columbia.edu/boo
- Justino, P. (2011). "Violent Conflict and Human Capital Accumulation", CRPD Working Pp 8, Centre for Research on Peace and Development, University of Leuven (www.kuleuven.be/crpd). Also IDS Working Paper 379.
- Kilcullen, D. (2005), "Countering Global Insurgency", *The Journal of Strategic Studies*, Vol 28 No. 4, pp. 597-617.

- Lai, B. & Thyne, C. (2007). The effect of civil war on education 1980-97. *Journal of Peace Research* 44 (3), 277-292
- Lawson, R. (1965). *Frustration: The Development of a Scientific Concept*, New York, Macmillan.
- Little, M. H. (2002). The extra-curricular activities of black college students, 1868-1940. *The Journal of African American History*, pp 43-55. The Past before us (Winter, 2002). Published by; Association for the Study of African American Life and History, Inc.
- Lopez, H. & Wodon, Q. (2005). "The Economic Impact of Armed Conflict in Rwanda." *Journal of African Economies* 14:586–602. Google Scholar
- Lunenburg, F. C. & Ornstein, A. O. (2008). *Educational administration: Concepts and practices* (5th ed.). Belmont, CA: Wadsworth/Cengage Learning.
- Malici, A. (2007). Thinking About Rogue Leaders: Really Hostile or Just Frustrated? *The Whitehead Journal of Diplomacy and International Relations, Summer/Fall*, Pp 1-9.
- Marc-Antoine P M (2014). —Boko Haram and Politics: From Insurgency to Terrorism in Marc-Antoine P M (ed) (2014). *Boko Haram: Islamism, politics, security and the state in Nigeria*, Ibadan African Studies Centre and IFRA
- Mariane, C. F. & Hoffman, D. (2004). *Hunter Malitias and International Human Rights*. Discourse in Sierra-Leon and Beyond. *Africa Today*. 50, 4.
- Maslow, A. H. (1973). *Conflict, frustration, and the theory of threat*. J. abnorm. (soc.) Psychol., 1943, 38, 81-86.
- Mayer, J. (2010). *Covert operation: Billionaire brothers who are waging war against Obama*. *The New Yorker*, 30 August: 45–55.
- Metz, S. (2004). *Insurgency and counterinsurgency in the 21st century: Reconceptualizing Threat and Response*, Strategic Studies Institute Home Available at <http://www.strategicstudiesinstitute.army.mil/pdffiles/pub586>.
- Miller, N. E., Sears, R. R., Mowrer, O. H., Doob, L. W. & Dollard, J. (1941). "[*Symposium on the Frustration-Aggression Hypothesis*](#)". *Psychological Review*. 48 (4): 337–366.
- Moore, S. R. (2005), *The Basics of Counterinsurgency*. *Contemporary Conflict Resolution*, Malden, MA: Blackwell Publishers .
- Muzan, A. O. (2014). *Insurgency in Nigeria: addressing the causes as parts of the solution*. *African Human Right*, 14, pp 217-243.
- O'Malley, B. (2010). "*Education Under Attack*", Commissioned by Mark Richmond, Director, Division for the Coordination of United Nations Priorities in Education, Education Sector, UNESCO.
- Omadjohwoefe, O. S. (2011). "Amnesty Initiative and the Dilemma of Sustainable Development in the Niger Delta Region of Nigeria", *Journal of sustainable development* pp. 249-258.
- Shemyakina, O. (2011), "The Effect of Armed Conflict on Accumulation of Schooling: Results from Tajikistan", *Journal of Development Economics*, Vol. 95, No. 2, pp. 186-200.
- O'Malley, B. (2010). *The longer-term impact of attacks on education systems, development and fragility and the implications for policy responses*. Paris: UNESCO.
- O'Neill, B. E. (2005). *Insurgency and Terrorism: From Revolution to Apocalypse*, Potomac Books, Washington DC.

- Othman, F. M., Sule, O. Z. I. & Singh D. S. R. (2015), *The Effects of Boko Haram Insurgency on Business Entrepreneurship Environment in Nigeria*.
- Pastore, N. (1950). "A Neglected Factor in the Frustration-Aggression Hypothesis: A Comment". *The Journal of Psychology*. 29 (2): 271–279.
- Reggiani, A., Pietro, B. & Russo, G. (2011) "Accessibility and impedance forms: Empirical applications to the German commuting networks," *International Regional Science Review*, 34(2), 230-252
- Rule B.G., Dyck R, Nesdale AR (1978): Arbitrariness of frustration: Inhibition or instigation effects on aggression. *European Journal of Social Psychology* 8:237-244.
- Satti, A. L. (2008), Brochure; University of Maiduguri at a glance. First ed. Abti printing press ltd
- Shehu, A. (2015), Boko Haram Insurgency and its Implications for Conflict-Sensitive Journalism in Nigeria; Department of Mass Communication Faculty of Social Science Ahmadu Bello University, Zaria Nigeria.
- Shuaibu, S. S., Salleh, A. M. & Shehu, Y. A. (2015). The Effects of Boko Haram Insurgency on Nigerian National Security; *International Journal of Academic Research in Business and Social Sciences*. Vol. 5. No. 6 pp 254-266.
- Swee, E. (2015), On war and schooling attainment; the case of Bosnia and Herzegovina. *European journal of Political Economy*. 40: pp 158-172.
- Taiwo, A. A. (2016), Security Implications of Boko Haram Insurgency for Nigeria and Niger Republic Diplomatic Relations; *Department of Political Science and International Studies, Faculty of Social Sciences Ahmadu Bello University, zaria*.
- Temali, M. (2002), *The Community Economic Development Handbook*. St. Paul: Amherst H. Wilder Foundation.
- Van de G. Luc, Rupesinghe, K. and Sciarone, P. (1996). Between Development and Destruction: *An Enquiry into the Causes of Conflict in Post-Colonial States*, The Hague: The Netherlands Ministry of Foreign Affairs.
- Wats, M. (2008). Imperia Oil; *The Anatomy of Nigerian Oil insurgency*. Working Paper No. 17
- Whitley, B. & Kite, M. (2010). *The Psychology of Prejudice and Discrimination (2nd ed.)*. Belmont, CA: Cengage Learning.
- Yamane, T. (1967). *Statistics, an Introductory Analysis*, 2nd Ed, New York; Harper and Row.
- Yusuf, L. (2009). *The Principles and Practice of Islamic Religion*. Lagos: NOK Publishers Nig. Ltd.

Investigation of the Effects of Age, Season and Quaility of Leachate (Contamianant) Transport in Bulumkutu Open Dumpsite, Maiduguri

Engineer Abdullahi Muhammad Abba

Department of Civil Engineering Technology, Ramat Polytechnic Maiduguri, Borno State.
PMB 1070

Abstract: *The disposal of solid wastes at Bulumkutu dump site over the years is an issue of great concerns more so with it attendants leachates emanating from the site causing a lot of untold odors' and discomfort to the people around it apart from the various medical conditions that might be caused by the leachate presence from the dumpsite. Generally, Municipal solid waste is disposed in low lying area without proper precautions or operational controls. Therefore municipal solid wastes management (MSWM) is one of major environmental problems in Borno. Municipal solid waste management encompasses planning, engineering, organizations, administrations, financials and legal aspects of activities associated with generation, storage, collections, transport, processing and disposal in an environmentally compatible manner adopting principles of economy activities and energy conservations. The research investigated the effects of the leachate and its variations over time as a result of age, season and quality of the leachate.*

Keywords: *Leachate, dumpsite, variations and municipal solid waste (MSW)*

INTRODUCTION

Maiduguri metropolis in Borno state is currently facing a municipal solid waste dilemma, for which all the elements in the society are responsible. The community sensitization and public awareness is low. There is no system of segregation of organic, inorganic and recyclable waste at household's level, besides the inadequacy of effective legal framework to address municipal solid waste management in the state. Management of municipal solid waste MSW is an issue of great concern to all and remains one of the most neglected areas of urban development in the state. With the rapid industrialization and population growths, the state of our environment are degrading day by day. Municipal solid waste generation has direct correlations with economic growth. Due to the rapid industrial growth and migration of people from the villages to the metropolises as a result of insurgency, the urban populations are increasing rapidly.

The disposal of solid wastes at Bulukutu dump site over the years is an issue of great concerns more so with it attendants leachates emanating from the site causing a lot of untold odors' and discomfort to the people around it apart from the various medical conditions that might be effected by the leachate presence from the dumpsite. Generally, Municipal solid waste is disposed in low lying area without proper precautions or operational controls. Therefore municipal solid wastes

management (MSWM) is one of major environmental problems in Borno. Municipal solid waste management encompasses planning, engineering, organizations, administrations, financials and legal aspects of activities associated with generation, storage, collections, transport, processing and disposal in an environmentally compatible manner adopting principles of economy activities and energy conservations. The management of municipal solid waste is going through a critical phase due to the unavailability of suitable facilities to treat and dispose of the larger amount of municipal solid waste daily in the metropolises.

The management of municipal solid waste MSW requires proper infrastructure, maintenance and upgrade for all activities. The difficulties in providing the desired level of public service in the urban areas are often due to poor financials status of the municipal corporations such as the Borno environmental protection agency.

Insufficient management of disposal of municipal solid waste is an obvious cause for degradation of environment, ecological impacts such as land degradation, water and air pollutions are related with improper management of municipal solid waste. Most of the municipal solid waste is dumped on Land or in more or less uncontrolled manners. Lack of sufficient awareness at the grassroots level of the waste generation add to the problem of littering. As a result, there is serious threat to public health due to the environmental pollutions. Unscientific disposal causes an adverse impact on all components of the environment and human health.

One of the major pollutions problems caused by municipal solid waste at dumpsite is the leachate which is generated as a consequences of precipitation, surface runoff and infiltration or intrusions of ground water percolating through a dump site ,biochemical processes and the inherent water content of waste themselves. Leachate is the aqueous effluent generated as consequences of rainwater percolation through wastes and the inherent water content of waste themselves. Its quality is the result of biological, chemical and physical process .Rainfalls is the main contributor to the generation of leachate .The precipitation percolates through the waste and gains dissolved and suspended components from the biodegrading waste through several physical and chemicals reactions

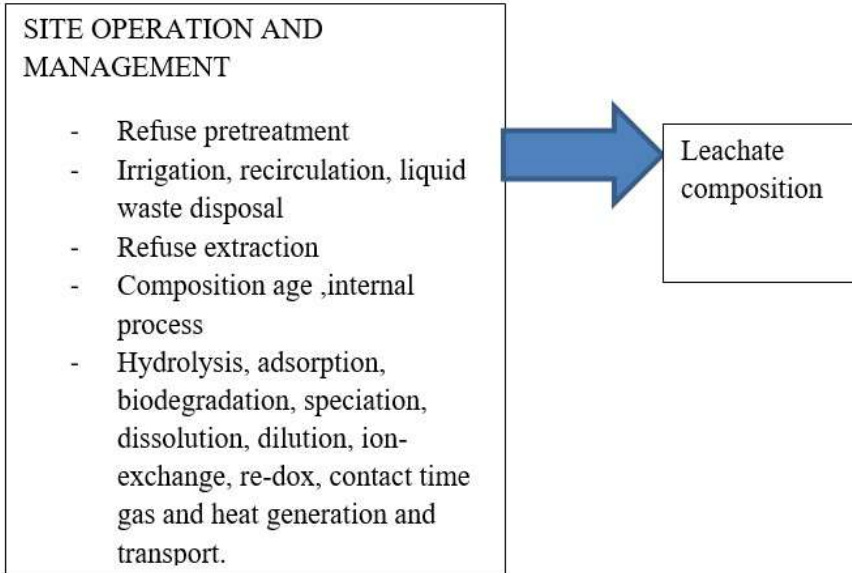
LITERATURE REVIEW

Municipal solid waste (MSW) represents major crises for both urban and rural communities because of lack of awareness of effects of dumping their waste in water canals and other unapproved places causing untold potentials hazard to both human and animals in the society. The storage of any waste material at Dumpsite or landfill poses a potentials problems. One of problem is the possible contamination on soil, ground water and surface water that may occur as leachate produced by water or liquid moving into or through and out of the dumpsite or landfill., migrating into adjacent area(Schroeder et al.,1994).Leachate can be harmful and toxic o human and the environment (Umi Raihana et al.,2014.).Fatta et al (1994) determined that even traces of toxins in leachate can be harmful for the quality of surface and ground water and also for human health

(.Guisboti, 2009).Other researcher (Al-Yagout and Homade .,2003,(Gworeck et al.,2016) classified leachate as one of major source of heavy metals transfer to the environment. Dumpsite leachate effluents are known to be characterized by high organic and inorganic pollutants concentration (Bodzek et al., 2006) and are extremely toxic to the environment. The significant impact of leachate could be entrophications of aquatic systems and toxic effects on fauna which are caused by a variety of contaminants (Lavrova and koumanova., 2010).Typical constituents concentration in Dumpsite leachate are 1000mg/lit BOD5,18000mg/lit COD,225mg/lit TN,30mg/lit TP,1000mg/lit Ca,250mg/lit Mg,500mg/lit Na ,500mg/lit K,60mg/lit Fe,500mg/lit Cl, and 300mg/SO4(Tchobanoglous and kreith,1998).Due to its high toxicity ,leachate is a major threat for aquifers and surface water health status(Bulc,2006).

The major problem in Dumpsite leachate treatments is the extremely high concentrations of ammonia and organic nitrogen.(Bulc,2006),Lavrova and koumanova (2010). Municipal solid waste (MSW) is an inevitable byproduct of human activities. MSW management is highly influenced by the socio-economic and political driver of the society. Unscientific Management and adhoc approaches in municipal solid waste management have led to a generation of voluminous leachate in urban conglomerate with its attendant's consequences. The composition of Dumpsite leachate varies greatly depending on the age of the landfill or dumpsite .As the age of dumpsite increases, Organic concentrations (COD) in leachate decreases and increase of ammonia nitrogen Concentration. The existing relation between the age of the dumpsite and the organic matter compositions may provide useful criteria to choose a suited treatment process (Amalendu, 2004), Bagui (2004) has tabulated the range of concentration of different parameters in leachate of municipal waste which is shown in table 1 describe the lower limits and upper limits that can be expected from landfill or a dumpsite.

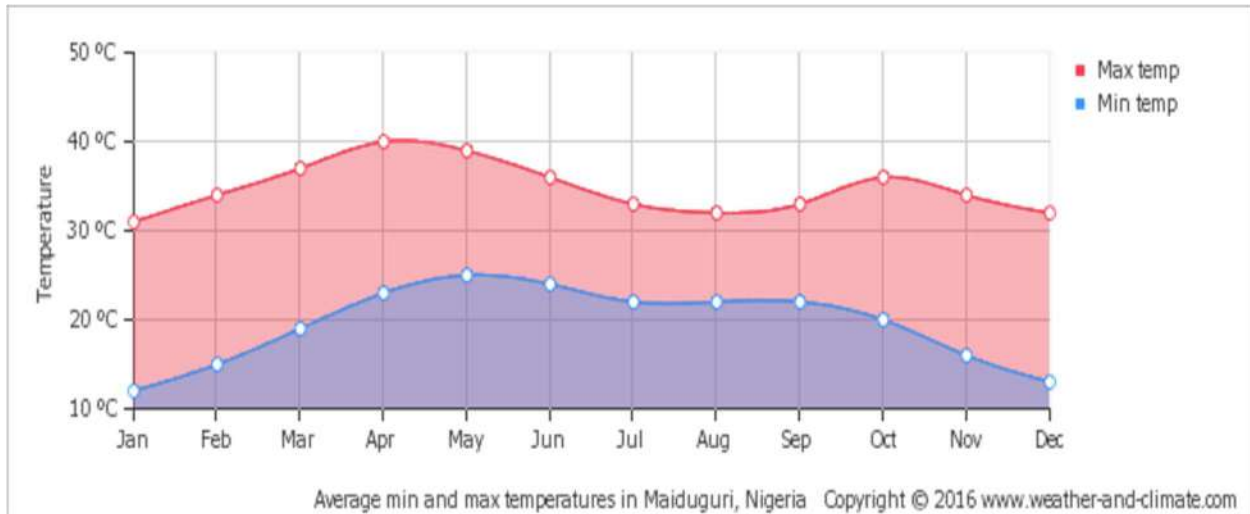
FACTORS INFLUENCING LEACHATE FORMATIONS IN AN OPEN DUMPSITE



ACTORS INFLUENCING LEACHATE COMPOSITION IN DUMPSITE

DIFFERENT CHARACTERISTICS OF LEACHATE GENERATION FROM DIFFERENT DUMPSITE OR LANDFILL

PHYSICAL	ORGANIC CONSTUTENTS	INORGANIC CONSTITUENTS	BIOLOGICAL
Appearance	Organic chemicals	Suspended solids(SS),Total solids (TS),volatile suspended solids (VSS),Volatile dissolved solids(VDS),chloride sulphate	Biochemical oxygen demand (BOD)
PH	Phenols	Phosphate	coliform
Oxidations –reduction potentials	Chemical oxidations demand(COD)	Alkalinity and acidity, N-nitrate, Ammonia -N	Bacterial
Conductivity	Total organic (TOC),Volatile acids, Tanins, lignins	Sodium, potassium, calcium, manganese, Hardness, Heavy metals such as Pb, Cd, Ni, Cr, Co, Zn, etc.	Total fecal streptococci
Turbidity	Oxygen –N,Ester soluble,Nil grease	Arsenic cyanide fluoride selenium	
Temperature	Methylene Blue, organic groups as required, chlorinated hydrocarbons		
Odor			



There are two (2) options for MSW dumping all over the world; one is the crude landfill (open Dumpsites) and the sanitary landfill. Sanitary landfill is one of the secured and safe facilities for the disposal of municipal solid waste (MSW). The most common pathway for leachate to the environment is from the bottom of dumpsite or landfill through the unsaturated soil layers to the hydraulic connections to surface water. However, pollution may also result from discharge of leachate through treatment plants or direct discharge of untreated or partially treated leachate. There are several factors that may influence the pollution potential of leachate according to many researchers. These include the concentrations and flux of the leachate, the Dumpsite sitting i.e. the hydrogeological setting and the degree of protection provided the basic quality, volume and sensitivity of the receiving groundwater and surface water.

Insufficient management and disposal of solid waste is an obvious cause for degradation of environment in the developing countries. Ecological impacts such as land degradation, water and air pollution are related with improper management of solid waste. In Asian countries and most African countries, most of the solid waste is dumped on land in more or less uncontrolled manners. Lack of sufficient awareness at the grassroots level of the waste generation added to the problem of littering. As a result, there is serious threat to public health due to environmental and human health.

TABLE 2.1 PARAMETERS OF PRETREATED LEACHATE AND THE LIMITING VALUE ACCORDING TO WORLD HEALTH ORGANIZATION (WHO)

POLLUTANTS	AVERAGE	LIMITING VALUES ACCORDING TO WHO
PH	8.15	6.5-8.5
COD	10897mg/l	250mg/l
BOD	26mg/l	50mg/l
TDS	8906mg/l	1000mg/l
IRON	3.8mg/l	3mg/l

CADMUIM	4.3mg/l	0.003mg/l
---------	---------	-----------

STUDY LOCATION

Maiduguri metropolis is the largest town of Borno state has a population of slightly Five million inhabitants. It lies between latitude $10^{\circ}48'00''$ and longitude $11^{\circ}20'00''$ (Moyomi and Mohammed, 2014). The climatic condition of Maiduguri metropolis is hot characterized with high humidity and is semi-arid with a maximum mean temperature of up to 47°C and minimum mean temperature as low as 25°C . Total rainfall during the year is between 650-700mm with 85% of total rainfall occurring between July and September.

Leachate samples for the research work will be collected from Bulumkutu open Dumpsite. It was observed that there is no any cover of any description placed over the spread to inhibit the ingress of surface water or to minimize litter of surface water or to minimize litter below and odors or to reduce the presence of vermin and insects. Rags pickers regularly set fire to waste to separate non-combustible materials for recovery since there is no specific arrangements to prevent flow of water into and out of the Dumpsite, the diffusions of contaminants released during degradation of dumpsite waste may proceed without uninhibited. No proper compaction is done to compress the waste into the site



**MAP OF NIGERIA SHOWING MAIDUGURI
MATERIALS AND METHODOLOGY
SAMPLING PROCEDURE**

The quality of leachate was determined after taking integrated samples at different locations of the dumpsite. The sites where the sampling would be undertaken is an open dumpsite, a non-engineered site where there is no any liner nor leachate collector or treatment system, The leachate samples are collected from the base of solids waste heaps where the leachate is being drained due to gravitational forces. The leachate sampling was undertaken on three different point in time so as to ascertain the effects of the rainfall on the leachate quality. Leachate samples are collected from the same locations to determine the effects of age and seasonal variation on the leachate characteristics of Bulumkutu open dumpsite municipal solid waste.

LABORATORY INVESTIGATIONS

The various physico-chemical parameters such as PH value, Total solids(TS),suspended solids(SS),Total dissolved solids (TDS),Turbidity, Hardness, Biological oxygen demand(BOD),chemical oxygen demand(COD),Chloride(Cl),Nitrate(NO₃),Total phosphorous(TP), sulphate (SO₄) and possibly other anticipated heavy metals such as Iron(Fe),Lead (Pb),Chromium(Cr),Cadmium(Cd),Copper(Cu),zinc(Zn) and nickel(Ni).

Arsenic (AS) was analyzed to determine the pollution potentials of the leachate discharge from the Bulumkutu municipal solid waste (MSW) dumpsite.

Standard methods for examinations of waste and wastewater as specified by American public health associations (APHA, standard methods for the examinations of water and wastewater, 21st editions) while PH values are measured using electronic PH meter (4500-H .B .of standard methods) while the total solid (TS) was determined by properly shaken unfiltered sample and estimated using gravimetric methods (254.B of standard methods)

Table: 2.2 CHEMICAL COMPOSITION OF LEACHATE FROM MUNICIPAL SOLID WASTE (MSW)

Parameter	Concentration Range Mg/l	Bulumkutu
Alkalinity (As CaCO ₃)	0-20,850	(16,200)
Aluminum	0.5-850	(900)
Antimony	0.-3.19	(2.18)
Arsenic	0.-70.2	(60.5)
Barium	0-12.5	(7.0)
Beryllium	0-0.36	(0.5)
BOD 5	0.195,000	(15,000)
Barium	0.413	(0.215)
Cadmium	0.1.16	(9.5)
Calcium	5-4,0 80	(3500)
Chloride	11,375	(12,375)
Chromium	0-22.5	(20)
COD ²	0-89,520	(72,000)
Conductivity umho/cm	480-72,500	-
Copper	0-9.9	(8.0)

Cyanide	0-6	-
Fluoride	0.1-1.3	(1.5)
Hardness (as Caco ₃)	0.1-225,000	(230,000)
Iron	0-42,000	(38,000)
Lead	0-14.2	(16.0)
Manganese	0-115,600	(120,000)
Manganese	0.05-1,400	(900)
Organic Holiday	0.320-3.5	(4.0)
Benzene	0.1-0.6	(0.5)
Ethyl benzene	0-4.9	(0.2)
Nitrogen (Ammonia)	0-1250	(1000)
Nitrogen (Nitrate)	0-9.8	(8.5)
Nitrogen (Organic)	0-1,000	(900)
Nitrogen (Kyeldahl)	0-3, 320	(2800)
Nickel	0-7.5	(0.95)

Phenol	0.17-6.6	(5.5)
Phosphorous (total)	0-234	(200)
Phosphate	0.01-154	(150)
PH	1.5-9.5	(8.00)
Potassium	0.16-3,370	(4.00)
Selenium	0-1.85	(2.3)
Silver	0-1.90	(2.2)
Sodium	0-8,000	(7800)
Thallium	0-032	(0.5)
Tin	0-016	(0.18)
TDS ³	584-55,000	
TSS ⁴	140,900	
TOC ³	335,000	
TVA ⁶ (as Acetic Acid)	0-19,000	

TABLE 2.3 LEACHATE CONCENTRATION CHANGES WITH DUMPSITE AGE (LANDFILL)

Parameter	Landfill/Open Dumpsite Age (YEARS)				
Mg/L	0.5	5-10	10-20	(Bulumkutu)	> ≥0
BOD	10,000-25,000	1,000-4,000	50-1,000	(800)	<50
COD	15,000-40,000	10,000-20,000	1,000-5,000	(2300)	<1,000

Nitrogen (Kyle/Daw)	1,000-300	400-600	75-300	(300)	<50
Nitrogen (Ammonia)	500-1,500	300-500	50-200	(170)	<30
TDS	10,000-25,000	5,000-10,000	2,000-5,000	(300)	<300
PH	3-6	6-7	7-7.5	(7.5)	7.5
Calcium	2,000-4,000	500-2,000	300-500	(200)	<300
Sodium & Potassium	2,000-4,000	500-1,500	100-500	(600)	<100
Magnesium & Iron	500-1,500	500-1,000	100-500	(750)	<100
Zinc & Aluminum	100-200	50-100	10-50	(90)	<100
Chloride	1,000-3000	500-2,000	100-500	(200)	<100
Sulphate	500-2,000	200-1,000	50-100	(200)	<10
Phosphorous	100-300	10-100	50-100	(250)	<10

EFFECTS OF DISTANCE OF DUMPSITE ON GROUNDWATER CONTAMINATION

The extent of contamination level of groundwater quality due to leachate percolation depends upon a number of factors like chemical composition of the leachate ,rainfall ,depth and distance of the well from the pollution source (the dumpsite).Groundwater sample of different depths and distance from dumpsite are to be analyze to understand the level of contaminations (USEPA,2004). Concentration of contaminants were found to be high in the sampling sites which are near to the landfill/dumpsite as reported by Abbas (2014) and Su shi (2015).Interestingly, the groundwater contamination drops fast with increase in the sampling sites from the landfill/dumpsite .The leachate was further found to be gentler as the distance from the landfill/dumpsites is increased.

TABLE 2.4 LEACHATE CHARACTERIZATIONS AND STABILIZATION AT VARIOUS DEPTHS AND ITS IMPACT ON GROUNDWATER QUALITY

TOTAL SITE AREA	4ha
WASTE FILLED AREAS	3.5ha
DISPOSAL QUANTITY (MT/day)	APPROX 140
WASTE OWNERSHIP DISPOSAL METHOD	BORNO STATE SANITATION BOARD AND OPEN DUMPING AND LEVELLING BY BULLDOZER
AVERAGE DEPTH OF WASTE DUMP	APPROX.1.5M
GROUND CONDITIONS	SILTY –CLAY SOIL
HYDROLOGY	WATER TABLE AT 3-5M
AGE	26YEARS

Studies undertaken by several researchers indicates that the physico- chemical characteristics ,ionic pollutants concentration ,Nitrogenous pollutants concentrations ,carbonaceous pollutants concentrations and heavy metals concentration at variable depths tends to improves as the distance increase away from the dumpsites .Accordingly, it shows that the quality of groundwater in the area near the dumpsites is greatly affected by leachate contaminations as again those that are far away from the dumpsites .The quality of groundwater was found to significantly improve with increase in depth and distance of the wells from the dumpsites .If it is unavoidable ,deeper drilling and frequent analysis of water samples are desirable in areas where there is dumpsites even if it is decommissioned dumpsites with few years (Mor et al.2006).

The quality of ground water in areas where there are dumpsites are reported to be distorted and presence of heavy metals of various pathogenic microorganism which are attributed to the leachate contaminations and most dumpsites/landfill are not isolated enough as required by regulatory bodies .Reported cases drinking groundwater polluted by heavy metals such as manganese and other ascernic substances in leachate for a long time is reported to increase risks of cancer and infants deaths as well as induce motor and cognitive disorder .More recent studies have revealed that emerging pollutants with genotoxicity ,reproductive toxicity among others.

Leachate from dumpsites are likely source of contamination of drinking water causing poisoning ,cancer ,heart disease and teratogenicity abnormalities' .Equally ,leachate was implicate d for bacteria contaminations of drinking water.

The research seeks to establish an in-depth studies concerning groundwater quality, establish a bench –mark information's on the extent .of pollutants brought about by the dumpsites. The evaluation of the dumpsite leachate quality and quantities is to be established for use in environmental impact assessment as well as the factors that influences the leachate production processes which varies with time and space ,hence the need for in-depth evaluation .The conventional contaminant are known as reported in several research work ,but the exact composition of dumpsite leachate composition is yet to be established and obviously their potentials impacts on the environment in this part of the world is relatively unexplored.

GOVERNING EQUATIONS

There are various governing equations which are essential for the utilization of all the outlined steps. The partial differential equations describing the groundwater flow, velocity and contaminants transports can be expressed as follows according to Harbaugh (2016) and Zheng and Wang (2014):

For the ground water flow model,

$$\frac{d}{dx} \left[kx(\psi) \frac{d\psi}{dx} \right] + \frac{d}{dy} \left[ky(\psi) \frac{d\psi}{dy} \right] + \frac{d}{dz} \left[kz(\psi) \frac{d\psi}{dz} \right] = \left[\frac{\theta}{nSs} + c(\psi) \frac{d\psi}{dt} \right] + -Q \dots 1$$

For the contaminant transport Model:

$$\begin{aligned} & \frac{d}{dx} \left(\theta D_{xx} \frac{d}{dx} + \theta D_{xy} \frac{dc}{dy} + \theta D_{xz} \frac{dc}{dz} \right) + \frac{d}{dy} \left(\theta D_{yx} \frac{dc}{dx} + \theta D_{yy} \frac{dc}{dy} + \theta D_{yz} \frac{dc}{dz} \right) \\ & + \frac{d}{dz} \left(\theta D_{zx} \frac{dc}{dx} + \theta D_{zy} \frac{dc}{dy} + \theta D_{zz} \frac{dc}{dz} \right) - \left[\frac{d}{dx} (V \times C) + \frac{d}{dy} (V_y C) + \frac{d}{dz} (V_z C) \right] \\ & = \frac{d}{dt} (\theta C) + \rho b \frac{ds}{dt} + Km \theta C - 1 + -R \end{aligned}$$

Where X,Y Z are the Cartesian coordinates axis ., t is the time .,Kx, Ky ,Kz are the hydraulic conductivity along the respective Cartesian plane ,X,Y,Z coordinates axis ,ψ is the pressure head ,θ is the moisture content .,n is the effective porosity of the porous media Ss is the specific storage of the porous media .C(ψ) is the specific moisture capacity ,Q is a volumetric flux per unit volume representing sources and sinks of water.,Dij(I,j=x,y,z) is the hydrodynamic dispersion coefficient .,C is the concentration of contaminants dissolved in groundwater.,Vx,Vy,Vz are groundwater velocities in x,y,z directions and

Vx=-Kx∂h/∂x, and Vy=-Ky∂h/∂y, while Vz=-Kz∂h/∂z, h=ψ+z is the total head., pb is the bulk density of the porous media,S is the weight absorbed water per unit area of porous media .,Km is the decay coefficient .,m is the m-th order of chemical /biological decay .R is the retardation coefficient which is defined as

$$R=1+ \rho b/n k_d$$

Where Kd is the partition coefficient .The component of the hydrodynamic dispersion coefficient are also calculated by equation below

$$\begin{aligned} D_{xx} &= \alpha_L V^2_x / |V| + \alpha_T H V^2_y / |V| + \alpha_T V V^2_z / |V| + D^* \\ D_{yy} &= \alpha_L V^2_y / |V| + \alpha_T H V^2_x / |V| + \alpha_T V V^2_z / |V| + D^* \end{aligned}$$

Where αL is the longitudinal dispersivity ,αTH is the horizontal transverse dispersivity and αTV is the vertical transverse dispersivity and D* is the molecular diffusion coefficient , |V| = √v²_x + v²_y + v²_z is the magnitude of the velocity vector.

When the velocity vector is aligned with same coordinates axis, all the cross items becomes zero. These governing equations cannot be solved analytically; therefore they have to be solving using numerical methods. The finite difference method is used in MODFLOW and MT3DMS Package for deriving the solution to the governing equation.

Although, some of the models have been applied in the prediction of contaminants sorption and transport in developed countries, not much has been done in Nigeria .One of the six (6) guidelines and standards defining environmental policy includes the management of solid and hazardous wastes ,notwithstanding there are numerous issues that hinder its successful execution (Eneh and Agbaue,2011).It is observed that most of the work in contamination of groundwater due to landfilling and open land dumping is described qualitatively ,without much emphasis to quantitative measurement and prediction

CONCLUSION

The release of leachate to the environment is one of the major environmental impacts related to disposal of waste .Disposed waste in Open Dumpsites undergoes a series of phases where the waste

is decomposed .During the decomposition, leachate is generated by excess rainwater infiltrating the waste .The leachate contains several groups of pollutant namely Dissolved organic matter, inorganic macro components, heavy metals and xenobiotic organic compounds.

Existing literatures shows that the compositions of leachate is highly dependent on the degradation stage of the waste.

Leachate generation is an inevitable consequence of the practice of waste disposals .Many environmental factors and operational practices influence landfill process resulting in temporal and spatial variations in the quantity and quality of land fill leachate. Leachate sampling methods and sample handling routine may also influence the leachate quality.

Several studies have also indicated seasonal variations in leachate compositions and concentrations have been reported.

Mathematical models have been developed over the years to simulate these variations as well as leachate generations and transport process.

Several reviews of selected flow and transport model have been reported in literature's ,many of which have been applied to simulate the migration of leachate contaminants plumes away from sanitary landfill and similar concepts have also been adopted to develop mathematical models or use existing models to simulate leachate occurrences and behavior with a landfill.

REFERENCES

- Abbas .A.A.,Jungsong.G.Ping.L.Z.,Ya Pan,Y., Winston., Al-Rekabi (2009).Review on Landfill leachate treatments .American journal of applied science,6(4).,pp672-684,2009.
- Ahmed S. khanbilvardi R.M, fillos and gleason P.A, two dimensional model for estimating leachate for water management, conf.proc, ASCE,forth horth Texas, April 17-21, 738-148
- Ahmed S. khanbilvardi R.M, fillos J and gleason P. tho dimensional leachate estimation through land live. J.Hydrengineering ASCE 118:, 306-323
- A.Kansel, Solid waste management strategies for India, Indian journal of environmental protections, 22(4), 2002, 444-448.
- A .khajuria, Y.Yamamodo and T.Morikoa, Solid waste Management in Asian countries, Problems and issues. Proceeding of 4th international conference on waste management and environment, June2-4, 109, 2008 643-653
- Al-shifi, R. predicting the generation and transport of pollutants by water shed hydrologic system model proc.inter.emf, April Lisbon, Portugal, 888-895 management and environment, June2-4, 109, 2008 643-653
- Al-shifi, R. predicting the generation and transport of pollutants by water shed hydrologic system model proc.inter.emf, April Lisbon, Portugal, 888-895
- A.H.Robinson, Landfill Leachate Treatment, Journal of membrane Technology, 2005, 5-12

- Akesson N.P Nilsson seasonal change and pattern of leachate fluid in municipal solid waste land fill journal environment 123,892-900 ()
- Amalendu, B. (2004). Design of landfill and integrated solid waste management, 3rd Editions, John Wiley & Sons, Inc. Hoboken. New jersey, Canada
- APHA, Standard methods for examination of water and waste water (19th edition).
- Augustine D.J Pacey, modeling land fill methane generation conference proceedings 3rd international land fill symposium, sardine Italy vol,1;115-148
- Bendz, D.C Dengisson, L evaporation from an active uncovered landfill, journal of hydrology, 182:143-155,1996
- Beven, K.P. german waterflow in soil micropores.11A combined flow model, journal of soil science, 32:15-29()
- Blakey W.C infiltration and absorption of water by domestic waste in landfills, research carried out by WRC harwell landfill leachate symp, oxon .UK. (1986)
- Brooks, R.H.A.T. covey properties of porous media affection fluid flow, Proc: AM.soci. Civ Eng.g 92,61-87, 1989
- C.Visvanathan and J.Tranker, Municipal solid Management in Asia. A comparative analysis workshop on sustainable landfill management 3-5 December, Chennai, India, 2003, 3-5
- Catfrey, R.P, R.K ham, the role of evaporation in determining leachate production from milled refuse landfill compost sci. march-April: 11-15 (1986)
- Campbell D.J.V understanding water balance in landfill sites waste management ,75:594-600 (1998)
- Clozying of leachate collection systems used in harzardous waste disposal identifying white paper, prepared for USEPA research triangle park, north Carolina.
- Chen C.R.J wagnet, simulation of water and chemicals in micropores soils, part 1 representation of the equivalent macrospore influence and it effects on soil water flow J>Hydro, 130:105-126 (1999)
- Christerisen, T.H and Kyeldsen P, (1989) basic biochemical process in landfill.in: T.H Christensen R> cassu and R. stegman (editors) landfilling press technology and environmental impact academic press London PP. 29-49
- Demetamorphous A.C Kortifictis G.P, Bourodinas E.I and navy E.G moisture transport in a solid waste land fill model and sensivity analysis water resource , bullet 22, 601-609 ()
- El-fadd M,nomical modeling of gas and heat generation in sanitary landfill Ph.D dissertation standford university
- Environmental Protection Agency (EPA Ghana) Manual for the preparation of District waste management in Ghana. Best practice .Environmental Guidance. Series NO 3, EPA, Accra. (200)
- Ehrig H.S quality and quantity of sanitary landfill leachate waste management Res 1:53-68(2000)
- Ettala, M., infiltration and hydraulic caudation at a sanitary lawful. Aqua finically, 2; 231-237,71006.
- Erdogan H prediction models for sanitary land fill in Eng, conf. prece ASCE boulder, Co July 6-8, 540- 547

- Farguhar G.J leachate production and characterization. Com journal civil Eng.g 16 317-325 ()
- Fenn D.G Harley K.J Deg. T.V () used of waste balance method for cincinati predicting leachate generation at waste disposal site EPA 530/5w-168 USEPA ohio.
- Foo, K.Y., Hammed B.H. (2009). An overview of landfill leachate treatment via activated carbon absorption Process. Journal of hazardous materials (171)
- Fred Lee. G, Anne Jones-Lee (1994). A groundwaterprotection strategy for lined landfills. Enviromental. Science and technology.
- Fuller W.H Ford A.A and carter G.E predicting movement of selected metals in soils, application of the disposal 5th Ann. Symp. Orlando florida March 26-28 EPA 600- 9-29-023ac
- G.Tchobanoglous, H.Thesen and S.A. Vigil integrated solid waste management Engineering Principles and Management issues (1st Editions) New York McGraw Hill, 1993
- Gee, J.R; the prediction of leachate generation in lawfill a new method; 6th annual malison conference of applied research and practice on municipal and industrial west , pp. 201-224,2009.
- Gerke, H.H. M.T; van genuchten a dual proposity model for simulating the preferential movement of water and solutes in structured porous media, water resource res.29:305-319, 2011
- Ibrahim A. Mirsal (2008). Soi l Pol lution-Or igin, Monitoring & Remediation Second edition, Springer.
- IS 2720- Part 5 (1970). Method of Test for Soils: Determination of liquid and plastic limits. Bureau of Indian Standards, New Delhi.
- IS 2720- Part 30 (1980). Method of Test for Soils: Laboratory vane shear test. Bureau of Indian Standards, New Delhi.
- IS 2720- Part 3 (1980). Method of Test for Soils: Determination of specific gravity. Bureau of India Standards, New Delhi.
- IS 2720- Part 5 (1970). Method of Test for Soils: Determination of liquid and plastic limits. Bureau of Indian Standards, New Delhi.
- Kortiatis G.P Modelling the moisture transport through solid waste landfill Ph.D dissertation, Rutgers university ()
- Lee, J.Y jung LH Lee W.B and Kim J.O, computer and experimental simulation of the production of methane from municipal solid waste. Water sci tech .27. 225-234
- Lee J.L ; shin H.S. and clung H ; simulation of leachate quality using laboratory hyalite proc. Thro Int. landfills syrup. Sandinia , Italy, 865-875 ()
- Noble J.J nasir G.m, heestan J.F and Arnold A.E experimental an mathematical modeling of moisture flow in land filltech centre env.mgt, turf university.
- Rao S.K; prediction of settlement in landfills for foundation design purpose Ph.D dissertation .West Virginia university ()
- Reddy. K.R, Hiroshan Hett iarachchi, Janardhanan Gangathulasi, Jean Bogner, and Thomas Lagier (2009).
- Reddy. K.R., Hiroshan Hettiarachchi, Naveen Parakalla, Janardhanan Gangathulasi, Jean Bogner, and Thoma Lagier (2009)
- Rowe R.K and broker J.R; pollutants migration through liner undertrain by fractured sill J. Geotech Englg Asiel , 127 1902-1919 ()

- .Roa ,T.Rao .V.V.S.G .,RANGSAVSIN,K ,Surinda .L Mahesh,j.(2011) Assessments of groundwater contamination from a hazardous dumpsite in Ram fit ,india .Hydrogeology journal Vol 150.pp465-469
- S.Renou, J.G. Giaduran, S.Poulain, F. dirassouyan and P.Moulin.Landfill leachate treatment. Review and opportunity, journal of Hazardous materials, 150, 2008 468-493
- Singh V.P kinematic wave modeling in water resource environmental hydrology john wisely and sons New York 2010
- Straub W.A and lynch D.R., models of lawfill leaching organic strength. J. environs. Engg, AIP ASCE, 180,251-268 ()
- Stegman R.H J ehrig leachate production and quality-result of land fill process and operation conference proceeding gs. An international landfill symposium. Sardinia Italy XXVIII:1-16, 2012
- Thoma, S.G, D.P Gallegos D.M smith, Impact of fracture coating on fracture/matrix flow interaction unsaturated porous media water resource; 28:1357-1367,1998
- Tsana Y.W, C.F Tsana, channel model of flow through fractured media, water resource 23:467-479.(2000)
- USEPA (2011) Municipal solid waste landfill criteria technical manual, subpart-D ,Design criteria ,united state environmental protection Agency .,http//www.epa.gov
- USEPA (1989). Requirements for Hazardous waste landfill design, continuation and closure. Engla/625/4-89-022, USEPA Washington DC,USA,57P.
- YAING C.W Nummon, T.J jacniki , M.P cogley, D.R and capine, S.V.()
- Zeiss, C.W major moisture flow through municipal solid waste pattern and characteristic .J. environment systems 22.211-231 ()
- Zheng , C(2009) Recent Development and pure direction for MT3DMS and related transports codes ,Ground water vol.7 pp 620-625
- Zheng ,C.and Bernett,G.C.(1995). Applied contaminant transport modeling, van Nostrand Reinhold ,A Divison of international Thompson publishing inc.New York pp440

Feasibility of Greywater Reclamation Using Local Plant Material in De-Centralised Recycling Systems for Maiduguri and its Environs

¹Abubakar Muhammad Rufai, ²Yagana Bukar and ³Zarah Ali Lawan

⁴Maryam Baba Bukar

^{1, 2 & 3} Department of Remedial Science Ramat Polytechnic, P.M.B 1070

⁴University of Maiduguri Teaching Hospital, P.M.B 1414

Corresponding Email address: rufaia97@gmail.com

Abstract: Maiduguri is a semi-arid region that suffers from water shortage as a result of high temperature and low rainfall. Population growth with poor water management increases pressure on water resources. This study scaled the quantity of water used for domestic activities to characterize greywater generation volume in Maiduguri. A questionnaire was administered to 40 households across the four districts of Maiduguri: Two (2) from densely populated areas of Shehuri north and Gwange while the other two (2) from less densely populated areas of Bolori and Maisandari respectively. The outcome of the results revealed that about 46.8% of the resident sources of water are piped network from the treatment plant supply by the government while 40.39 % used private boreholes. With soak-away as a medium of greywater disposal constituting 52.5% while 44% of the inhabitant similarly used street due to lack of effective sewer system to dispose they greywater. A descriptive statistical distribution was used to analyze the numerical data obtained. The findings from the descriptive statistics revealed that the volume of water used for domestic activities from the two sources in (litres) stood at 533 in Gwange, 451 in Shehuri north, while 287 in Maisandari, and 287 in Bolori respectively. The volume of greywater produced in (litres) stood at 315 in Shehuri north, 387 in Gwange, Bolori 91, and 200 in Maisandari. Generation from all domestic activities stood at, ablution 7.0 %,53 bathing, kitchen 20% and laundry 20% in Shehuri north. While in Gwange ablution is 1.0%, bathing 61%, kitchen 8%, and laundry 30%. Similarly, in Bolori ablution 1.3%, bathing 63%, kitchen 24%, and laundry 12% while in Maisandari ablution 1.0 %, bathing 66 %, kitchen 17% and laundry 16% respectively. Base on pieces of literatures, Moringa oleifera and rice husk are therefore recommended to treat greywater in Maiduguri and its environs.

Keywords: Greywater, Laundry, Ablution and Bathing

Introduction

The global water shortage is due to a combination of population expansion and economic growth with extensive use of water in agriculture, industry, and increasing standard of lifestyle, as while as climate change (Ahmadalipour, Moradkhani, & Magliocca, 2019). Water is defined as the most demanded basic need for living beings on earth. However, water is at the same time significant for domestic, agricultural, and industrial purposes (Hossain, & Mahmud 2019). Maiduguri water

demand is estimated to rise to approximately 154,443 Million cubes per day by the year 2056, to meet this water demand, the combined supplied strength from the treatment plant of Maiduguri with other sources such as boreholes (public boreholes) stands at 31,973 Million cubes per day (Abdullah, Abubakar & Jones , 2019). Grossly it is inadequate to meet the projected household water demand of 154,443 Million cubes per day by the year 2056. The pressure on water resource are divide into two; demands-side pressure which are due to demographic growth which led to increasing in water demand for domestic, agriculture and industrial purposes. Similarly, the supplies-side pressure is due to drought, and climate change. Those demands will increase by 2025 to 35% while on the other hand, by 2050 it will reach up to 67% which are mostly from developing countries such as Africa (Boretti & Rosa, 2019). Climate change is considered to be potential factor that will increase pressure on water resources in not too distant future (Duran-Encalada. Paucar-Caceres, Bandala & Wright, 2017). However due to rural-urban migration, there will be continuous pressure on water demand in towns from the developing countries, and continuing with these demands, the problem would leave about 55% of the world population in water crisis (Guneralp, Lwasa, Masundire, Parnell & Karen., 2017). Domestic wastewater is known as greywater. Greywater is defined as domestic water waste originating from households such as laundry clothes, kitchen, washing dishes, and bathing excluding toilet wastewater (Ghaitidak & Yadav 2013). Dark and black water are considered to be domestic waste from toilets, bidet, kitchen sink, and dishwashers (Oteng-Pepurah, de Vries & Acheampong, 2018). Similarly, James, Surendran, Ifelebuegu., Ganjian, & Kinuthia, (2017) described greywater as untreated household wastewater from showers, baths, kitchen, hand wash basin, laundry, and other known sources that have no contact with sewage without toilets. However, according to Craig and Richman (2017) wastewater from domestic activities such as dishwashing and laundry exclude sewage is called greywater. Greywater is now considered and recognizes as an essential source of water in most water-scarce nations (Spychala, Nie'c, Zawadzki, Matz, Hung, 2019). Greywater may represent up to 75% of the total domestic wastewater, accounting for up to 100–150 Litre/Population Equivalent/day(L/PE/day) in European Union and other high-income countries, and for smaller volumes in low-income countries (Boano, Caruso, Costamagna, Ridolfi, & Fiore, et al., 2020). And Nigeria is also considered to be a low-income nation. Globally, wastewater treatment and reuse have been re-emphasized for decades as effective mitigation solution of water scarcity (Hossain, Muhammed, Pramanik, & Nizamuddin, 2020). Recycling greywater for non-portable reuse provides strategies for alleviating the risk of water shortage and water demand. Greywater reuse can play a fundamental role, in converting a significant fraction of wastewater into a valuable water resource. The wastewater treatment system includes collection, effective treatment, and integrated recycling of treated wastewater for water management to overcome the potential shortages' of freshwater and to reduce water pollutant (Boano et al., 2020), hence sustainable management of water resource is therefore essential.

Problem statement

Maiduguri is a Sahel savannah and is characterized as the driest zone for decades which is similarly known for water access problems and scarcities (Akinbile et al., 2019). Maiduguri and its environs

lie within the Sahel savannah region and the area is characterized with high evaporation, evapotranspiration rate on an average of 2000mm per annum with a maximum rainfall of about 600 mm per year which is therefore classified as a dry area (Goni, Sheriff, Mohammed, Mohammed & Ibrahim, 2019). Portable water sources are mainly from surface water for which this community receives supplies from the water treatment plants of Lake Alua. This dam constitutes only 30% of supplies to the entire community of this area while the rest are been generated through boreholes. The rainfall usually lasts for 3 months only and the temperature remains high which usually triggers the evaporation rate to be high during the dry season resulting in water shortage (Akinbile et al., 2019). According to Mohammed (2009) study reported that there is an increase in temperature rate with a decrease in rainfall (drought), evapotranspiration, desertification as well as drying up of rivers that are taking place in Maiduguri and its environs. Water scarcity remained a major challenge during the dry season and many of the inhabitants use less than 25 liters per person per day (Hyeladi & Nwagilari 2014). The advancement of climatic crisis has further worsened the availability of water, vegetation, and agricultural production in Maiduguri. However, currently, there are more than 4 million people that are taking refuge in Maiduguri due to insurgency, in addition to the existing inhabitant populations of the city. Similarly, many of them do not have access to clean and hygienic water because of some environmental factors. Furthermore, 31,973 million cubes per day supplies from all known sources for this community as mention in the introduction part of this study is grossly inadequate to meet their household water demand in addition to the influx of these internally displaced persons of more than 4 million. Thus supply schemes from other sources should be considered as potential mitigation to cover those water demands capacity to enhance supplies in Maiduguri and its environs.

Study Area

Maiduguri is the state capital of Borno state Nigeria, the city is geographically located between the latitude of 10°48'00''N and Longitude of 11° 20' 00''E (Goni et al., 2019). Maiduguri is a Sahel savannah and is characterized as the driest zone for decades which is similarly known for water access problems and scarcities. Maiduguri and its environs lie within the Sahel savannah region and the area is characterized by a high evaporation rate, evapotranspiration on an average of 2000mm per annum with a maximum rainfall of about 600 mm per year. Figure 1.1 showed the map of the study area with their respective district areas. The average temperature of Maiduguri is 25.8⁰ C and 47⁰ C as the highest temperature, and this highest temperature was recorded around 1983. Subsequently, the lowest was recorded as 5⁰ C in 1979 (Babagana, 2017).

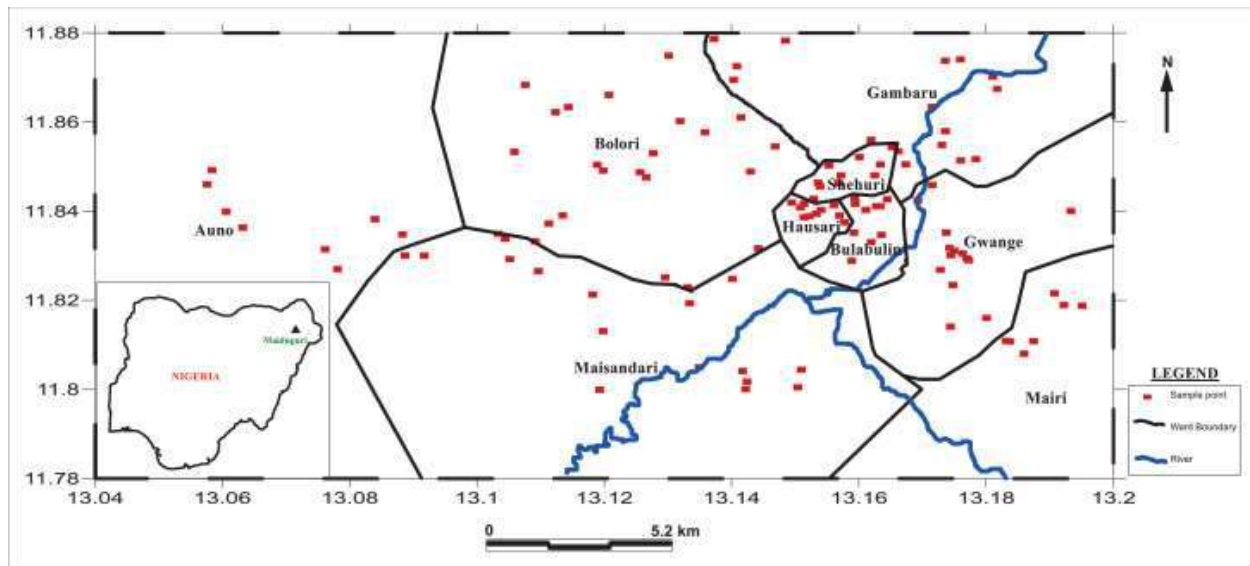


Figure 1.1 Map of Maiduguri and it's environ

Aim

The research aim is to evaluate the volume of greywater produced from a different source of water to recycle and to minimize and sustain domestic water supply in Maiduguri and its environs

The objective of the study

- To determine the sources of water supply in Maiduguri
- To estimate the quantity of water used for domestic activities by households for their domestic activities
- To evaluate the volume of greywater produced per household

Literature Review

Water resource management

Since the 1992 UN Earth Summit held in Brazil, people have continued to discuss the depletion of natural resources globally in broad terms due to population growth and the need to minimise the irrational use of water (UN 1992). There is increased concern for the development of wastewater reclamation systems to address water problems worldwide. Nowadays countries such as China and Indonesia are offering incentive and levies towards coherent and effective natural resource development; particularly recycling of wastewater effluent according to reused guidelines standards by individuals (Anderson, 2002). Similarly, the government of Australia offers a rebate incentive of \$ 500 to an individual for the installation of greywater systems for reuse. It has been made mandated in Tokyo to install a Greywater recycling system for buildings covering an area of over 30,000m² (Oron, Adel, Agmon, Friedler &, Halperin et al., 2014).

Global approach to wastewater

The wastewater management concept has become a global phenomenon that attempts to address problems of water demand and its stress. The world is heterogeneous, thus the effectiveness of these concepts vary from one region to the other even within the same country for water

sustainability and improvement of environmental sanitation (Biswas, 2008; Gine-Garriga et al., 2013). Worldwide, there is a different approach from many countries to treat wastewater these include a complex, conventional (centralised) system and non-conventional (de-centralised) local systems installed at household levels (Langergraber & Muellegger 2005). Wilderer, (2001) added that building of centralised wastewater treatment systems could serve densely populated communities. However Letting, Lens, & Zeeman, (2001) study asserts that centralised systems are expensive forms of treatment for the local community. Therefore to sustain natural resource at the local level, Daigger's (2009) study suggested that decentralised treatments system could be used because the technologies involved in wastewater recycling is less expensive. There are two most common ways of tackling environmental waste and sanitation problems 'flush and forget' including the continuous collection of sewage in underground pipe systems that are connected directly to treatment plants and 'drop and store' dry sanitation (Anderson, 2002; Langergraber & Muellegger 2005; Ormerod 2016). Wastewater reuse application for agricultural irrigation purposes has supported the livelihoods of many farmers across the world (Sato, Qadir, Yamamoto, Edo, & Zahoor, 2013). In Pakistan, a study revealed that about 32,500ha (325,000,000m³) of land were irrigated with wastewater (Ensink, Mahood, Hoek, Rashid-sally, & Amerasinghle, 2004). Similar reports have indicated that about 73,000ha (730,000,000m³) of land were irrigated from wastewater in India (Scott, Faruqui, & Raschid-Sally, 2004).

Greywater

Greywater is defined as domestic water waste originating from households such as laundry, kitchens, dishwashing, and bathing but excluding toilet wastewater (Ghaitidak & Yadav 2013). Similarly, Morel and Diener (2006) describe Greywater as untreated household wastewater from showers, baths, kitchens, hand wash, basins, laundry and other sources that have had no contact with sewage from toilets. However, Weiskel, (2014) described Greywater as wastewater from domestic activities such as dishwashing and laundry, excluding sewage. Greywater is now considered and recognised as an essential source of water in most water-scarce nations (Peters, 2015). Black-water is considered to be domestic waste from toilets, bidets, kitchen sinks and dishwashers (Allen, Smith, & Palaniappan, 2010).

Greywater quantity

Generally, water consumption depends on the availability of resources and living standards obtainable by the household. Generation of greywater depends on total water consumption, habits of the residents, and living standards (Table 1.1) present water consumption per capita per day and volume greywater generation in some developed and developing countries (Erisson et al., 2002). Al-Mughalle et al., (2012) study evaluating the quantities of Greywater produced from different sources in Sana'a Yemen. The study revealed that on average, the daily quantity of Greywater produced is 259 liters.

Table 1.1: Greywater generation and water consumption

Country	Place	WC Lcpd	GG Lcpd
Jordan	Amman	84	59
South Africa	-	104	80
Yemen	Sana'a	40	35
Senegal	Dakar	105	60
Australia	Perth	381	117
India	Calicut, Kottayam	162	79
India	Athiyannor	159	77

Ghaitidak and Yadav (2013:16) WC* water consumption: GG*greywater generation: Lcpd* litre per capita per day

Greywater accounts for 75% volume of wastewater estimated to be produced by household (Ghaitidak & Yadav 2013). Greywater generation in a households account for more than 70% of their water consumption and this depends on individual lifestyle (Tamanna, Abdul, Islam & Salwa 2011). Some literature reported that the typical Greywater generation volume varies between 90 to 120 l/d for high- income countries without water scarcity but depends on living standards, customs, installed water systems, and habits of the household. Table 1.2 shows different countries with different standards quantification of generation. However, the volume of Greywater in low-income countries such as Niger, Nigeria, Yemen, Oman, and Jordan with water challenges and simple forms of water supply can be as low as 20 to 30 l/P/d (Oteng-Pepurah et al., 2018).

Table 1.2: Indoor household water used

Use	UK total used in (%)	US total used in (%)	China total used in (%)	Korea total used in (%)	Sweden Total used in (%)	Yemen total in (%)	Israel total in(%)
Bathing	26	30	23	20	33	54	20
Toilet	34	21	45	21	22	-	-
Kitchen	28	25	20	39	28	-	26
Laundry	12	24	11	20	17	38	13

Tamanna et al. (2011); Al-Muhalles et al. (2012); Friedler (2004).

Greywater reuse in Africa for water management

Adewumi, Ilemobade, & Zyl., (2010) reported that in South Africa wastewater is collected, treated, and reuse for household, agriculture, and industrial usage. There port further indicated that there were three different approaches practiced for wastewater treatment in South Africa: Category (A) household reuse while Category (B) at district reuse (eg a project for zero waste in Western Cape Province) and category (C) for wide urban collection and reuse (eg central collection of wastewater

for treatment of non-domestic and domestic sources in Kwazulu-Natal province). Similar efforts were reported in other African countries including Morocco (Tahri et al. 2010), Senegal (Scott et al., 2004), Ghana (Hyde, 2013), Tanzania (Kihila, Mtei, & Njau, 2014) and Tunisia, (Bahri & Brissaud, 1996). According to Sato et al., (2013), the availability of wastewater treatment and reuse information in Africa is one of the major problems because only three out of the 48 sub-Saharan African countries (*South Africa, Senegal, and Seychelles*) have data that are complete but these are old data. Thus, there is a need for wastewater treatment research to provide reliable data on water sustainability.

Greywater generation volume from developing countries

A Study conducted within rural and urban areas of China, India, Yemen, and Jordan showed that there is a higher generation of Greywater in urban areas than in the rural areas (Zeng et al., 2013; Halalshel et al., 2008; Al-Mughalles et al., 2012; Jamrah, Al-Omari, Al-Qasem, & Ghani, 2006). Comparing this data from those countries, with that of Australia (as shown in Figure 1.2) proves that the Greywater generation level is high in Australia.

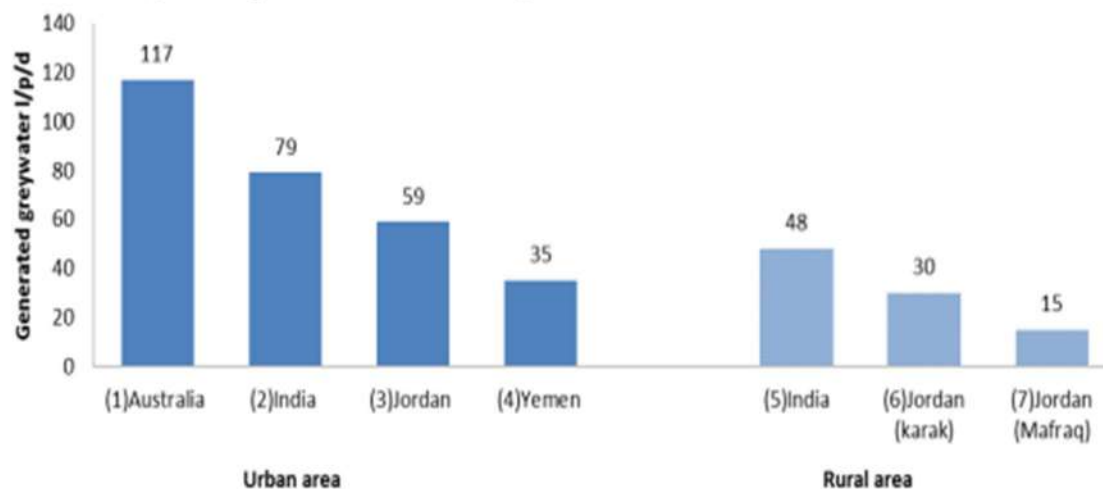


Figure 1.2: Levels of greywater generation in rural and urban areas. Albalawneh and Chang (2015)

Jamrah et al., (2006) maintain that the Greywater generation level constitutes almost 70% of domestic household freshwater consumption. The Greywater generation distribution from households is 47% from bathroom, shower, and washbasin while 26% is from laundry and washing machine, for kitchen and dishwasher is 27% respectively. (Ghaitidak & Yadav 2013; Jamrah et al., 2006). Greywater generation accounts for 50 to 80% of effluent produced by a household but depends on some environmental local conditions (Tilley Zurbrugg & Lüthi 2010).

Greywater treatments technologies

A sustainable assessment provides technologies that support scientific decisions toward future improvements in water reuse (Zijip, Posthuma, Deviles, Wintersen, & Swartjes., 2016). Wastewater treatment systems including collection, treatment, and recycling of treated wastewater for further reuse as a water management solution to overcome the shortage of fresh

water and to reduce emissions pollutants (Masmoudi, Nolde, Ciroth & Bousselmi., 2020). In most countries, sustainability for better water quality involves huge costs but, simply technology will allow 85% reclamation of wastewater for domestic reuse as resource management for water sustainability (Parimal, 2017, Masmoudi, et al., 2020). Therefore recycling greywater for nonportable uses provides strategies for alleviating the risk of water shortage and water demand. Available technologies for wastewater treatments are usually categorized as physical, biological, and chemical systems. The appropriate technology system to be selected is based on the pollutants constitute parameter of the Greywater which includes, TSS, detergents, turbidity, suspended solid temperature, PH, TDS, BOD, COD, dissolved oxygen, colour, oil, and grease. According to Spychała et al., (2019) study, physical, chemical, and biological technologies are widely used for Greywater treatment and reused by following with some specification which dependent on the quantities

Natural materials used in wastewater treatments

A different natural material was reported as filter media for wastewater treatments for non-convectional treatments processes. The notable natural materials which have been tested and reported as filter medium were *Rice husk*, *red Maize*, *red beans*, *Moringa Oleifera*, *Pumpkin*, *Reed bed*, among others (Viana, Silveira,& Mourad , 2016, Kaetzel et al., (2019). These materials are employed in various chemical, physical and biological processes of wastewater treatments. For instance, *Moringa Oleifera* is a multipurpose small size tree that was reported to be inexpensive coagulant and has a good sorbent capacity for the removal of organics in wastewater treatments (Verma, Kumar, & Muneesh , 2020). Similarly, According to Hudock, Myers,& Brennan, (2019) study reported that *Rice husk* has a chemical composition of 75-90 % organic matter which is lignin and cellulose that is very cheap materials with a relative low bulk density of 87-97% as that of silicon. Another study by Mor, Chhoden, & Ravindra, (2016) reported that rice-husk ash was able to eliminate 89% of the inorganic phosphate released from the agricultural fields (fertilizer) and domestic household wastewater such as detergent in effluent. These inorganic phosphates are considered as one of the most hazardous and toxic chemicals of run-off wastewater.

However, according to Hudock et al., (2019) study, *Rice husk* has a good adsorbent in the treatment of wastewater with a very high removal efficiency of the photochemical property. The study further demonstrated that rice husk's optimal surface area, chemical composition, and price point contribute to its good candidacy for water and wastewater treatment, and how variables such as pH and rice husk preparation can affect the maximum adsorption capacity. The study concluded that rice husk will be a potential filter to reach economies of scale in developing nations and the resulting implications for the global drinking water supply. Similarly, an experimental study by Kaetzel et al., (2019) on farm-wastewater treatment demonstrated that in most developing countries, common agro-residues such as rice husk biochar have been implemented efficiently as two-stage anaerobic filter materials in Sub-Saharan Africa countries. These processes were very cost-effective and efficient in the removal of chemical oxygen demand up to 94% and such treated water was reused for irrigation purposes. *Moringa oleifera* seeds contain cationic proteins that can

be used for water and wastewater treatment, furthermore, the oil content of *Moringa oleifera* seeds is high, and the properties of this oil render it useful for many applications such as in the treatment of wastewater (Magalhães et al., 2020).

Vieira, Marcelo., Salva, Bergamasco., Araoju, Fagundes-Klen, (2009) study employed *Moringa Oleifara* as an effective and inexpensive sorbent in the removal of organics in wastewater treatments, and the study used *Moringa* as coagulants in the treatments process. Similarly, the study has found the adsorption power that can able to keep the PH level of water at 5-8. The study further recorded a removal efficiency of 98 % for both turbidity and color at high turbid wastewater. Mani, Meikandaan, Gowrishankar,& Kanchanabhan , (2019) further reported that *Moringa Oleifera* has removal efficiency in high turbid wastewater from 100 NTU to 5.9 NTU before filtration and after filtration to 5 NTU which served as natural coagulants. However, the study revealed a Coliform removal of 89.96 %.

According to Yusuf, Obalowu, & Abubakar, (2020) study magnetic field and *Moringa* seed powder reduced the turbidity, COD, alkalinity, ammonia nitrate, pH, BOD, sulphate ions as while as total coliform in wastewater. Thus, a combination of magnetic field and *Moringa* seed powder for wastewater treatment gave better and consistent percentage reduction of physical, chemical, and bacteriological properties. The study thereby recommended both combination of magnetic field and *moringa* seed powder for wastewater treatment in Nigeria. Another experimental study by Verma et al., (2020) evaluate the extracted components of *Moringa oliefera* and applied them to wastewater, the results revealed that in turbidity wastewater the removal efficiency of 99.2% and 99% in case of oiled and de-oiled seeds applied as coagulant concentrations of 2% and 1% respectively. Similarly lowered suspended solids up to 96.8% and 96.2% were observed when the same doses were applied while no raise in COD values were noticed in both cases. However, a slight reduction of 12.5% and 16.6% in BOD values were there at 1% applied concentration of stock solution for both oiled and de-oiled seeds. Reduction in COD was only observed in the case of de-oiled seeds which were up to 25.3% at an applied concentration of 1.5%. Also, no alteration in pH was seen which makes *Moringa oleifera* a suitable coagulant as no post-treatment is required. However, the study further revealed that the *Moringa oleifera* leaf has no positive results were obtained in each of the parameters tested.

Magalhães et al., (2020) study further confirmed and revealed that *Moringa oleifera* seed is promising when use for wastewater treatment and in the removal of oil and grease from wastewater as a more affordable, sustainable, and natural alternative to commercial flocculants.

Methodology

Primary Data collection tools / Justification

The researcher used open-ended questions for the collection of primary data to quantify the volume of greywater generation from domestic activities from a different sources of water in the study area. An open-ended question was used to determine the quantity of water used in a bucket for laundry and bathing was asked and the main reason was to determine the volume of water used by

households to quantify greywater from the respondents. This question was made open in order to allow the people of the study area to answer questions in their own words which they provide more valuable and richer information because there is no available data on water usage from the study area. However, the quantity of water used in (bucket) for kitchen and (kettle) for ablution was asked because these are the containers used by the people of the study area to fetch water which will guide the researcher to determine the quantity of water used in quantifying the daily volume of water used to produce the Greywater.

Sample Frame

Samples of 120 people across the four districts of the study area were contacted to participate in the survey. One hundred and twenty 120 participants were identified as potential responders across the four districts. The online link of the survey was handed through the email address and WhatsApp numbers of the people of the study area through ward heads, and village heads of their respective district areas. For the analysis, the statistician suggested that a sample size greater than or equal to 30 provides a good sample distribution (Saunders, Lewis, & Thornhill, 2012). Bartunek, Rynes, & Ireland, 2006 added that a minimum of thirty 30 samples is adequate for statistical analysis which provides an essential rule of thumb for a small category of the sample within a whole sample. Therefore for this reason, out of the 120 samples, the sample of 50 respondents will be considered as the study population for the analysis of this research to avoid delay in their responses. This is because some individual WhatsApp contact may not be active during the period of this survey. Therefore researcher limited the analysis to forty 40 participants. However, there is no personal or official interaction between the researcher and the selected respondents except via this research work. This is because the population of more than a hundred is enormously higher for the researcher to know them as individuals or friends as they are all scattered across the study areas.

Stratified probability sampling

The researcher does not consider the entire city of Maiduguri as a target population because of its size. Therefore stratified sampling was used in sampling the target population, in particular stratified random was adopted for easy sampling technique for the estimation of a wider area such as Maiduguri. Khan et al. (2015) this technique is more convenient for the stratification of variables such as demography (geographical region, ethnicity, socioeconomic) or other regular criteria that are generally practiced in a research survey. The researcher, therefore, stratified the Maiduguri community based on the socioeconomic status of district areas. Maiduguri is divided into four districts based on the distribution of housing density. The housing density is defined as the number of dwellings per unit area or residential density. However the Ministry of land and survey has designed residential layouts for the Maiduguri community which categorized the areas into land size as high (30x 15m) medium (30x25) and low (30x40), the areas are Shehuri north as (high), Bolori (low), Maisandari (low) and Gwange (high) district according to the inhabitant's population

(Waziri, 2012). Figure 1.3 presents the conceptual diagram used for the sample selection; the target population of 1,120 is across these four areas and from each of these areas 10 is selected randomly from the outcome of response where K^{th} represent sampling interval and can be obtained when the total number of population is divided by several districts n .

10 was selected from K^{th} from the each of the four districts, hence the first district was randomly selected, and thereafter every 10th household was selected from K^{th} in each of the area's districts

$$K^{th} = \frac{N}{n} \dots\dots\dots (1)$$

$$K^{th} = \frac{1120}{4} = 280 \dots\dots\dots (2)$$

K^{th} = sample interval

N = population size

n = number of districts.

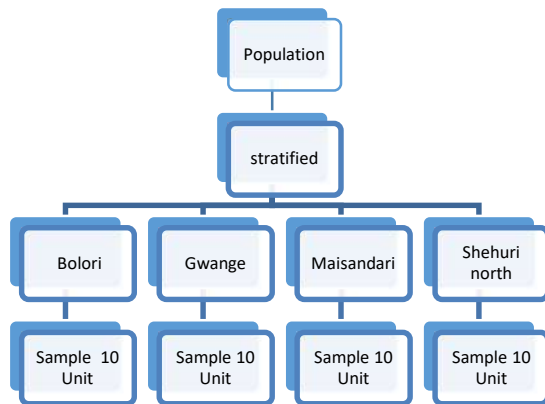


Figure 1.3 Stratify sample selection (Saunders, et al., 2012)

Data analysis techniques

Descriptive statistics: was used to estimate the average quantity or volume of water used for domestic activities that lead to becoming greywater. The researcher used numerical information from the result of the survey to analyze the data. The quantities were evaluated using the formula for mean to model greywater recycling systems. The mean is applied to determine the average volume of water used per individual in a household. Thus the technique that was used includes frequencies, mean, and percentages.

$$\text{The Household volume of water used} = \sum x_1 + x_2 + x_3 + x_4 \dots\dots\dots x_n \dots\dots\dots (3)$$

$$\text{Quantity of water used by individual} = \sum \frac{x_1 + x_2 + x_3 + x_4}{n} \dots\dots\dots (4)$$

- $\sum x_n$ is the sum of data point represent the sample household
 - n is the total number of people per household
- Conversion from weeks to days = $\sum \frac{x_n}{n_i}$ (5)
- n_i is the numbers of the days of the week

Results and discussion

The overall survey sample

A hundred (100) % was recorded as all the respondents answered and returned the Questionnaire. Overall response of the survey was rate at 100 % on the sample of 40 people who were contacted from different strata of the study area. Majority of these participants both from the densely and less densely populated areas have more than 5 occupants living in each of the house which is presented in table 1.4. Information on the response to the survey will be analysed to reflect the objective of this research.

Table 1.4: frequency of people living per your household

S/N	Number of people in household	Frequency	Percentage (%)
1	2	4	6.45
2	3	6	9.68
3	4	8	16.13
4	5	22	67.74
	TOTAL	40	100

Source of domestic water in Maiduguri

The outcome of the survey showed that 46.8% of Maiduguri residents' common source of domestic water is pipe borne water, which is from the water treatment plant of the study area as earlier mentioned in the statement of problem. It is the pipe network system that supplies water to Maiduguri residents. However, this system supplies only 30 % of this community as earlier mentioned while 12.81% from other means. Some households, particularly in the less-densely populated areas without pipe network water depend on shallow boreholes. This constitutes 40.39% of the study population.

Source of water collection

Some households in Maiduguri can neither afford to pipe the public water system into their houses nor drill shallow boreholes. Therefore government has provided public reservoir at some strategic location for this group of people to access water; however the outcome of the survey further revealed that 37.5% of Maiduguri residents used public reservoir to collect they daily water.

Access to water supply from reservoirs is often difficult for residents living far from the reservoirs. Most households in this group constituting 37.5% are always moving in search of water and they are unable to meet their household water demand. This corroborates the report by WHO & UNICEF 2017 that Mostly in African countries, people travel far distance to access water which they usually devote more than 30 minutes to have one trip collections. Consequently, a system of water that has no pipe network connection to the community the collection time is near to an hour which prevents most family in meeting their daily water demands and about 884 million (13%) of the world population collect water from a very far distance and is unprotected.

Preferred source of domestic water

Participants were asked whether water from the chosen source is enough for their family activities, the results of the survey showed that 82% of the residents agreed that the preferred source of water system is enough for their family activities per day. However, 40.39% are privately owned borehole, this has made the chosen source to be sufficient. 15% disagreed that the chosen source is adequate; these are people that collect water from the public reservoirs and this is usually time-consuming. Such households experience water shortages in this study area.

Water scarcity during a specific season

Participants from study area were asked whether they experience water scarcity during a specific season, 55% disagree experiencing water scarcity while 27% agreed and 12% strongly agreed and realised to be experiencing water scarcity during a specific season. This may be attributed to the high temperature with low rainfall of less than 600 mm as reported by the Nigerian Meteorological Service (NIMet), 2018. Therefore shortfall between water requirement and availability result in domestic water stress while acknowledging this portrayal of seasonal water scarcity, there is need for water sustainability which the study is focusing on.

Disposal of wastewater

The outcome of the survey on the wastewater disposal system in Maiduguri showed that, the 52.5% of the residents used soak-away as a medium or system for wastewater disposal and this is usually from the less densely populate areas where there is adequate land mass to construct central soak-away in their houses to collect domestic wastewater. This finding is similar to Abubakar, (2017) study that, in Nigerian wastewater is disposed through toilet connected to sewer or to septic tank (soak-away), this are the usual methods of wastewater disposal. Similarly 44% of the inhabitants disposed wastewater on the street. This is due to lack of functional sewer systems and enough land mass to construct central soak-away to collect and dispose their wastewater and majority of the sewer system are ineffective as reported by Aken and Shehram, (2018), while 3.2% of the population study used other mechanism. Soak-away and street are the major media used by the resident of the study area. The possible challenges with these types of disposal system are that, it

is hard to quantify volume of Greywater generated and Wastewater from soak -away usually containing black water.

Daily domestic activities performed by household

Participants were asked to indicate if the following activities are performed in their house on daily basis; ablution, laundry, and bathing the result of the survey showed that 93.5% residents perform ablution on daily basis this is due to fact that, Maiduguri is a Muslim dominated community that perform five daily prayers that makes the activity to be often which generate wastewater. However, the result of the survey further revealed that 79 % of the residents perform bathing on daily basis which is due to high temperature and low humidity of the area. Laundry is often performed especially in families with infants in whom it becomes necessary to perform laundry activities on daily basis. These are common domestic activities that consume water and generate greywater. This however depends on individual lifestyle, household occupancy, access and pattern of water usage that determine the greywater generation level from those activities.

Quantity of water for domestic activities

Participants were asked for the quantity of water used in kettle for ablution per day. The study takes into consideration, their culture and religion. Ablution can be defined as washing of all expose part of body with clean water. 51% of the respondents used medium-sized kettle of water for ablution per day which is equivalent to 2.5 litres of water across the four areas. (Figure 1.4) is the frequency volume of water used for ablution. However, 37% of the respondents used larger kettle for ablution per day and this is equivalent to 5 litres per day. These respondents are mostly from the densely populated areas where majority of the occupants have some dependents while 12% of population study used small kettle which is 1.5 litres. This finding of 5 litres used by entire household is against the study by Suratkon, Chan and Rahman (2014) that 5 litres is the average water volume required for a single ablution in Malaysia. The outcome of the survey showed that only 2.5 litres of water used by household of more than 4 people in the less populated area while 5 litres in densely populated areas. Shettima, 2018 reported the various size of kettle as (larger 5 litres, medium 2.5 litres, and small 1.5 litres). Thus, there is water scarcity among Maiduguri inhabitants.

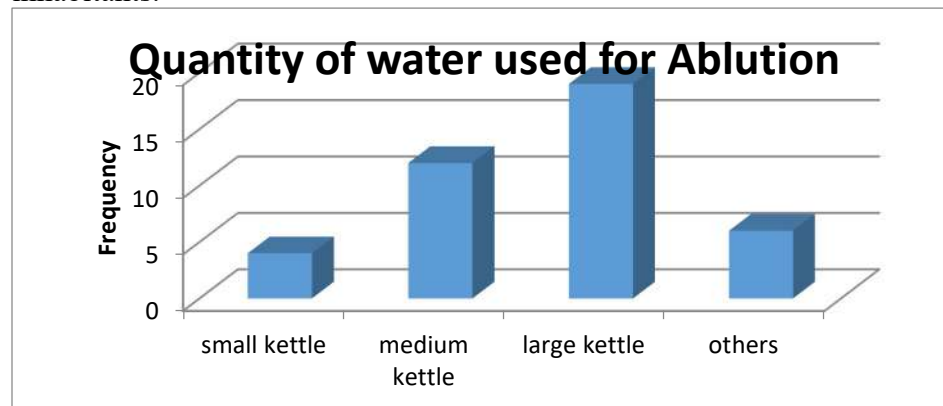


Figure 1.4 frequencies for quantity of water usage for ablution

Quantity of water used for kitchen

Residents of Maiduguri were asked about the quantity of water used in a bucket for kitchen per day. However, 77.50 % of the respondents used a larger bucket of water and this is equivalent to 25 litres. About 12.5% of the responders used a medium bucket which is 16 litres and 5.0% used small bucket which is equivalent to 10 litres Figure 1.5 depicts frequency volume of water used for kitchen, the rate of water usage for this activity is as a result of number of occupant in household for which the study evaluated the number to be more than 5 per household.

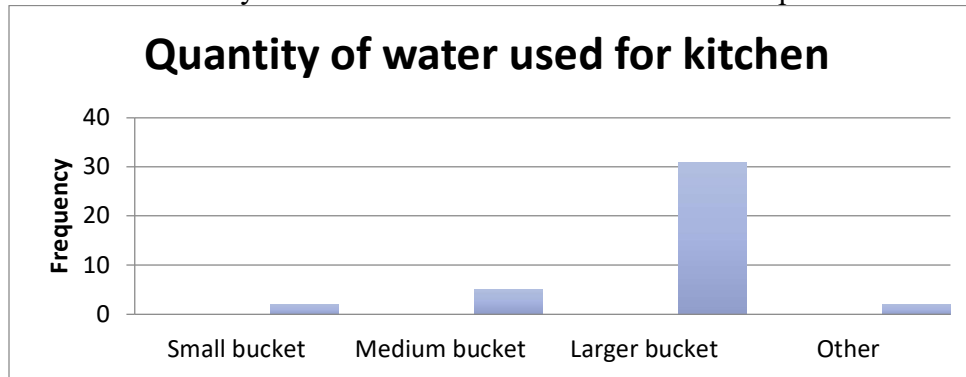


Figure 1.5 frequency water used for kitchen.

Volume of water used in the generation of greywater

Respondents from the study area were asked about the sources of water they use to perform their different daily domestic activities. Several domestic activities were included in the questions, such as ablution, kitchen, laundry, and bathing with their source of water. The result of the descriptive statistical analysis revealed that the mean volume of water used for laundry on a weekly basis in Shehuri north district from pipes water system stood at 188 litres per household while those with borehole stood at 301 with a standard error of 47 & 206 respectively. Table 1.5 showed the quantity of water used for domestic activity from the study area which is proportional to the quantity of greywater produced at 70% volume of water used reported by Tamanna et al. (2011) that the Greywater generation in a households account for more than 70% of water consumption and is from individual lifestyle.

Table 1.5 quantity of water used from the study area

Districts	Volume of water used from pipe & borehole water system (litres)	Greywater produced @ 70 % volume of domestic water used (litres)
Shehuri north	451	315
Gwange	553	387
Bolori	130	91
Maisandari	287	200

The findings of (91, 200, 315, and 387) litres of Greywater generated across the study areas are in line with Al-Mughalle et al., 2012 study in Yemen (2015) and Ghaitidak and Yadav (2013:16), the study has evaluated the quantities of Greywater produced from different sources in Sana'a of Yemen and the study further revealed that on average, the daily quantity of Greywater produced is 259 liters. Where Greywater has also account for 75% of wastewater volume estimated to be produced by households. However Table 1.5 presents the percentage quantity of greywater generated in this research and these findings in (table 1.6) is consistent with the studies by Tamanna et al. 2011; Al-Muhalles (2012) and Friedler (2004) in UK, China, US, Israel, and China (in table 1.7) respectively.

Table 1.7: Indoor household water used

Use	UK total used in (%)	US total used in (%)	China total used in (%)	Korea total used in (%)	Sweden Total used in (%)	Yemen total in (%)	Israel total in(%)
Bathing	26	30	23	20	33	54	20
Toilet	34	21	45	21	22	-	-
Kitchen	28	25	20	39	28	-	26
Laundry	12	24	11	20	17	38	13

Tamanna et al. (2011); Al-Muhalles et al. (2015); Friedler (2004).

Table 1.7 Percentage contributions from all sources

Used	Shehuri north (%)	Gwange (%)	Bolori (%)	Maisandari (%)
Ablution	7.0	1.0	1.3	1.0
Bathing	53	61	63	66
Kitchen	20	8	24	17
Laundry	20	30	12	16

Conclusion

The study concluded that the major activities that generate wastewater in Maiduguri are laundry, ablution, bathing, and kitchen. The volumes of water used for these domestic activities from (pipe and borehole) water system in (litres) stood at 451 in Shehuri north, Gwange 553, Bolori 130, and Maisandari 287 respectively. The quantity of greywater produced in (litres) stood at 315 in Shehuri north, 387 in Gwange, Bolori 91, and 200 in Maisandari. The generation percentage from all domestic activities stood at, ablution 7.0 %, 53 bathing, kitchen 20% and laundry 20% in Shehuri north. While in Gwange ablution is 1.0%, bathing 61%, kitchen 8%, and laundry 30%. Similarly, in Bolori ablution 1.3%, bathing 63%, kitchen 24% and laundry 12% while in Maisandari ablution 1.0 %, bathing 66 %, kitchen 17% and laundry 16%. However, this community allows wastewater to flow freely on the street or via poorly constructed sewer system without an adequate water management system. Although this community received a supply of water from a single treatment plant and the plant supplies water to only 30% of Maiduguri residents. Similarly, WHO reported that they are needed for water management across the globe because this resource continued to deflect as a result of growth in population and human activities? Therefore, there is the need for water management to recycling wastewater both at local and national levels to sustain the domestic water supply. However, best on the available literature, rice husk, and Moringa Oleifera is recommended for greywater treatment for the study area.

References

- Abdullah, A B., Abubakar S. U. Ibn, & Jones A. N. (2019) 'Pattern of Residential Water Demand Analysis for Maiduguri Metropolis, North-eastern Nigeria'' *Arid Zone Journal of Engineering, Technology and Environment*, Vol. 15(2),292-303. ISSN 1596-2490
- Adewumi, J., Ilemobade, A. & Zyl, V., J. (2010) "Treated Wastewater Reuse in South Africa: Overview, Potential and Challenges". *Resources, Conservation and Recycling* 55 (2), 221-231
- Ahmadalipour, A. Moradkhani, H. Castelletti. Magliocca, N. (2019) 'Future drought risk in Africa: Integrating vulnerability, climate change, and population growth' *Science of the Total Environment* Volume 662, 672-686
- Ahmaruzzaman, M & Vinod, K., G. (2011) 'Rice husk and its ash as low-cost adsorbents in water and wastewater treatment (review)' *Ind. Eng. Chem. Res.* 50(24),13589-13613
- Akan J., C., Abdurrahman, F., I., Sodipo, O., A., Ochanya A., E., & Askira Y., K. (2010) 'Heavy Metal in Sediment from River Ngada Maiduguri, Borno State' *Journal of Environmental chemistry and Ecotoxicology* 2(9),131-140.
- Akeh, G., I. & shehram, B. (2018) 'Solid waste disposal management problems in Ramat polytechnic Maiduguri, North East Nigeria' *Moj ecology and environmental sciences* 3(1)00065
<https://www.google.com/search?q=Solid+waste+disposal+management+problems+in+Ramat+polytechnic+Maiduguri%2C+North+East+Nigeria%E2%80%99+Moj+ecology+and+environmental+sciences+3%281%2900065&ie=utf-8&oe=utf-8&client=firefox-b-ab>
- Akinbile, C., A., Ogunmola, O.O., Abolude, A.T., Akande, O, S.(2019) 'Trends and spatial analysis of temperature and rainfall patterns on rice yields in Nigeria'' *Atmos Sci Lett.* 2020;21:e944

- Albalawneh A., & Chang, T. (2015) 'Review of the greywater and proposed greywater recycling scheme for agricultural scheme for agricultural irrigation reuses' *International journal of research-Granthaalayah* 3(12), 16 -35
- Allen, L., Smith, J. & Palaniappan, M. (2010) 'Overview of Greywater Reuse': *The Potential of Greywater Systems to Aid Sustainable Water Management*.
<https://www.google.com/search?q=Overview+of+Greywater+Reuse%3A+The+Potential+of+Greywater+Systems+to+Aid+Sustainable+Water+Management&ie=utf-8&oe=utf-8&client=firefox-b-ab>>
- Al-mughalles, H., Abdul Rahman, R., Binti S., and Mahmud, M. & Abd J., N. (2012) 'Household greywater quantity and quality in Sana'a, Yemen' *Electronic Journal of Geotechnical Engineering*, 17 H, 1025-1034. <https://ukm.pure.elsevier.com/en/publications/household-greywater-quantity-and-quality-in-sanaa-yemen>
- Anderson R. C.(2002). 'Incentive-Based Policies for Environmental Management in Developing Countries' *Sustainable development: issue brief* 02–07
<http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-IB-02-07.pdf>
- Babagana, A., Dungus, B, Bello S A., & Kolo, B., S. (2017) 'Problem and prospect of Alau Dam construction in Alau community, Konduga Local government Area, Borno state Nigeria'. *European science* 9(11), 20
- Bahri, A. & Brissaud, F. (1996) "Wastewater Reuse in Tunisia: Assessing a National Policy". *Water Science and Technology* 33 (10-11), 87-94
- Bartunek, J., Rynes, S. & Ireland, R. (2006) "What Makes Management Research Interesting, and Why Does It Matter?" *Academy Of Management Journal* 49 (1), 9-15
- Biswas, A. (2008) "Integrated Water Resources Management: Is It Working?" *International Journal of Water Resources Development* 24 (1), 5-22
- Boano F., Caruso, A., Costamagna, E., Ridolfi, E., Fiore, S., Demichelis, F., Galvão, A., Pisoeiro, F., Rizzo, A., & Masi, F.,(2020) 'A review of nature-based solutions for greywater treatment: Applications, hydraulic design, and environmental benefits' *Science of the Total Environment* 711 (2020) 134731
- Boretti A., & Rosa L.(2019) 'Reassessing the projections of the World Water Development Report. npj Clean Water (2019) 2:15 ; <https://doi.org/10.1038/s41545-019-0039-9>
- Craig, M. & Richman, R. (2017) "Towards Development Of A Standard Methodology For Testing Field Performance Of Residential Greywater Reuse Systems: Case Study Of A Greywater Reuse System Installed In 22 Homes In Southern Ontario (Canada)". *Journal of Water Reuse and Desalination* 8 (2), 135-152.
- Daigger G., T. (2009) 'Evolving urban water and residuals Management Paradigms: Water reclamation and reuse, decentralization, and resource recovery' *Water environmental Research* 81(8), 809-823
- Daura, M. M. (2002) 'Maiduguri Atlas of Nigeria in Africa Atlases' *Bielot, Belgium*. 148-149
- Duran-Encalada, J. A Paucar-Caceres, A E. R. Bandala, & Wright G.H, (2017) 'The impact of global climate change on water quantity and quality: A system dynamics approach to the US–Mexican transborder region. [European Journal of Operational Research](https://www.researchgate.net/publication/316111111)

- Ensink, J., H., J., Mahood, T., Hoek, V., Rashid-sally, W., & Amerasinghle, L. F. (2004) 'A national assessment of wastewater use in Pakistan: An obscure activity or a vitally important one'? *Water policy* (6), 1-10
- Eriksson, E., Auffarth, K., Henze, M., & Ledin, A. (2002) 'Characteristics of Grey Wastewater'. *Urban Water* 4 (1), 85-104
- Fowler S. J. & Smets B. (2017) 'Microbial biotechnologies for portable water production' *Microbial biotechnology* 10(5), 1094-1097
- Friedler, E. (2004) 'Quality of Individual Domestic Greywater Streams and its Implication for on-Site Treatment and Reuse Possibilities'. *Environmental Technology* 25 (9), 997-1008
- Ghaitidak, D. & Yadav, K. (2013) "Characteristics and Treatment of Greywater-A Review". *Environmental Science and Pollution Research* 20 (5), 2795-2809
- Gine-Garriga, R., Jmenez- Fernandez A., de P. & Perez-foguet, A. (2013) 'Water-sanitation-hygiene mapping: An improved approach for data collection at local level' *Science of the total environment* 463-(464), 700-711
- Goni I. B, Sheriff B. M, Mohammed A, Mohammed K., & Ibrahim B. (2019) Assessment of nitrate concentrations in the shallow groundwater aquifer of Maiduguri and environs, Northeastern Nigeria. *Scientific African Volume 4*, e00089
- Guneralp ,B.,Lwasa, S , Masundire, H, Parnell & Karen C., S., (2017) Urbanization in Africa: challenges and opportunities for conservation. *Environ. Res. Lett.* 13 (2018) 015002
- Halalshah, M., Dalahmeh, S., Sayed, M., Suleiman, W., Shareef, M., Mansour, M., & Safi, M. (2008) 'Grey Water Characteristics and Treatment Options for Rural Areas in Jordan'. *Bioresource Technology* 99 (14), 6635-6641
- Hossain N, A, Muhammed A. Bhuiyan K , Kumar, Pramanik, B, Nizamuddin ,S & Griffin, G (2020) 'Waste materials for wastewater treatment and waste adsorbents for biofuel and cement supplement applications: A critical review' *Journal of Cleaner Production* 255 (2020) 120261,
- Hossain, N., & Mahmud, L., (2019) 'Experimental investigation of water quality and inorganic solids in Malaysian urban lake, taman tasik medan idaman. *Lakes Reservoirs Res. Manag.* 24, 107e114.
- Hudock, B., Myers, D & Brennan P. (2019) 'Treated Rice Husk ash as a novel biosorption complex for low-cost water detoxification'. University of Pittsburgh, Swanson School of Engineering First-Year Conference Paper 03.29.2019
- James, D., Surendran, S., Ifelebuegu, A., Ganjian, E., & Kinuthia, J. (2017) 'Grey Water Reclamation for Urban Non-Potable Reuse-Challenges and Solutions: A Review'
- Jamrah, A., AlOmari, A., AlQasem, L., & Ghani, N. A. (2006) 'Assessment of Availability and Characteristics of Greywater in Amman'. *Water International* 31 (2), 210-220
- Kaetzl, K., Lübken, M., Uzun, G., Gehring, U., Nettmann, E., Marc Wichern, K. (2019) [On-farm wastewater treatment using biochar from local agroresidues reduces pathogens from irrigation water for safer food production in developing countries](#)” ***Science of The Total Environment*** Volume 682, 601-610
- Khan, Z., Anjum, A., Soomro, A, Tahir M, A (2015). Towards cloud based big data analytics for smart future cities. *J Cloud Comp* 4, 2 (2015). <https://doi.org/10.1186/s13677-015-0026-8>

- Kihila, J., Mtei, K. & Njau, K. (2014) "Wastewater Treatment for Reuse in Urban Agriculture; the Case of Moshi Municipality, Tanzania". *Physics and Chemistry of the Earth, Parts A/B/C* 72-75, 104-11
- Korbinian, K. Manfred, L. Gülkader U. Tito Gehring E.N., Stenchly, K., & Wichern, M. (2019) 'On-farm wastewater treatment using biochar from local agroresidues reduces pathogens from irrigation water for safer food production developing countries'. *Science of The Total Environment* Volume 682, PP 601-610
- Langergraber, G. & Muellegger, E., (2005) "Ecological Sanitation—A Way To Solve Global Sanitation Problems?" *Environment International* 31 (3), 433-444
- Litting G., Lens & Zeeman P. (2001). Environmental protection Technology for Sustainable Development' IWA Publishing, London (UK), 3-10
- Mani, A. Meikandaan, T.P. Gowrishankar, P.G., & Kanchanabhan, T. E. (2019) 'A Study on Treatment of Industrial Effluent (Dyeing) using Moringa Oleifera, Tamarina Indica as Coagulants' *International Journal of Civil Engineering and Technology*, 10(3), pp. 550-565
- Magalhães, N., C., Salvs, A.F.R., Cunha, B. M.P., Drewes, J. E., Amaral, C., S., M(2020) 'Role of nanofiltration or reverse osmosis integrated to ultrafiltration-anaerobic membrane bioreactor treating vinasse for the conservation of water and nutrients in the ethanol industry' *Journal of Water Process Engineering* Volume 36, 101338
- Masmoudi J, K. Nolde E., Citroth, A., & Bousselmi, L. (2020) 'Life cycle assessment of a decentralized greywater treatment alternative for non-potable reuse application' *International journal of environmental science and technology* 433-444
- Mayomi, D & Mohammed A. S. (2014) 'A decade Assessments of Maiduguri urban expansion (2002-2012): Geospatial Approach' *Global journal of human- social science disaster management* 14(2), 2249-460x
- Mor, S., Chhoden, K. & Ravindra K. (2016) Application of agro-waste rice husk ash for the removal of phosphate from the wastewater. *Journal of Cleaner Production* Volume 129, PP, 673-680
- Morel, A., & Diener, S. (2006) "Greywater Treatment by High Rate Algal Pond under Sahelian Conditions For Reuse in Irrigation". *Journal of Water Resource and Protection* 14.
- Morgan, C., Bowling, M., Bartram, J., & Kayser G., L. (2017) 'Water, Sanitation and Hygiene in school' Status and implications of low coverage in Ethiopia, Kenya Mozambique, Rwanda, Uganda and Zambia. *Environmental health* 220(6), 950 -959
- Muthuraman, G. & Sasikala, S. (2014) "Removal Of Turbidity From Drinking Water Using Natural Coagulants". *Journal of Industrial and Engineering Chemistry* 20 (4), 1727-1731
- Nigeria Meteorological Agency NIMet (2018), <https://nimet.gov.ng/publication/2018-seasonal-rainfall-prediction-srp>
- Ormerod, K. (2016) "Illuminating Elimination: Public Perception and the Production of Potable Water Reuse". *Wiley Interdisciplinary Reviews: Water* 3 (4), 537-547
- Oron, G., Adel, M., Agmon, V., Friedler, E., Halperin, R., Leshem, E. & Weinberg, D. (2014) "Greywater Use In Israel and Worldwide: Standards and Prospects". *Water Research* 58, 92-101

- Oteng-Peprah, M., de Vries, N. & Acheampong, M. (2018) "Greywater Characterization and Generation Rates in a Peri Urban Municipality of Developing Country". *Journal of Environmental Management* 206, 498-506
- Parismal, P. (2017) 'Selection of water Treatment Technology' *Industrial water treatment process Technology* 537-54
- Peters., E., J. (2015) 'Wastewater reuse in the Eastern Caribbean' a case study' *The West Indian Journal of Engineering* (38)33-43
- Sato, T., Qadir, M., Yamamoto, S., Edo, T. & Zahoor, A. (2013) "Review Global, Regional, And Country Level Need For Data On Wastewater Generation, Treatment, And Use". *Agricultural Water Management* 130, 1-13
- Saunders, M., Lewis, P. & Thornhill, A. (2012). *Research methods for business students*. Harlow (Essex): Pearson. *PNAS* 109 (24) 9320-9325
- Scott, E. A., Faruqui N. I and L. & Raschid-Sally L. (2004) 'Wastewater Use in Irrigated Agriculture: Management Challenges in Developing Countries.(eds).
<https://www.ircwash.org/sites/default/files/Scott-2004-Wastewater.pdf>
- Shettima M., L.,(2018) (eds) 'Development of a community system for water reclamation from grey water in Gujba: A conceptual method'
- Spychała, M. Nie'c, J , Zawadzki, P , Matz, R.,& Hung N. T. (2019) 'Removal of Volatile Solids from Greywater Using Sand. *Appl. Sci.* 2019, 9(4), 770; <https://doi.org/10.3390/app9040770>
- Tahri, L., Elgarrouj, D., Zantar, S., Mouhib, M., Azmani, A. & Sayah, F. (2010) "Wastewater Treatment Using Gamma Irradiation: Tétouan Pilot Station, Morocco". *Radiation Physics and Chemistry* 79 (4), 424-428
- Tamanna M, Abdul J MD, Islam, S & Salwa (2011) 'Grey water generation and quality measurement at a specific site in Dhaka city' (eds). <http://www.iebconferences.info/362.pdf>
- Tilley, E., Zurbrügg, C. & Lüthi, C. (2010) "A Flow stream approach for Sustainable Sanitation System". *Social Perspectives on the Sanitation Challenge*,69-86,
https://www.researchgate.net/publication/226881702_A_Flowstream_Approach_for_Sustainable_Sanitation_Systems>
- UN (1992) 'The united nation program of action from Rio agenda 21, New York'
<https://sustainabledevelopment.un.org/outcomedocuments/agenda21>
- Verma R. K, Kumar R, & Muneesh S., I. (2020) 'Use of Distinct Parts of Moringa Oleifera in Domestic Wastewater Treatment (An Analogous Study) **Published in: 2020 8th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions) (ICRITO) Date of Conference: 4-5 June 2020, <http://10.1109/ICRITO48877.2020.9197942>>**
- Vian, M., C. E., Silveira, J. W., & Mourad, K. A. (2016). 'Using Rice Husks in Water Purification in Brazil'. *International Journal of Environmental Planning and Management*, 2(3), 15-19.Volume 256,(2), 567-581
- Vieira, A., Marcelo., V., Salva G, F., Bergamasco., R., Araoju, A, Fagundes-Klen, M, R.(2009) Use of Moringa oleifera Seed as a Natural Adsorbent for Wastewater Treatment' *Water Air and Soil Pollution* 206(1):273-281

- Waziri, M. (2012) Spatial Pattern of Maiduguri City: Researchers' Guide.
http://www.academia.edu/5259193/Spatial_Pattern_of_Maiduguri_City_Researchers_Guide
- WHO/UNICEF (2017) '2.1 billion people lack safe drinking water at home, more than twice as many lack safe sanitation' <https://www.who.int/news-room/detail/12-07-2017-2-1-billion-people-lack-safe-drinking-water-at-home-more-than-twice-as-many-lack-safe-sanitation>
- Wilder, P.A (2001)(eds) 'Decentralized versus Centralized Waste Water management in Lens Decentralized sanitation and reuse – concepts, system and implementation. London (UK)
- Yusuf, K, Obalowu, O, & Abubakar, (2020) 'A Effect of Magnetic Field and Moringa Seed Powder on Wastewater Treatment' *J. Appl. Sci. Environ. Manage.* Volume, 24 (2) 341-345
- Zeng, S., Dong, X., Chen, J. & Li, P. (2013) "Planning an Urban Wastewater System with Centralised Greywater Reuse: A Case in Beijing". *Civil Engineering and Environmental Systems* 30 (1), 40-55
- Zijp, M, C., Posthuma, L., Deviles, J., Wintersen, A., & Swartjes F. (2016) 'Definition and use of solution – focused Sustainability Assessment' A novel approach to generate, explore and decide on sustainability solution for wicked problems. *Environmental international* (91), 319-331

Effectiveness of Indirect Error Correction on the Writing of Higher National Diploma Students of Ramat Polytechnic Maiduguri

Hajja Karu Ahmad Sheriff

Department of Language and Liberal Studies, Ramat Polytechnic Maiduguri

Abstract: *This work investigates the effectiveness of indirect error correction on the writing of Higher Diploma one (HND1) students of Ramat Polytechnic, Maiduguri. Fifty HNDI Students from Agricultural Extension and Management, Animal Health production, Soil and Water Engineering, Post-Harvest Technology and Farm Power and Machinery departments were randomly selected for the study. They were administered two types of test in form of pre-test and post-test to write an expository composition. The error types identified in the composition are in vocabulary/ grammar, stylistic technique, organization and content. The frequencies of their occurrences are recorded before and after the indication of error using the indirect error correction. The work reveals that there is slight reduction of error in the written composition of HNDI students. Therefore, it is concluded that indirect error correction is effective in giving corrective feedback in the written composition of HNDI students of Ramat Polytechnic, Maiduguri.*

Keywords: *Correction, Error, Indirect, Students & Grammar*

Introduction

Error is indispensable in language learning and the need to correct an error as it occurs in the learning process is paramount. Students are expected to learn and communicate effectively using the English language and their communication should be devoid of any error that will hinder the process of learning language effectively. It is important for the teacher to give corrective feedbacks in order to improve their ability to communicate accurately and effectively. Therefore, this study is designed to examine the effect of indirect error correction technique administered to written compositions of Higher Diploma students of Ramat Polytechnic, Maiduguri.

The objective of learning a second language for students is for them to achieve proficiency in the use of the language and to communicate effectively. But most students have problems in communicating effectively as result of the errors they make as they learn the language.

The aim of this study is to examine the effect of indirect error correction technique in the composition of HNDI with the specific objectives of identifying the errors in their written compositions and to determine the effect of indirect error correction technique of HNDI students.

The study is based on the behaviourist theory of B.F Skinner in form of positive and negative reinforcement for learners' behaviour and discouraging undesired behaviour. According to this theory, language learning involves the formation of habit: this perspective stems from work in psychology that viewed the learning as kind of behaviour and being based on the notions of stimulus and response (Ellis 199; Mitchell and Myles 2004). In other words, the theory is based on the assumption that humans are exposed to many language stimuli in their environment and their repeated response to these stimuli will lead to the formation of habits. The view of the behaviourist theory when applied to language learning implies that the learning of language progresses when the learner makes active and repeated responses to stimuli (Skinner 1957). These responses are reinforcement when repeated for over a period of time, it will lead to the formation of habit that consist automated responses elicited by given stimuli. There it supposes that positive motivation will yield positive response. This means that teacher provides meaningful motivating and encouraging feedback to students' written composition; it will trigger them to response to teacher's suggestion for correction rather than emphasizing on the correction.

Methodology

Testing method is used to collect data for this work. The test is based on the pre-test and post –test design. Fifty HNDI students were randomly selected from Agricultural and Extension Management, Animal Health Production Soil and Water Engineering, Post-Harvest Technology and Farm Power and Machinery that registered for the session. They were assigned to write an expository essay on one of the topics 'how to prepare a land for cultivation' and "the effects of drug abuse" for their pre-test. The duration of forty minutes was given to them to write the pre-test. The errors to be indicated include vocabulary and grammar, stylistic technique, organization and content. The indirect error corrections were used to indicate errors in the written composition. These include the use of circling, underlining and using cursor to indicate missing words. The pre-test composition was returned to the students in order to see the corrective feedback on their written compositions.

Another expository essay was assigned to them for their post-test. The essay was based on topic such as the ‘effects of drug abuse’ and ‘politics in Nigeria.’ They were also given forty minutes to write the composition in order to find out the effectiveness of indirect error correction technique applied to the pre-test composition

Literature Review

Error and error correction

Error is an unintended deviation from the rules of language. Most of these errors are made by second language learners who lack the knowledge of the target language. Richard (2000), Norrish (1983) and Cunningsworth (1987), view an error as systematic deviation that happens when a learner has not learnt something and consistently gets it wrong. For Hendrickson (1987) and Corder (1982) errors are essentially part of the learning process; they provide the teacher with an insight into what kind of feedback the learner may require and what strategies to be taken for appropriate correction of the learners’ error.

However, Corder (1982) is also of the view that one of the most important tasks of a teacher in a language classroom is to decide when correction is necessary. Allwright and Long (1997) claim that Teachers should not correct immediately rather giving clues (i.e. using codes) to learners will be more useful for them to achieve their linguistics competence and correct their errors (Mikano 1993:340). Also, Khansir and Pakdel (2018) and Richard (1975) as well posit that learners’ error is an integral part of learning a target language. For them the best strategy to correct language learners’ error is to let the learners correct their own errors in the target language.

Furthermore, there are different types of error correction which include evaluation, error identification, teacher correction, peer response Hendrickson (1978). The most conventional technique is the teacher correction. The teacher correction technique can be further classified into two: the direct and the indirect type of error correction (Ferris 2006). The direct type of error correction is an overt correction technique in which the error is indicated by underlying or over striking the error to provide the correct form to the learner. The indirect type of error correction on the other hand is provided by indicating the location of error by underlining, circling and indicating the location of the error with a cursor or by using

codes. For this study, the indirect type of error correction is adapted to correct student error in order to find its effectiveness in their written composition.

Studies on Error Correction

Katayma, (2007) and Erel and Bulut, (2007) longitudinal studies using pre-test and post-test design reveal that students corrected using indirect coded feedback committed few errors than the direct coded feedback. Ashwell (2000) states that teachers believe that correcting the grammar of student written composition will help them to improve the accuracy of their subsequent writing. This statement above is based on the outcome of study carried out by Ferris and Robert (2001), Chandler, (2003); Leki, (1991) are also of the opinion that student who receive error feedback from teacher will improve in accuracy overtime.

Furthermore, another similar study conducted by Shivaji, (2012), Chandler (2003) and Greenslade and Felix-Brasdefer, (2006) investigated the effect of direct and indirect error correction feedback on the written composition of undergraduate. Shivaji's study reveals that the two types of feedback have positive impact on improving the student grammatical accuracy. While Chandler (2003), findings of the study reveals that indirect error correction with student editing their work contributes to accuracy than direct error correction. For Greenslade and Felix-Brasdefer, (2006), the coded feedback was more effective than the underlining feedback that is the uncoded feedback. Almost all recent studies found positive and significant effect on error correction except Truscott and Hsu, (2008); Liu, (2008); Hartshorn et al., (2010). They believe that error correction as a form of feedback is ineffective in improving the ability of the learners to write accurately. This work is different from the studies above because it attempts to determine the effectiveness of the indirect error correction by the teacher on the written composition of HNDI students of Ramat Polytechnic Maiduguri.

Data Analysis and Discussion

The data for this work is presented in two tables. Table one is for pre-test results and post-test results in table two. Each table comprises of five columns and each column consists of five headings

Table1.Pre-test score

Error type	Number of students	Total frequency	Mean	percentage
Grammar/vocabulary	50	588	11.8	47%
Stylistic technique	50	503	10.1	40%
Organization	50	488	9.8	39%
Content	50	580	11.6	47%
Total		2159	43.2	

Table2.Post-test score

Error type	Number of students	Total frequency	Mean	Percentage
Grammar/ vocabulary	50	418	8.36	35%
Stylistic technique	50	385	7.7	31%
Organization	50	415	8.3	33%
Content	50	403	8.1	32%
		1621	32.4	

The findings are based on the outcome of the post- test which reveals that there is significant improvement on the number of errors found in the written composition of HND I student when compared with the pre-test result. The pre-test recorded the overall frequency of 588 errors in grammar and vocabulary with the mean of 11.8 grammar/ vocabulary per student and the percentage of 47.while the post-test result recorded the reduction of error to 418 with mean of 8.4 and the percentage of 35 For example, students commit error of spelling, omission,

capitalization, mechanical accuracy and tense in this category. Some of the error of spelling include 'craupcion' instead of 'corruption,' 'west' for 'waste', 'experance' for experience, 'catilass' for cutlass and "blest" for blessed. While that of tense include use of future progressive tense instead of future tense in this sentence: 'you will be dismissing from school.' instead of 'you will be dismissed from school'. Other error in this category is the use of capitalization. Most of the students have problem with the use of capital letter to start a sentence. However, after they were given their pre-test paper with indirect corrective feedback, there is slight improvement in this category. Similarly, the stylistic technique also recorded reduction of error from the pre-test with frequency 503 errors to post- test frequency of 385. The mean for the pre-test stand as 10.1 per and 7.7 for the post-test. The percentage of 40 is recorded for pre-test and 30% for the post-test. This shows there is improvement in the use of stylistic technique such as use of transitional markers, varied sentences structure, conciseness and figurative language. For example, most of the students have problem with the use of transitional markers, For example, 'Many people start drug abuse...' and another with 'In some individual, the onset of...' a paragraph start without a transitional marker in the pre-test. But there is slight reduction of error in this category after using the indirect corrective feedback. Likewise, the organization also recorded a slight improvement in which most the composition written by student during the post test lacks organization, because most of the written the compositions were not organized into paragraph. But with the corrective feedback using indirect method the organization error recorded similar improvement in the post-test score. The frequency of error for the pre-test recorded 488 while that of post-test recorded 415. The mean for pre-test is 9.8 while that of post-test stand at 8.3 for each student. The last type of error analyzed is that of the content. The frequency of error is 580 for the pre-test and 403 for the post-test. The mean for the pre-test recorded the 11.6 against that of post-test which recorded the mean of 8.1. The percentage for both tests is 47 for pre- test and 32 for the post-test. This means that there is also reduction of error in content.

Conclusion

From the findings above there is slight reduction in the number errors using the indirect error correction technique. This supports the findings of shivaji (2016); Erel and Bulut (2007) and Chandler(2006) in which their studies favoured the indirect error correction by teacher. Therefore, it can be seen from this study that

student will improve in their errors if they were allowed to deduce from the feedback they were given by their teacher indirectly. This means that student can be able to correct their errors, even if they not given the correct form or use codes to indicate their errors. This can be seen from the reduction of errors in the post-test composition given to the student. For this study, the indirect error correction is effective in correcting the written composition of learners of English as a second language, therefore, it is suggested that similar studies should be carried out to ascertain the effectiveness of other types of error correction.

References

- Allwright, R.L.(1975).’ ‘Problem in the Study Language Teachers’ Treatment of Learners Error.’ In M.K. Burt & H. Dulay (Ed s), on *TESOL ’75 New Directions in Second Language Learning, Teaching and Bilingual Education*.(pp 96-106) Washington,DC: TESOL.
- Ashwell, T. (2000). ‘Pattern of Teacher Response to Student Writing in a Multi-draft Composition: Is Content Feedback Followed by Form Feedback the Best Method?’ *Journal of Second Language Writing, VOL. 9 issue 3 pp 227-257*.
- Bitchener , S. &Knoch, U. (2009). ‘The Contribution of Written Corrective Feedback to Language Development: A Ten Month Investigation.’ *Applied Linguistics.vol.31, pp 193-214*.
- Chandler, J. (2000). ‘The Efficacy of Various Kinds of Error Feedback for Improvement in the Accuracy and Fluency of L2 Student Writing.’ *Journal of Second Language Writing, vol.18, 136-140*.
- Cohen, A.D. (1987). ‘Student Processing of Feedback on their Composition.’ In A.L. Wenden & J. Robins (Eds), *Learning Strategies in Language Learning* (pp 57-69) Eaglewoods cliffs, NJ. Prentice-Hall.
- Corder , S.P.(1982) *Error Analysis and Interlanguage*. Oxford: Oxford University Press.
- Cunnigworth , A. (1987).*Evaluation and Selection of EFL Materials*. London : Heinemann Educational Books.
- Diab , R. (2005). ‘EFL University Student’ Preference for Error correction and Teacher Feedback in Writing.’ *TESL Reporter, Vol.38, pp27-51*.
- Edge ,J. (1989). *Mistake and Correction*. London, Longman.

- Erel, S. & Bulut D.(2007). 'Error Treatment in L2 Writing: a Comparative Study of Direct and Indirect Coded Feedback in Turkish EFL Context.' *Sosyal Bilimler Enstitüsü Dergisi* says: vol 22, issue 1, pp 285-312.
- Fathman, A. & Whalley, E.(1985). 'Teacher Treatment of Error and Student Writing Accuracy.' Paper Presented at the 19th Annual TESOL Convention, New York.
- Ferris, D.& Roberts, B.(2001). 'Error Feedback in L2 Classes: How Explicit Does it Need to Be ?' *Journal of Second Language Learning*. Vol.10 pp 161-184.
- Ferris, D.R.(2002). *Treatment of Error in Second language Student Writing*. Ann Arbor. MI: University of Michigan Press.
- Greenslade, T. & Felix-Brasdefer, J.(2006). 'Error Correction and Learner Perceptions in L2 spanish writing.' In C.A. Klee & T.L.Face (Eds.) *Selected Proceeding of the 7th Conference on the Acquisition of Spanish and Portuguese as first and second language*(pp.185-194).somerville, MA: Cascadilla proceeding project.
- Hartshorn, K.J.; Evans, N.W.; McCollum, R.M. Wollberger,M.9(2010). 'Contextualizing Corrective Feedback in Second Language Writing Pedagogy', *Language Teaching Research*, Vol.14, Issue 4,pp 445-463.
- Hendrickson, J.M.(1978) 'Error Correction in Foreign Language Teaching: Recent Theory, Research, and Practice '. *Modern Language Journal*, Vol.62, Issue 8
- Katayama , A. (2007). 'Japanese EFL Students' Preference towards Correction of Classroom Oral Errors.' In K.Bradford-watts(Ed.) *JALT 2006 Conference Proceedings*.Tokyo.JALT 2006, 284-299.
- Khansir,A.A.&Pakdel (2018). 'Place of Error Correction in English Language Teachning'. In *Educational Process International Journal*, vol.7,issue 3,pp189-199.
- Leki, I.(1991). 'The Preference of ESL Students for Error Correction in college – Level Writing Classes.' *Foreign Language Annals*. Vol.24.issue 3,pp 203-218.
- Makino,T. (1993). 'Learners Self Correction in EFL Written Composition' IN *ELT Journal* . 47 (4) 337-341
- Norrish J.(1987). *Language Learning and their Errors*. London: Macmillan Publishers' Ltd.
- Richard, J.C. (1974). *Error Analysis Perspectives on Second Language Acquisition*. London, Longman

- Shivaji, K.(2012). ‘The Effect of Direct and Indirect Error Correction Feedback on the Grammatical Accuracy of ESL Writing of Undergraduate.’ *Journal of Humanities and Social Sciences* ,vol.7, pp78-
- Truscot, J.(1996). ‘The Case against Grammar Correction in L2 Writing Classes.’ *Language Learning*, vol. 46,pp170-171.
- Truscot,J.& Hsu, Y.(2008). ‘Error Correction Revision and Learning’, *Journal of Second Language Writing*, 17,292-305.
- Zamel, V.(1985) ‘Responding to Student Writing’ *TESOL Quaterly* 19,79-102.

Understanding the Appropriateness and Implementation of Consumer Protection Laws in Nigeria

Shehu Usman Ali

Department of Languages and Liberal Studies

School of General Studies

Ramat Polytechnic Maiduguri

Email: Shehuman222@gmail.com

Abstract: *The study assessed the appropriateness and implementation of consumer protection laws in Nigeria. The parameter of the study concentrate on the contribution to the scholarship by examining the complex issue surrounding consumer protection laws. Data were obtained using in-depth interview from selected consumers, policy makers and regulatory agencies. A total number of 40 face-to-face interviews is conducted. Data is sorted and analysed using Nvivo software and thematic analysis. The results showed that consumers suffer from consumption of adulterated, substandard and expired food items and drugs. In the total effects of these are injuries, losses and damages to the Nigerian consumer. Therefore the study recommends that agency that has been put in place by the government should efficiently work with tools and facilities to provide an enabling environment for effective consumer protection.*

Keywords: *Appropriateness, Consumer, Implementation, Law, & Protection*

Introduction

The level of consumer rights violation and exploitation in Nigeria is becoming worrisome to every Nigerian. Although a number of policy and regulatory agencies exist, protecting the consumer against such exploitations has been a big challenge to the relevant agencies. In a number of occasion, these agencies have issued threats of dealing with to affected businesses, but the threats have turned empty and have fallen on short of meeting or achieving the anticipated objectives (Okwe, 2015; Nnodim, 2014). Many studies were conducted on consumer protection-related topics exists. For instance, Anayo, et al (2017) look at consumer protection in market transactions in Nigeria and the emphasis on the complex issues of consumer protection in Nigeria with a view to understand the responsibility of the relevant actors in protecting the right of the consumer in Nigeria. Similarly, Emmernual et al (2016) consider the position of consumer protection council, right from its establishment, its responsibility and its coverage. The study also observed that the consumer protection in Nigeria like must less developed country is virtually very low, despite the rapid growth of business activities in their market place. They also observed that, the Consumer Protection Council Act provided for the rights of consumers but it does not stipulate the enforcement powers of the enforcing authority. The authors further observed that the carelessness

of consumers make them negligent of information about the product which will enable them to know and protect their rights which resulted to wider spread absence of litigation against a defective product. Oni-Ojo and Iyiola (2014) stated that a product harm cause to the consumer through defective product raise the manufacturer's liability and products liability cases are file annually in developed countries. However, the study observed that in many developing countries especially Nigeria, the situation is different, the law only define defective product but fail to accord the consumers the adequate protection it's deserved. In another vain, Bello et al (2012) opined that Nigerian consumers continue to remain victim of substandard goods and service. They attributed the position of consumer's ignorance and lack of competitive market. They are also of the view that the consumer rights under the Consumer Protection Council Act are merely implied in nature. They concluded by advocating that consumer laws should not only be in existence but it should be protective and compensatory as it applied.

Statement of the Problem

It is worthy to state that consumer protection rights are aimed at protecting consumer from liable producers and service provider. The law of protection is supposed to achieved two basic goals, one is to protect the general interest of the consumers and second is to protect the private law relationship of the parties (Odion, and Okojie, 2003). However, it is evidence that the rights of Nigerian consumers are continually being undermined. Therefore, this study aimed to looks at the appropriateness of the laws and implementation of the Nigeria consumer protection laws.

Research aims and Objectives

This paper aims to provide an in-depth understanding the appropriateness and the efficacy of the laws protecting consumer rights in Nigeria. In line with the recommendations of Yin (2009), a case study research approach will be employed for the purpose of providing in-depth perspectives of the stakeholders.

Literature Review

Malemi (2008) sees a consumer as a person who utilized the process of production and services. The study also define the term product to include all types of eatable and non-eatable goods and what qualifies a good is not selling but rather the delivery of goods to the consumers is what matters. The liability of the manufacturer is inherent in nature subject to the product defects, liability where the proof of reasonable warning can be established by the manufacture. Ijewere (2007) opined that Nigerian consumers are ever ready to summon their efforts in order to seek for their rights and enjoyed their powers in the market. The findings encourages the manufacturers to establish consumer protection unit in their organization and these should be supported by the government through funding and ensuring that the manufacturers produce quality products.

Kanyib (2000) slated that the Subject matter of negligence as an instrument of consumer protection which the author summarized his conclusions as follows; One liability base on negligence provide adequate protection to consumers, proof of negligence is difficult or even impossible especially if the product itself is damage from accident or made ineffective by exposure prior to laboratory analysis, the consumer is disadvantage by his lack of familiarity with the manufacturing or production process, especially if the manufacturer made an affirmation showing

a full proof production process, defect frequently occur even the absence of negligence. Lastly, negligence is therefore an impractical theory of liability for defective product. The author therefore recommended strict liability as an alternative bases of liability in product cases. Under the strict liability regime, the consumer is at the receiving end of the risk in the chain of production.

Monye (2005) observed the issues involved in consumer protection in Nigeria, especially in the area of contractual liability of the seller or manufacturer, negligence in tort, the regulation mandate and enforcement powers of the regulatory bodies such as Standard organization of Nigeria(SON),National Agency for Food and Drug Administration and Control (NAFDAC), and Consumer protection council of Nigeria(CPC).And her observation of the legal position is that the Nigerian consumer is fairly protected, at least on paper. The author further postulated that there are some area whereby protection is virtually not in existence, particularly in the area relating to exemption clause, and the absence of provision for compensation order to victim of product defect. The author recommend that there should be an enhance safety consciences of the manufacturer, establishment of legal unit in various regulatory agencies to prosecute offenders of their various offence rather than refer those cases to police. It also recommend the need for significant increase in fine, to also grant award of compensation to an injured consumer in addition to criminal penalties of a manufacturer. Nyor(2004) stated that producers at all stages of production, processing and distribution must be responsible for safety of food and should establish food safety assurance programs while the government on the other hand plays the role of regulator.

Methodology

The study will use both primary and secondary sources of data. The primary data is solely through structured interviews. This will be done through field and research participants. Fourty interviews will be conducted by the trained field participants. However the secondary data will be sourced from reports and documentary evidence from research organisations. The respondents will be purposively selected from 31 wards in Maiduguri town. Due to the size and population of the wards, Maisandari will have 3 respondents. Mafoni, Hausari, Gwange1, 2, 3, Maiduguri and Maimusari wards will have 2 respondents each, while the remaining wards will have one respondent each. The interviews will be sorted, coded, transcribed in the language they were done and translated to English. The analysis will be manually done by the research assistants. They will extract emerging themes from the translated interviews which will create basis for discussion. This approach will allow the researcher to observe specific instances and seeking to establish generalisations about the phenomenon being investigated (Collis and Hussey, 2013; Gilgun, 2013).

Results and Recommendations

Compensation challenges for consumers

One of the fundamental factors for establishing the consumer protection act is to ensure appropriate and vivid compensation for consumers. it is an important window opened to build and fortify consumer confidence in governance. In addition, it serves a motivator for ensuring public duties and responsibilities on the side of the consumers are articulated and negotiated. Alhaji musa of bulabulin ward added that, had it been a consumer is duly compensated in the case of sudden loss or hazard, with respect to a manufacturer's product, consumers wouldn't have found an alternative

in less quality or inferior product. Mr Bulus of Dala ward also stressed that this is the major reason while consumers indulge in cutting corners over service providers for telecom and power providers, leading to continuous sabotage of installations and outage.

Alas, all the respondents have stressed candidly that they have never witnessed a case scenario where a consumer was compensated for manufacturer's errors. Enyia and Abang, (2018) posited that the Nigerian justice system is inclined more to punishing offenders than compensating complainants. The consumer protections act convict persons who aid or issue wrong advertisement about a product to a fine of N50,000.00 or serve a 5years jail term or both. The consumer is not part of the proceeding, as it is between the state and the manufacturer. This means that the consumer is not a beneficiary of the fine imposed by the statutes. Alhaji musa also stressed his scepticism over the existence of compensation of an injurious product to consumers. He made examples with a pharmaceutical company's saga over affected children whose parents fought in vain and are left to cater for paralysed and autism children. Malam Gaji Bukar and Alhaji Musa Mustapha attributed this challenge to political interference under the auspices of administrative bottlenecks, artificially created to frustrate consumers efforts and stall any legal process that will liberate consumers. Malam Usman Shettima attributed the inability of seeking redress for compensation to the fact that consumers don't know their rights. he said, consumers are not even aware that such fundamental rights vested on them ever exists. consumers view such struggle as an already lost course and futility lies ahead even if attempted. Abdullahi Jafar a local resident of Bolori ward and Wholesale petty shop owner stressed that at the mention of any issue regarding seeking redress from manufacturing moguls, fear sets in. this is because people think any issue so inclined involves the government and has links with police stations and the court. the public tend to have phobia for-and has been living in constant fear of such public institutions. he also added that if truly "police is your friend" and "the law is blind" consumers should be ever ready to seek redress anywhere, anytime and under any justified circumstance.

Consumer's nature of patronage

An important element for manufacturer's protection is the establishment of wholesale or retail outlet. this is to ensure copywrites and imitations are greatly mitigated. given the nature of economic activities; being mostly informal, consumers patronise outlets that are readily accessible or available at the time of need. The manufacturer in this case cannot oversee the entire sale of his product. Alhaji Gaji Bukar stressed that seeking redress in most cases tends to be impossible because he doesn't patronise certified and recognised manufacturers outlets and franchises. Alhaji musa of Bulabulin ward said, he patronises the closest and cheapest stores for products. He even purchases products from hawkers who take advantage of traffic jams to sell. He recollected how he bought a close-up toothpaste in a traffic jam that turned out to be an imitation. He stressed also that the manufacturer cannot blame for such mistake.

As Enyia and Abang (2018) posited, consumer protection laws have remained in the lowest ebb even with the presence of administrative and regulatory frameworks. Despite this, the consumers have exacerbated the situation with the nature of purchasing manufacturers products. Mr Bulus and Abdullahi Jafar attributed such problems with seeking cheaper items and easy access. It will remain an uphill task therefore to seek redress in such a situation.

Consumers and consumer rights dichotomy

1. Lack of confidence in the judicial system

Today it has shown that millions of Nigerians suffer from the consumption of adulterated, substandard and defective product. Examples of these are expired food items and drugs. The basic outcome of these are injuries, losses and damages to the Nigerian consumers. The Nigerian legal system allows for private right of action as a means of seeking redress by a disadvantage consumer. Most of the consumers don't even know their right while others tend to abandon litigation and lawsuit, thinking of the very meager monetary reward and damages which is virtually inadequate and tactically imbalance with the level of injuries and losses incurred by the consumer from the product of the producers. Abdullahi Jafar stressed that he would rather fall back to his God rather than wasting a lot of energy to gain little or nothing at all. Some consumers abandoned their cases in the court because of the cumbersome nature of the Nigerian judicial system, which appears to be very lengthy and rigorous process and which in most cases don't favour injured consumers. The process comes out to discourage and diminish the trust and confidence the consumer has in the judicial system. Musa Bukar from Lamisula Jabamari ward posited that he only manages to cater for his household needs, and he needs the entire day to negotiate such issues. Therefore, the time to keep gallivanting in the name of pursuing a law suit is absolutely useless to him because he is a low income earner and he needs all time he can use. This eventually stops them from laying complaints on the court against the producers. Some consumer laws and policies have been laid down by the government with low and without effective powers on the subject matter of establishment.

2. Low income earning of consumers

The financial means and the economic capacity of the consumers is the fundamental determining factor whether or not the consumer can assume their duties, responsibilities and rights as consumers. It shows that many consumers have abandoned their litigation and law suits because of lack of financial capacity to pursue any suit in the court. Mustapha Bulama of Maisandari ward said his belief is that the court and its proceedings are made for the rich and bourgeoisies alone. He wonders when and where he can be able to fit into such processes as a result of his low income earning.

3. Inadequate awareness and sensitisation

Most often consumers in Nigeria find themselves saddled with services and non-performance from the producers. Unfortunately it is rare to seek redress due to number of reasons. One of such reasons is ignorance about the extent of protection accorded to them by the law. Another important reason is the low-level of awareness of the consumers which stems from the lack of formal education as well as insufficient critical information on the products and services provided by manufacturers. This is a necessary attribute for effective consumer protection in Nigeria.

Consumer rights and responsibilities

Millions of Nigerian consumers suffer from consumption of adulterated, substandard and expired food items and drugs. In the total effects of these are injuries, losses and damages to the Nigerian consumer. The Nigerian legal system allows for private right of action as means of seeking redress

by disadvantaged consumers. Some may not even know their rights but thinking of the meagre monetary rewards they will get from litigation, which may force them to abandon the law suit. The penalties for some product offences are too small to have any different effect apart from the counterfeit and fake drugs and wholesome processed foods. The penalties stipulated by other statutes are too small to enhance the commitment by the government in protecting the Nigerian consumer. Thus, in addition to the various laws and agency that has been put in place by the government are not adequately working tools and facilities to provide an enabling environment for effective consumer protection.

References

- Anayo, D. B., Edwin, C. I. & Kalu, S. E. (2017) Consumer protection in market transaction in Nigeria.
- Asikhia, O. Oni-Ojo, E. E. (2011) An investigation into the legal frame working Nigeria. *Australian journal of business and management Reserch*.vol.1
- Bello, K. B., Suleman, J. B. & Danjuma, I. (2012) Perspective on consumerism and consumer protection Act in Nigeria. *European journal of business management Reserch*.vol.4
- Baidaiki, A. D. (2013) Law and principles of consumer protection. *Nigerian institute of advance legal studies journal of law*
- Enyia, J. O. and Abang, T. A. (2018). In Search for a Consumer Protection Antidote In Nigeria: A Case for the Amendment Of The CPC Act, 1992. *International Journal of Current Research* Vol. 10, Issue, 03, pp.66733-66742,
- Ijewere, A. A. (2007) Consumer activism and its implication for consumer protection in Nigeria
- Kamaradeen, B. B. Jamila, B. A. & Ibrahim, M. (2013) Perspective on consumerism and protection Act in Nigera. *European journal of business and management*.vol 4.
- Kanyib, B. B. (2005) Consumer protection in Nigeria
- Nyor, J. T. (2014) The role of regulatory Agencies in food quality control in Nigeria
- Ndubisi, E. C., Anyanwu, V. & Nwankwo, C. A. (2016) Protecting the Nigerian consumer: An expository examination of the role of consumer protection council.
- Odion, O. &Okojie, E. (2003) Burden of proof in product liability law in Nigeria. *Ahmadu Bello university journal of commercial law*.
- Oni-Ojo, E. E. &Iyiola, O. (2014) Legal implication if manufacturers, negligence and its effects on consumer.
- Maccido, U. A. &Akume, A. A. (2013) An evaluation of product liability law
- Monye, F. (2005) Law of consumer protection
- Malemi, E. (2008) Law of tort
- Monye, F. (2005) Law of consumer protection.

Empirical Investigation into Determinants of Non-Farm Entrepreneurial Activities among Internally Displaced Persons: Evidence from Borno State, Nigeria

Bashir Kachalla Mohammed¹, Mohammed Mai Bukar² and Ali Mustapha³

^{1&2}Department of Remedial Art, Ramat Polytechnic, Maiduguri, Borno State

³Department of General Studies, Federal Polytechnic, Damaturu, Yobe State

*Corresponding Author's Email: bakmohgreat1@gmail.com

Abstract: *This study focuses on the determinants of participation in non-farm entrepreneurial activities among Internally Displaced Persons (IDPs) in Borno State, Nigeria. The study use purposive sampling technique to select Borno state as the case study area. Similarly, all the 32 formal IDP camps in Borno state were selected purposively since the study is on internally displaced persons. A total of 400 IDPs were selected using Yamane formula. The result was analyzed using ordinary least square regression model. Findings of the study revealed the significant impact of access to credit, donor from NGOs/government and membership of association on income generated from nonfarm entrepreneurial activities. Nevertheless, both demographic characteristics and socio-economic factors affect the IDPs decision on the level of income generated from nonfarm entrepreneurial activities in the study area. The study therefore, recommends that IDPs should be encouraged by government and the NGOs to form or join Community Based Organizations (CBOs) and other cooperative societies with a view to promote mutual interest. A sustainable framework that will enable the IDPs have access to credit at a lower rates should be encourage. Capacity building on product value addition should be provided to the IDPs to improve the quality of their commodities thereby earning a better return.*

Keywords: *Non-farm, Entrepreneurial, Internally Displaced Persons, Borno State*

Introduction

Due to fast growing population in Africa, there is increasingly pressure on limited arable land. Thus, many households are no longer able to live on agriculture alone but also participate in other non-farm entrepreneurship activities. (Oseni & winters, 2009).

The UN estimates that over 41.3 million people around the world have been forcibly moved from their homes into refugee and internally displaced person (IDP) camps (IDMC, 2019). Unlike other forms of migration, where the choice of movement can be an optimization problem for the household, majority of displaced persons are forced to leave their homes and land with little more than what they can carry. Such movement constitutes a large economic shocks to many households. The chances of people recovering from such a shock has implications for both individual well-being and national long-term growth.

Nigeria has witnessed an upsurge in insurgency attacks by Boko Haram, the result of which left many people into displacement. These persons are always confronted with various challenges which include loss of their livelihood, loved ones, frustrations, abuses and threat of assault etc. Displacement Tracking Matrix round XXI of January 2018 identified estimated 1.7 million IDPs in over 321,580 households across six states of North-East Nigeria with 40 per cent residing in camp-like settings in urban areas, plus 1.4 million returnees. The number of IDPs represented 4.5 per cent increase compared to the 1,702,680 identified in Round XX Dec. 2017. The number of displaced people in the country increased by 4.5 percent as at January 2018. (Nigeria's National Population Commission, 2018).

Since May 2013, the Boko Haram insurgency in northern Nigeria has resulted in destroying infrastructure, provoked severe livelihoods erosion and triggered the displacement of over 1.3 million people in Borno state, out of which 265,782 are in Maiduguri. The humanitarian situation of internally displaced persons (IDPs), returnees and the non-displaced population in Borno state is concerning. Therefore, the study seek to assess the determinants of participation in entrepreneurial nonfarm income generating activities among internally displaced persons in Borno State, Nigeria. The inspiration for this study comes from the fact that farm sector alone cannot provide the needed livelihood of the internally displaced population in the state that was devastated by insurgency and poses a threat to growth and development in the area and Nigeria at large (Mohammed & Ahmed, 2014).

The livelihood of internally displaced persons (IDPs) are mostly characterized by complex methods that involves various forms of income generating activities by one or more IDP, as non-farm income activities undertake an increasingly important role over time See (Rashidin, M.S., Javed S., Liu B., & Jiang W. 2020).; IDMC (2019); (Shehu & Abubakar, 2015).; (Kimty, 2015). Over the years, several studies were conducted in Nigeria and beyond on both demographic characteristics and socio-economic features that determine participation in non-farm entrepreneurial activities by households. Variables such as household's age, household size, gender, education, marital status, dependency ratio, access to formal credit, distance to community center, value of livestock, access to tarred road, total expenditure on food and non-food items, remittance to household and membership of association were used. See (Rashidin, M.S. *et al.* 2020); (Ojeleye, Saleh & Oyewole 2014); (Madaki & Adefila 2014); (Ike, 2015) and (Kimty, 2015) but none of these studies captured the status of the household whether the household are Internally Displaced, Refugee or host community as these are bound to play a significant role in influencing the type of non-farm income activity to be adopted by the household in the study area. Furthermore, there have been a number of studies in Nigeria and beyond on non-farm entrepreneurial activities by many scholars like (Shehu & Abubakar, 2015), (Ike, 2015) and (Rashidin, M.S. *et al.* 2020) all of which present evidence of determinants of participation in non-farm entrepreneurial activities as an income source, but to the best of our knowledge, no study was conducted in the north-eastern part of Nigeria particularly Borno state. Hence the aim of this study is to address this information gap. Therefore, the study seek to assess the determinants of participation in non-farm entrepreneurial activities among internally displaced persons in Borno State, Nigeria with specific interest to factors that influences the level of income.

Review of Related Literatures

This section discusses the theoretical framework and conceptual studies on entrepreneurial nonfarm income generating activities in Nigeria, Africa, other developing countries and developed nations.

Theoretical Framework

Sustainability theory

Several factors influencing the Internally Displaced Person to take decision with regards to participating in various non-farm entrepreneurial activities. Qasim, (2012) asserted that in developing countries, several uncertainties (social and natural markets) influenced the household's behavior. This has pose series of constraints in determining their production decisions. The economic theory underpinning this study is the Sustainability theory.

The sustainability theory tries to select and incorporate social responses to environmental and cultural problems. It points out that an economic model expresses sustain natural and financial capital, ecological model describes biological range and ecological integrity while political model defines social systems that appreciate human self-esteem. One of the major concerns of economist is how to make efficient use of scarce natural resources with alternative uses so as to ensure sustainability and improved environmental quality for man (Hoffman & Ashwell, 2001). Sustainability as regards natural endowment like land and its deposits, forests, air and water bodies means a balanced use of these resources over a lengthy time period without impairing the fundamental ability of the natural resource base to support future generation. A sustainable environmental system need to sustain a steady resource base, avoid excess exploitation of renewable resources and draining of non-renewable resources to make investment in adequate substitute.

Sustainability has become a significant idea to solving global resource and environmental issues (McGee, 2006) most especially in the management of natural resources. Sustainable agriculture according to Olowookere (2010) is the ability of farmers to produce food without damaging the environment and surrounding ecosystem by their agricultural activities.

Therefore, this study adopts this theory as a working framework since it captured the central message of the study as it vividly explain the relationship between participation in non-farm entrepreneurial activities by the internally displaced persons and its major determinants which is one of the objectives of this study.

Conceptual Framework

Non-farm Entrepreneurial Activity

Non-farm economy may be defined as comprising any non-agricultural activities that can generate income to the households (including income in-kind and remittances), either through wage labour or in self-employment. In some contexts, non-farm entrepreneurial activities are also important sources of local economic growth (e.g. timber processing, mining, tourism etc). (Davis, J. R. 2003). Most development economists have maintained that underinvestment in non-farm sector is largely due to: a) existence of one primary economic activity, namely farming; b) that theoretically, the

share of agriculture as a primary sector declines in the course of economic development; and c) labour moves out of agriculture and rural areas.

Accelerating the importance of non-farm economy is the inconsistent increase in demand for non-farm output as incomes rise (the theory of “economic transformation” where the share of the farm sector in gross domestic product (GDP) declines as GDP per capita rises over time, termed Engel’s Law (Haggblade et. al., 2001)). This is the structural transformation of a successful developing economy.

Due to its production relation and employment opportunities it creates, the entrepreneurial sector is paramount to the growth and development of the economy. The contribution it provides to households income represents a substantial and greater share of rural incomes.

Determinants of Participation in Non-farm Entrepreneurial Activity

Davis, J. R. (2003) found an evidence regarding the importance of factors that determine access to Non-farm entrepreneurial activities in Uganda, Tanzania, India, South America, Armenia, Georgia and Romania. In his paper titled “rural non-farm economy, livelihoods and diversification” he identified the determinants of non-farm income activities as: Education and skills, Social capital, Ethnicity and caste, Gender dynamics, Financial capital and Physical infrastructure and information. Furthermore, literature have shown that the household’s decision to participate in non-farm entrepreneurial activity is determine by various factors. Reardon *et al.* (2010) classify the factors responsible for the determinants of rural household participation into pull and push factors which are mostly facilitated by the household competence and the institutional atmosphere.

The pull factors include: low risk related with the activity compared to farm activity, need for immediate cash for transaction purpose, greater return on labour, greater yield on investment, desire for better life among the youth and economic opportunities. The push factors on the other hand include; increase in population, scarcity of fertile land and decline in its access, poor farm output, deteriorating earnings from farming, temporary shocks, absence of rural financial markets, and inaccessibility to market of farm inputs and weakening of the natural resource base.

Reasons for household participation in non-farm entrepreneurial activities

According to Reardon, T (2000), decisions made by households concerning the form and extent of their involvement in non-farm income activities (either starting enterprises or entering the wage labour market) generally depend on two main factors:

- The incentives offered, such as the relative profitability and risk of farm and Non-farm activities;
- The household’s capacity (determined by education, income and assets and access to credit, etc.) to undertake such activities.

Households are motivated to undertake non-farm income activities by either "pull" or "push" factors. In the case of enterprises set up by households, the choice of technologies and products will likewise be determined by similar conditions.

Empirical Literature Review

Different empirical studies have been conducted on non-farm entrepreneurial activities in Nigeria, Africa, other developing countries and developed nations.

M. S. Rashidin, S. Javed, B. Liu, and W. Jian (2020) investigates the effects of nonfarm income on agricultural productivity in rural Pakistan. Data was collected from the Pakistan Social and Living Standards Measurement Survey (PSLM) 2017–2018, a sample of rural and urban areas designed by Pakistan's Federal Bureau of Statistics. Heckman's two-step procedure was used to tackle the problems of endogeneity and selection bias. The first phase, probit regression, indicates that the accessibility of banks, motorable roads, forest, telecommunication substructure, montane grasslands, and shrub lands zone affects nonfarm income. On the other hand, the second stage, ordinary least squares regression, found a negative impact of nonfarm income on per capita farm income. Furthermore, results reveal that nonfarm household income has a significant positive effect on agricultural productivity.

Moreover, Seng (2015) investigate the effect of non-farm activities on farm households' food consumption in rural Cambodia using data of 5762 household from 2009 Socio-Economic Survey data by National Institute of Statistics. Explanatory variables include; gender of household head, age of household head, education level of household head, Household members greater than 64 years, Household members less than 15 years, Landholding, Availability of irrigation, yield damage and availability of public transport. Probit model was applied to explore the data. Findings from the study shows that there is a positive and significant relationship between the level of education of the household head and per capita food consumption. Therefore, engagement in non-farm activities exerts positive effects on household food consumption.

Shehu and Abubakar (2015) uses the Nigerian nationally representative household level data to examine the factors influencing the decision of farm household to participate in non-farm enterprise (NFE) activities in rural Nigeria. The model was estimated using Tobit regression. Variable studied include household size, head's gender, head's age, and years of education of the adult members of the household, formal credit, social capital, proximity to market, access to mobile phone, electricity and public transport. Result shows that among other variables, household size significantly influence non-farm enterprise participation decision of the household. Unique to this study, was that households having access to social and financial capital can overcome the non-farm enterprise's entry barriers. This suggests that for the development of rural entrepreneurship in the country, the farm households need to be provided with basic education, community infrastructures, effective micro-credit and social network.

Ike (2015) use both descriptive statistics and the Tobit regression to analyze data collected from 180 households in 18 communities of Southeastern Nigeria on factors that cause households to participate in non-farm activities. The study precisely studies the socio-economic features of farmers that contribute to participation in non-farm activities. The variables studied include: household heads' age, household heads' gender, educational level of household head, size of the household and dependency ratio. Other variables studied are the farm size, income from farm, remittance and the distance to the nearest urban center. Result from the Tobit regression model shows that the variables studied exclusive of gender are all significant. The coefficient of the

household heads' age, remittance and size of farm as well as income from farm and distance to nearest urban center are all negative. The study recommends an all-inclusive collaboration among the three tiers of government in to pursue rapid development in the rural areas by providing basic infrastructural facilities so as to diversify the rural economy away from dependency on the farm sector.

Moreover, Nagler and Naudé (2014) in their unique approach to Non-farm activities looks at the greater importance of non-farm economic activity among rural households in Africa. The study use data collected from the World Bank Living Standard Measurement Study-Integrated Survey in Agriculture (LSMS-ISA) which covers six countries from 2005-2012. Probit regression was used to identify the factors that determined rural household undertaken a non-farm enterprise. Variables used includes: access to formal credit, household size, share of adults, household wealth, distance to nearest major road, distance to nearest urban center and annual precipitation. Result from the study shows that non-farm entrepreneurship creates informal jobs to family members and are influenced by seasonality of agriculture. The findings also reveal that substantial heterogeneity exist across countries in the determinants of rural non-farm entrepreneurship.

Methodology

Description of study area/site/subjects

Located in the north-eastern geo-political part of the country with Maiduguri as its capital, Borno state has an area of 61, 435sq. km. One exceptional feature of the state is that it shares border with three countries namely Cameroun republic to the east, Chad republic to the north-east and Niger republic to the north. Located on latitude 10° N and 14° N and longitude 11.30° E and 14.45° E, the state has a hot and dry climate in most part of the year particularly from March to July and a cold climate during the hamattan period which last from November to February. The period of rainfall is normally from June to September in the north and from May to October in the southern part which varies from 300mm to 500mm and 700mm to 1000mm in the northern and southern part respectively. (Mustapha, Gwary and Makinta, 2014)

Agriculture is the mainstay of the state's economy that has a vast fertile land. It is suitable for the production of arable crops. The state is endowed with many solid minerals. Recently, exploration of crude oil was started in the shores of the lake Chad Basin area. Other non-farm entrepreneurial activities engage by the populace includes: cap making, weaving and knitting, groundnut oil processing, dyeing of cloths, ginnery and tannery, food processing, local drinks production, Local perfume making, blacksmith and goldsmith, pottery, mechanic, vulcanizer, Tricycle riding(Keke Napep), etc. (Mustapha, Gwary and Makinta, 2014)

Data collection and data analysis

The study use purposive sampling technique to select Borno state as the case study area. Similarly, all the 32 formal IDP camps in Borno state were selected purposively since the study is on internally displaced persons. However, out of the 400 sample size that was identified using the Yamane formula, random sampling technique was used to select the respondents from the 32 camps which were allocated proportionally. The survey method was adopted. A structured

questionnaire was used to gather data from respondents who are the internally Displaced Persons in the IDP camps and the host communities in Borno state.

The data was analyze using relevant descriptive and inferential statistics to test the hypotheses. Dummy data was analyze using percentage, frequency and chi-square test to see the existing relationship between categorical or dummy variables and entrepreneurial activities. The data was computed and analyze using relevant and appropriate economic theory with the aid of STATA (14) package.

The type of analysis to be employed in a research depends on the nature and purpose of the study (Chukwuone, 2009). Similarly, selection of techniques to be adopted depends on some factors, particularly the objectives of the study, availability of data and time constraint (McNally & Othman, 2002).

This study therefore, besides descriptive statistical tools, employed OLS regression analysis to test the hypotheses. The OLS in the form of multiple regressions was adopted to regress the household's income as a dependent variable on other set of independent variables. This form of regression model is used when dependent variable is quantitative and the independent variables are of any type as in the case in this study. It is normally used to test the correlation between the dependent variable on one or more other independent variables (Gujarati, 2007)

Descriptive Analysis and Interpretation of the Data

This section presents the descriptive statistics for easier understanding of the variables under study. Table 4.1 and 4.2 presents the results of the descriptive statistics as follows:

Table 4.1 Descriptive Analysis of Demographic Variables

Variables	Respondents Opinion	Frequency	Percentage
Age	Less than 25	140	35
	25-35	101	25
	36-45	94	24
	Above 45 years	65	16
	Total	400	100
Gender	Male	175	44
	Female	225	56
	Total	400	100
Level of Educational	No Education	47	12
	Qur'anic Education	134	33
	Primary	110	28
	Secondary	73	18
	Tertiary	36	9
	Total	400	100
Occupation	Farm sector	340	85
	Non-farm	60	15
	Total	400	100
Household Size	Less than 6	219	55
	6-11	107	27
	More than 11	74	18
	Total	400	100

Source: Field survey, 2021

From table 4.1, the result indicated that out of four hundred respondents, 140 of the respondents equivalent to 35% fall into the age bracket of less than 25 years. 101 respondents (25%) are in the age range of 25-35. 94 other respondents, constituting about 24% are between the ages of 36 to 45. Also, about 65 equivalent to 16% of the respondents are above 45 years. This shows that an average Internally Displaced Person in the study area was in his/her productive age suggesting high economic productivity. Moreover, as can be seen from Table 4.1, 175 respondents (44%) are males and the remaining respondents constituting about 56% are females. The predominance of female IDPs in Borno state could be attributed to their nature of vulnerability and freedom of association in the study area. Nevertheless, 36 respondents constituting 9% acquired tertiary education. 73 (18%) obtained 'O' level results while only 110 respondents about 28% obtained primary school leaving certificate. 33% that is, 134 respondents attended Qur'anic education only. Thus, 57 respondents (12%) have never attended school. This implies that majority of the household head are literate and hence helps a lot to determine participation in non-farm income activities.

Furthermore, 340 of the IDPs reckoning 85% are farmers, while 60 constituting 15% are engaged in other non-farm entrepreneurial activities. In addition, from Table 4.1, the results indicated that out of 400 IDPs, 219 representing 55% fall into the household size bracket of less than 6; 107 equivalent to (27%) are in the household size range of 6-11 people and the remaining 74 representing about 18% have above 11 people in their households. This implies that majority of the IDPs in the study area are having few household members.

Table 4.2 Descriptive Analysis of Socio-economic Variables

Variables	Respondents Opinion	Frequency	Percentage
Access to Credit	Yes	32	8
	No	368	92
	Total	400	100
Remittance	Yes	136	34
	No	264	66
	Total	400	100
Donor from NGOs/Govt.	Yes	383	96
	No	17	4
	Total	400	100
Membership	Yes	44	11
	No	356	89
	Total	400	100
Non-farm Income	Less than 20,000	215	54
	20,000-50,000	109	27
	More than 50,000	76	19
	Total	400	100
Level of Participation	High	102	26
	Low	298	74
	Total	400	100

Source: Field survey, 2021

From table 4.2 above, the result indicate that, 32 respondents equivalent to 8% have access to credit either in a short term or long term from banks and non-banks financial institutions, while 368 respondents constituting (92%) have no access to credit in the study area. However, 136 internally displaced persons (34%) are receiving financial support from their relatives living outside the IDP Camp, while 264 households reckoning 66% are not receiving any support inform of remittance. This implies that majority of the IDPs are not enjoying any financial support from their relatives that are not staying with them.

Furthermore, 383 respondents equivalent to 96% are receiving humanitarian support from either government or non-governmental agencies while 17 respondents (4%) do not receive any support. This indicates that the IDPs living in organized/formal camp receives attention from donor agencies. Moreover, only 44 respondents (11%) have membership with associations or organizations, whereas about 356 households reckoning 89% did not have membership with any

association or organization. This implies that most of the respondents are not registered with any Community Based Organisation.

However, from Table 4.2, the results indicated that out of 400 respondents, 215 respondents representing 54% are receiving income of less than 20,000 naira, 109 respondents equivalent to 27% are in the income range of 20,000-40,000 naira while 76 respondents representing 19% are receiving income of more than 40,000 naira. This means that majority of the respondents are receiving income of less than 20,000 naira which is the least income in the study area. Finally, 102 households equivalent to 26% participated actively in the non-farm activities, while 298 respondents representing (74%) engaged in farming activities with less involvement in non-farm activities. This implies that majority of respondents in the study area are farmers.

Inferential Statistics

This section deals with presentation and interpretation of the results of the determinants of participation in non-farm entrepreneurial activities among Internally Displaced Persons in the study area.

Table 4.3 Results of the Factors that Affect the Level of Income Earned by IDPs from Participating in Non-farm Entrepreneurial Activity

Dependent Variable: Non-farm Income	
Independent Variables	Coefficient
Age	-0.009 (-0.18)***
Gender	0.722 (2.53) **
Level of Education	0.164 (0.66) ***
Occupation	-2.073 (-18.04) ***
Household Size	0.019 (1.36) ***
Access to Credit	0.558 (2.03) ***
Remittance	0.098 (1.19) ***
Donor from NGOs/Govt.	-0.115 (-1.06) ***
Membership	0.405 (2.55) **
Constant	10.778 (27.45) ***
R ²	0.634
F value	(48.10) ***

Significant at (***) 1%) (**5%) (*10%)

Source: Author's computation using STATA 14, extracted from appendices

Discussion of Findings

This study has empirically assessed the determinants of participation in non-farm entrepreneurial activities among Internally Displaced Persons in Borno state, Nigeria. These include: Age, Household size, Gender, Level of Education, Occupation, Household size, Access to credit, Donor from NGOs/Government and Remittance. To achieve the specified objectives, the study employed descriptive statistics together with logistic regression and ordinary least squared (OLS) in the form of multiple regression models. For the diagnostic tests, the study applied serial correlation test, normality test, multicollinearity test, heteroscedasticity test and functional misspecification test.

From the result in table 4.3, age coefficient is negative but significant at 1% level. This indicates that increase in age might likely reduce income from non-farm entrepreneurial activities by 18%. This findings support the conclusion reached by Seng (2015), Shehu & Abubakar (2015) and Ojeleye, Saleh & Oyewole, (2014) who also found that as ones age increases, he tends to shift from productive age to dependent and his capacity to participate in other income generating activities will decrease thereby reducing income.

Likewise, table 4.3 shows a positive and significant relationship between gender and non-farm income at 5% level with the male having an increase of 2.53. This is in line with the descriptive statistics in Table 4.1 which shows that participation in non-farm activities differs between the two sexes as male are more engaged in labour than females', this is because they mostly work outside their homes and rural environment. In most Nigerian cultures, particularly the northern region, men often dominate women and part of the responsibility of male is to work and provide the family income as they are the breadwinner. The result is in line with earlier findings that male participate more in non-farm activities than females. Ike (2015), Owoo & Naude (2014) and Khan, Deb & Bantilan (2014). However, findings by Seng (2015) and Polzen & MacDonald (1975) fail to concur with the above findings.

Similarly, Table 4.3 shows a positive and significant relationship between the level of education and non-farm income at 1%. It further indicates that as the level of education increase, income is likely to increase by 66%. The result of this study supports the finding of de Janvry, Sadoulet & Zhu (2005), Saliu & Adebayo (2010), Atamanov (2011) and Ibekwe *et al.* (2012) as they found that education of household head increases the chances of participating in various forms of income generating activities thereby increasing the level of household income from non-farm entrepreneurial activities. However, it is contrary to the findings of Beyene (2008) and Owoo & Naude (2014) who opined that level of education has no significant influence on participation in non-farm activities.

Furthermore, table 4.3 shows that occupation of the household head is significant but negative at 1% level. This indicates that full participating in farming reduces income from non-farm by 18.04. Occupation of the household head therefore, is a significant factor in determining both the level of participation and income from non-farm entrepreneurial activities. This study concur with the findings of M. S. Rashidin, S. Javed, B. Liu, & W. Jian (2020) and Madaki & Adefila (2014) who

found that occupation of the household head influences participation in non-farm income because household that participate less in agriculture have the probability of participating more in non-farm income activities that will generate income to the family.

Table 4.3 shows a positive and significant relationship between household size and income from non-farm entrepreneurial activities. With a coefficient of 0.019, an increase in household size might likely increase household income by 1.36. This result is based on the fact that, from the descriptive statistics in table 4.1, majority of the respondents have a moderate sizeable family, with the presence of at least one within the household. Also 'significant' value of household size might be due to a common rural practice of entire household participation in labour. This is a common practice in extended families which is the most common type of family in rural areas of Borno State. The result of this study is in line with the finding of Timothy (2011), Berjan, *et al.* (2013), Khan, Deb & Bantilan (2014), Nagler & Naudé (2014) and Shehu & Abubakar (2015) who found that increase in household size leads to increase in both participation and income from non-farm activities.

Another puzzling result, obtain on the coefficient of access to credit depicts a positive and statistically significant effect at 1 percent level on non-farm entrepreneurial activities with 0.558 on non-farm income as shown in table 4.3 respectively. The result shows that access to credit tremendously increases non-farm income by 2.03. The findings concur with other studies, which found that households who have access to credit participate more in non-farm entrepreneurial activities since it serves as a source of capital. Access to credit also gives the household the purchasing power to acquire or hire factors of production. (Stefan & Manfred, 2005; Timothy, 2011; Berjan, *et al.*, 2013; Ojeleye, Saleh & Oyewole, 2014; Nagler & Naudé, 2014; Shehu & Abubakar, 2015).

As for the donor from NGOs/government, the regression analysis on table 4.3 shows that the donor from NGOs/government coefficient of 0.115 is statistically significant but negative at 1% level. The study found that it is most IDPs who receive donor from NGOs and government institutions do rarely participate in other entrepreneurial activities.

However, table 4.3 shows a positive relationship between remittance and income from non-farm source. With a coefficient of 0.098, remittance tend to increase the household income from non-farm activity by 1.19. Finding of this study concur with the finding of Möllers & Buchenrieder (2011), Timothy (2011) and Ike (2015) who observed that remittance reduce the level of participation in non-farm entrepreneurial activity since households might tent to rely on remittance as an income supplement thereby forgoing participation in other income generating activities. However, the finding of this study therefore differ from that of Malek & Usami (2009) who found that transfer payment do not influence the level of participation in non-farm activities.

Similarly, Table 4.3 shows a positive and significant relationship between membership of association and non-farm income. Membership of association might likely increase non-farm income by 2.55. The findings corroborate the findings of Berjan, *et al.*, (2013), Ojeleye, Saleh &

Oyewole (2014), and Owoo & Naudé (2014) who found that although membership of association significantly influences non-farm income, it has no significant influence on the level of participation in non-farm entrepreneurial activities.

Diagnostic Tests

This section deals with the presentation and the interpretation of the results of diagnostic tests of the data collected.

Table 4.4 Results of the Diagnostic Tests

Tests	Test Statistic	P-value
Normality	42074.79	4.0963
Serial Correlation	2.467105	0.0327
Heteroskedasticity	0.41	0.5215
Functional Misspecification	6.86	0.6430
Multicollinearity		
Variables	Variance Inflation Factor	
Access to Credit	2.15	
Gender	1.80	
Membership	1.65	
Occupation	1.29	
Household Size	1.28	
Donor from NGOs/Govt.	1.23	
Age	1.22	
Educational Level	1.14	
Remittance	1.06	

Source: Author's computation using STATA 14, extracted from appendices

Table 4.4 presents the results of diagnostic tests for normality inform of Jarque-Bera, serial correlation in form of Breusch-Godfrey Serial Correlation LM Test, heteroscedasticity inform of Breusch-Pagan/Cook-Weisberg test, functional misspecification inform of Ramsey RESET test and multicollinearity. The results revealed that the model has passed all the tests conducted. Thus, the results indicate that there is no any problem.

Summary of Major Findings

This study assessed the determinants of participation in non-farm entrepreneurial activities among internally displaced persons in Borno state, Nigeria. It uses descriptive and inferential statistics to analyze the data. Moreover, inferential statistical tool namely Ordinary Least Square (OLS) in the form of Multiple Regression Model was employed to determine the factors that affect the level of income earned by households from participating in non-farm income activities. The findings of the study are summarized below:

4. Age of the household head (-0.18), Donor from NGOs/Government (-1.06) and occupation (-18.04) had a negative and significant impact on income generated from non-farm activities.
5. Gender of the respondents (2.53), level of education (0.66), household size (1.36), access to credit (2.03), remittance (1.19) and membership of association (2.55) all had a positive and significant impact on non-farm income.
6. Access to credit was positive and statistically significant (2.03). This shows that it tremendously increases income earned by the IDPs from participating in non-farm entrepreneurial activities.
7. Membership of association was also found to be positive (2.55). Result of the OLS reveals that it significantly influence the level of income earned from non-farm entrepreneurial activities.

Conclusion and Policy Implication

Based on the above findings, a general conclusion was drawn which shows that both demographic characteristics and economic factors affect the level of household income generated from non-farm entrepreneurial activities in the study area.

Specifically, donor from NGOs/Government to the IDPs have a significant impact on income from non-farm activities in the model. This shows that IDPs who receives donor earned more income from non-farm activities than household head who do not receive any.

Finally, the study found that access to formal credit and membership of association are an important determinant of non-farm income as none of the study examined disagree with the findings of this study. This means that households who had registered with an association had easy access to credit which is a source of capital and tend to earn more than household who have no access to credit. Thus, access to credit and membership of association are said to be the major determinant of non-farm entrepreneurial activities which is in line with a priory expectation.

Recommendations

Based on the findings of this study, the followings recommendations are made;

- iii) Since the findings revealed that membership of association significantly influenced income earned from non-farm entrepreneurial activity. The IDPs should be encouraged by government and the NGOs to form or join Community Based Organizations (CBOs) and other cooperative societies with a view to promote mutual interest.
- iv) Access to credit was also statistically significant. Therefore, government at both local and federal level are advised to establish a sustainable framework that will enable the IDPs have access to credit at a lower rates. The provision of low interest capital will promote participation in entrepreneurial activities thereby boosting the acquisition of

- productive assets which could increase household income, hence reducing their level of poverty and dependence on transfer payment.
- v) Government and non-governmental agencies implementing policy intervention strategies targeting entrepreneurship should give more attention to the IDPs. This can be achieved through assurance of adequate access to credit facilities on reasonable terms for acquisition of necessary inputs.
 - vi) Even though female IDPs participate in a number of entrepreneurial activities, they earn lower than their male counterparts from these activities. This is mainly due to their involvement in low return small scale traditional non-farm activities like: making of local perfume (Turaren wuta), cap making, weaving, tailoring and preparing local drinks like 'Sobo' and 'Kunun Aya', thus, government and other non-governmental organisations should build their capacity towards improving the quality of their commodities thereby earning a better return.

Suggestions for Further Studies

Apparent there are yet many questions which need to be answered. Specifically, further studies could be conducted on a comparative study on determinants of non-farm entrepreneurial activities between the IDPs and the host communities. In addition, the scope of this work is limited to Borno state, further studies could be conducted on the north-eastern region for a wider scope.

Reference

- Alobo, S. (2012). *Determinants of Rural Household Income Diversification in Senegal and Kenya* Lund University Press.
- AnrÃquez, G., & Daidone, S. (2010). Linkages between the farm and nonfarm sectors at the household level in rural Ghana: a consistent stochastic distance function approach. *Agricultural Economics*, 41(1), 51–66. <https://doi.org/10.1111/j.1574-0862.2009.00425.x>
- Atamanov, A., & Van den Berg, M. (2011). Microeconomic Analysis of Rural Nonfarm Activities in the Kyrgyz Republic: What Determines Participation and Returns? *SSRN Electronic Journal*. Published. <https://doi.org/10.2139/ssrn.1949675>
- CBN (2012). The Central Bank of Nigeria Partnership with Alliance for a Green Revolution in Africa (AGRA): Conceptual Issues, Operations and Prospects for Food Security in Nigeria. 2012, 48(4): 181–192.
- Eltayeb, M. A. & Ebiadalla M. E. (2012). Determinants of Farmers Access to the Formal Credit Sector in Kassala state, East Sudan. *Kassala University Journal*, 6 (1): 31-70.
- Ibekwe, U., Eze, C., Onyemauwa, C., Henri-Ukoha, A., Korie, O., & Nwaiwu, I. (2010). Determinants of Farm and Off-Farm Income participation Among Farm Households in South East Nigeria. *Academia Arena*, 2(10): 58-61.
- Ibekwe, U.C., Okorji, E. C., Nwagbo, E.C., Eze, C.C., Henri-Ukoha, A., Osuji, M.N. & Enyia, C.O. (2012). Determinants of participation in entrepreneurial Income Generating

- Activities in Ohaji/Egbema LGA of Imo State, South East Nigeria. *International Journal of Agricultural and Food Science*. 2(4): 143-145
- IDMC (2019). Global Report on Internal Displacement. *Discussion paper* Norwegian Refugee Council. 2019.
- Ike, P. C., (2015). Determinants of Participation in Entrepreneurial Economic Activities in South East Nigeria: A Tobit Analysis Approach. *Journal of Biology, Agriculture and Healthcare*. 5(2):102-108
- Jabo M. S. M., Ismail, M. M., Shamsuddin, M. N. & Abdullah, A. M. (2014). The impact of entrepreneurial nonfarm income generating activities on the food security status of rural households in Nigeria. *International journal of agricultural sciences and veterinary studies*. 2(4) <http://www.ijasvm.com/currentissue.php>
- Khan, P. E., Deb, U. & Bantilan, C. (2014). Rural entrepreneurial economy in Sat India: nature, extent and determinants. *Paper presented at the 8th Conference of the Asian Society of Agricultural Economists (ASAE)*. 15-17 October 2014 at the BRAC Centre for Development Management (BRAC-CDM), Savar, Dhaka, Bangladesh.
- Kimty. S., (2015). The Effects of entrepreneurial activities on farm households' food consumption in rural Cambodia. *Development Studies Research*, 2(1): 77–89, <http://dx.doi.org/10.1080/21665095.2015.1098554>
- Madaki J. U. & Adefila, J. O. (2014). Contributions of rural entrepreneurial economic activities to household income in Iere area, Kaduna state of Nigeria. *International Journal of Asian Social Science*, 4(5): 654-663
- Mohammed, D. T. & Ahmed, F. F. (2014). The Effect of Insurgency on Borno State Economy (2008 – Oct.2014). *Journal of Economics and Sustainable Development*. 16(6): 10-17
- Mustapha, Gwary & Makinta, (2014). Harnessing the economic potentials of Borno state for poverty alleviation in Nigeria. *International journal of research in agriculture and food sciences*, 2(5): 8-14
- Nagler, P & Naudé, W. (2014). Entrepreneurial Entrepreneurship in Rural Africa: Patterns and Determinants. *Discussion Paper No. 8008*. Forschungsinstitut zur Zukunft der Arbeit (IZA) (Institute for the Study of Labour), Bonn, Germany.
- Ojeleye O.A., Saleh M.K. & Oyewole S.O. (2014). Entrepreneurial Income and Food Security Status of Small Scale Farming Households in Nigeria. *Research Journal of Agriculture and Forestry Sciences*. 12(2): 1-7.
- Owoo, N.S. & Naudé, W. (2014). Entrepreneurial Enterprise Performance and Spatial Autocorrelation in Rural Africa: Evidence from Ethiopia and Nigeria

- Qasim, M. (2012). Determinants of Farm Income and Agricultural Risk Management strategies. The case of Rainfed Farm Households in Pakistan's Punjab. *International Rural development*, 2(2): 17-26
- Rashidin, M., Javed, S., Liu, B., & Jian, W. (2020). Ramifications of Households' Nonfarm Income on Agricultural Productivity: Evidence From a Rural Area of Pakistan. *SAGE Open*, 10(1), 215824402090209. <https://doi.org/10.1177/2158244020902091>
- Reardon, T., Stamoulis, K., Cruz, M.E., Balisacan, A., Berdegue, J., & Savadogo, K. (2010). Diversification of household incomes into entrepreneurial sources: Patterns, determinants and effects. *Paper no. 4, IFPRI conference on Strategies for Stimulating Growth of the Rural Entrepreneurial Economy in developing countries*, 17-21 May 2010 at Airlie House, Virginia.
- Seng, K. (2015). The Effects of entrepreneurial activities on farm households' food consumption in rural Cambodia, *Development Studies Research*, 2(1): 77-89.
- Shehu, A. & Abubakar, N. (2015). Determinants of Participation of Farm Households in Entrepreneurial Activities in Rural Nigeria. *International Journal of Economics, Commerce and Management*. 6(3): 21-28
- Tabachnick, B. G. & Fidell, L. S. (2012). *Using Multivariate Statistics*. 6th Edition, Person Education.
- van Leeuwen, E. & Dekkers, J. (2013). Determinants of Off-Farm Income and Its Local Patterns: A Spatial Microsimulation of Dutch Farmers. *Journal of Rural Studies*, 31(2): 55-66

Effects of Micro-Entrepreneurial Skills Acquisition of Trained IDPS towards Economic Self-Reliance

Ruth Asur¹, Yusuf Anuwa² & Bashir Kachalla Mohammed³

^{1,2&3}Department of Remedial Arts, Ramat Polytechnic, Maiduguri, Borno State, Nigeria.

Corresponding Author: ruthasura@yahoo.com. Mobile No.: +234 8035697886

Abstract: *This study examined impact of micro-entrepreneurial skills acquisition on the trained IDPs towards their economic self-reliance in Maiduguri, Borno State. Data were sourced through structured questionnaire and 180 were retrieved out of 229 samples distributed to the respondents. This made a 79 percent return rate. The study used Descriptive Statistics, Multiple Linear Regression Technique and Likert-Scale. The findings of the study are; the socioeconomic characteristics showed that majority of the respondents were married male who attained secondary school leaving certificate and earned average income between ₦21,000.00 – ₦30,000.00 monthly. On the other hand, result of the effect of micro-entrepreneurial skills acquired by the trained IDPs revealed that 75 percent of the respondent benefited from the skills acquired. In conclusion, more females should be considered when an opportunity to acquire skills comes. The study recommends that more of such programs should be provided to train more of untrained IDPs to be economically self-reliant.*

Keywords: *Entrepreneurial. Internally Displaced Persons & Skills,*

Introduction

Insurgents' attacks have been a serious concern in many countries of the World and it has become an epidemic for several years. The Internal Displacement Monitoring Center (IDMC) estimated the number of Internally Displaced Persons (IDPs) Worldwide to be about 38.2 million in 2014, the highest level since 1989 (IDMC, 2017). The figures kept escalating significantly in many insurgences affected countries, which brought the figure to 40.3 million people as a result of conflict and series of attacks on people as at 2016. The report shows that one person in every second is forced to flee their home in conflict affected countries (IDMC, 2017).

According to the Global Report on Internal Displacement (2017), Africa is the hardest hit by heavy armed insurgence attacks that led many people to flee for safety. In 2016, the total IDPs in Africa was about 10.762 million out of a total world IDPs population of 40.3 million which is approximately 26.7%. Currently, Africa has about 13 million internally displaced persons, a third of the global number of IDPs, and more than double the number of refugees in the continent (IDMC, 2017).

Boko Haram insurgency in the North East which began in 2009 has claimed many lives and destroyed property worth millions of naira. According to IDMC (2016), 85% of the total displaced persons in Nigeria have risen due to insurgency attacks by Boko Haram. It is important therefore to acknowledge the fact that without timely support and protection of IDPs today, many may end up being refugees Bilak (2017).

According to Displacement Tracking Matrix (DTM), a team composed of International Organization for Migration (IOM), National Emergency Management Agency (SEMA), Nigeria Red Cross Society and the Humanitarian Partners on the Field pointed out that the IDPs in Nigeria as at 2015 was about 2.1 million. This figure covers about 207 of the affected Local Government Areas (LGAs), involving 13 states in the Northern part of Nigeria. The report also indicates that about 1.7 million of the internally displaced persons were from Borno (1,434,149), Adamawa (136,010) and Yobe (131,203). Specifically, the report shows that about 528,000 out of the approximated 1.7 million (about 80%) IDPs live in Maiduguri Metropolis, Borno State, (International Committee of the Red Cross, 2016).

In terms of the economic effects of Boko Haram in Maiduguri, the crisis has led to the closure of many economic activities in the affected areas. Many businesses and companies have been forced to fold up or relocate to neighboring states due to incessant attacks by the insurgents resulting in loss of jobs and job destructions. Furthermore, majority of the residents in the area whose primary source of livelihood is farming have been grossly affected.

Fatile and Bello (2015) pointed that many of the internally displaced persons have no jobs and are homeless. This has led to overdependence of IDPs on government, NGOs, Philanthropists, and other international donor Agencies for survival and sustenance. In order to reduce the burden on these humanitarian Agencies, entrepreneurial skill development towards economic self-reliance was introduced to ensure that the IDPs are engaged.

This study therefore, intends to assess the impact of micro-entrepreneurial skills acquisition given to trained IDPs in ensuring that they are economically self-reliant.

Available reports by the International Committee of the Red Cross (ICRC), (2016) have shown that Maiduguri in Borno State has a large number of IDPs. Majority of them are unemployed and poor and depend on humanitarian supports. This is attributed to the destruction of their businesses, farms and properties caused by Boko Haram insurgents. Many NGOs, Governments and Philanthropists have contributed immensely to the provision of food, clothing and shelter towards the sustenance of the IDPs especially in Maiduguri Metropolis. Entrepreneurial Skill acquisition may economically empower the IDPs to be self-reliant, improves their lives and effort towards restoring peace in the region. However, only few studies have been carried out on the economic aspect, and those that are available are not detailed on entrepreneurial skill development and have not tried to assess the impact of the skills acquired towards economic self-reliance of IDPs. For example, the study by Obikaeze and Eweka (2016), concentrated more on the sustenance of IDPs through provision of food, clothing, shelter, healthcare and education without considering the aspect of entrepreneurial skill acquisition.

Despite the efforts made by the Government and NGOs to alleviate economic hardship faced by the IDPs, particularly in Borno, there has not been enough studies in this area that have assessed

the analysis of micro-entrepreneurial skills acquisition on self-reliance among trained IDPs particularly in Maiduguri.

Many business owners have been forced to close down and some flee the town as a result of security challenges. In addition, there is dearth in literature on the impacts of micro-entrepreneurial skills acquired by the trained IDPs in Maiduguri. This poses a serious concern in the academics and creates wide gap in the literature. Thus, to fill this gap, this study focuses on assessing the impact of micro-entrepreneurial skills acquisition of trained IDPs towards their economic self-reliance.

Literature Review

This section discusses the Conceptual, Empirical and theoretical framework on micro-entrepreneurial skill acquisition on economic self-reliance among trained internally displaced persons

Conceptual Issues

Micro-entrepreneurial Skills

There are many definitions of entrepreneurial skills. Entrepreneurial skill can be defined as the ability to create something new with value by devoting the necessary time and effort, assuming the accompanying financial psychic and social risks and receiving the resulting reward of monetary and personal satisfaction and independence (Hisrich and Peter, 2007). An entrepreneur who develops the skills is seen as one who organizes, manages and assumes the need of a business enterprise. The person takes control of his/her future and becomes self-employed whether by creating his own unique business or working as a member of a team at a multi-level vocation. The person combines land, labor, capital and entrepreneur which are used for producing goods and services in the economy, (Robert, 2021)

Sousal (2014) asserts that entrepreneurial characteristics can be acquired or learned throughout life. Such characteristics are ability to develop and maintain a successful business through hard work and effort, ambition to achieve goals, sense of responsibility for the success or failure of business. Entrepreneurial skills should be natural and should form part of our evolution and new model of economy.

Hassan Moshood (2018) sees entrepreneurs as aggressive catalysts for change, positive minded in every economic environment and having a desired hope for making profit. He further said entrepreneurs of old were the pioneers of today's business endeavors. They used their intellects to innovate and utilize capacity for accomplishment which is the yardstick by which enterprise is now measured.

Economic Self-Reliance

Self-reliance is the social and economic ability of an individual, a household or a community to meet essential needs including protection, food, water, shelter, personal safety, health and education in a sustainable manner and with dignity UNHCR (United Nation Handbook for Self-Reliance, (2005). Economic self-reliance (ESR) has to do with developing and strengthening livelihoods of persons of concern and reducing their vulnerability and long-term reliance on humanitarian/external assistance Economic self-reliance represents different ways of thinking

about the processes and outcome of economic development. It is an individual's ability to accumulate economic resources in excess of their needs. ESR provides a solid platform from which people can develop and reach their full human potential. Godfrey, 2008 states that individuals who are economically self-reliant have greater resilience in the face of negative economic shocks. According to Godfrey, economic self-reliance arises from two sources (1) our own effort, talents and skills and (2) our relationships with family, friends, government and macro-social systems.

Internally Displaced Persons (IDPS)

Since 2009 to date, many IDPs especially in the north east lost their houses and belongings due to the destructive activities of the Boko Haram insurgents. As a result, they had to flee to other Local governments more especially to Maiduguri metropolitan council to be hosted by relations while some are camped by the government. The attack was so severe that they had to run for their lives against being killed. This made them completely handicapped and nothing to hold unto as means of livelihood hence needed humanitarian assistance and protection.

Onuoha (2016) said the Industrial Trust Fund (ITF) trained more than 1,000 persons in Borno state and of this number, about 600 of the participants are IDPs drawn from various camps in Maiduguri, Borno State capital. The program is aimed at giving the IDPs a fresh beginning and integrates into the society by means of livelihood, training on various entrepreneurial skills and facilities.

The ultimate aim of the scheme is to motivate participants to organize themselves into cooperatives and eventually be introduced to the financial institutions to access soft loans.

Internally displaced person (IDPs) 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. This could be, in particular, as a result of or in order to avoid the effects of armed conflicts. The conflicts are situations of generalized violence, violations of human rights, natural or human-made disaster and the IDPs have not crossed an internationally recognized state border, Kampala Convention (2009).

Importance of Skills Acquisition Towards Economic Self-reliance

Skill development is the ability to carry out a task with determined results often within a given amount of time, energy or both. In the domain of work, some general skills would include time management, teamwork and leadership, self-motivation and others. Skills are required and needed by people to contribute to a modern economy. Skill development denotes improving yourself and skill set. The skills determine the ability of a person to complete a task with great success rate and in right time. According to Boson Innovation (2018), skills development involves two steps. One step is finding the knowledge required to improve the individual and secondly getting trained in that particular sector to excel in the tasks.

Furthermore, Nanayakkara (2017) demonstrated that being an entrepreneur allows people in poverty to escape poverty traps, earn an income that supports life styles as well as to be able to participate constructively in their respective communities. As a result, there are advantages of being an entrepreneur which help them in an increased level of choice and the ability to lives they have reason to value in constrained post war contexts.

Theoretical Framework

Human Needs Theory

In an effort to assess the entrepreneurial skill development of the IDPs towards self-reliance, there is a need to take into consideration the human needs of these people. This is because human needs are essential for survival. According to Maslow (1954) a renowned psychologist, human needs go beyond physical needs like food, clothes and shelter, they also include non-physical elements needed for human growth and development. For Maslow, human needs are hierarchical in nature. That is each need has a specific ranking or order of obtainment.

The concept of human needs could matter when assessing the entrepreneurial skill development of the IDPs. This is because one of the primary causes of protracted or integrated conflict amongst people is their unyielding drive to meet their unmet needs on the individual, group and societal levels. That is why needs theorist argued that needs unlike mere interest cannot be suppressed or bargained for. Therefore, the human needs approach calls for collaborative and multifaceted problem-solving models and techniques such as entrepreneurial skill development. However, the two major 'schools of thought' attempted to explicate the best practice that could guarantee human security. These are: 'Freedom from Fear Approach' and 'Freedom from Want Approach'. These approaches clearly Centre on what threats individuals should be protected from and offer the appropriate mechanisms for responding to these threats. A need creates tension in the individual to achieve a desired objective which reduces the tension. For the IDPs there is a tension caused by insurgency, therefore, the situation creates the need to acquire skills for sustenance. The IDPs lack the basic needs which include food, clothes and shelter; hence there is a need to motivate them to develop entrepreneurial skills towards self-reliance. Therefore, in the course of the entrepreneurial skill development of the IDPs towards self-reliance, their social need of acceptance; to love and be loved, by having a sense of belonging is paramount. Therefore, the needs theory will be adopted to guide this study.

Empirical Review

Demographic Characteristics of trained IDPs

Stephen (2016) examined how youth empowerment and the contributions of local entrepreneurs would facilitate sustainable peace in the post-Boko Haram conflict in North Eastern Nigeria. Using the Root Causes/Justice Theory and the Individual Change Theory as well as secondary data in arriving at literature findings, Stephen (2016) found that youth unemployment, gender inequality, religious intolerance, ethnicity, low level of education, social and political exclusion, high level of dependence, corruption among others do result in conflicts, and that, peace-building is most effective when it addresses the root causes of conflict in order to avoid a relapse into another conflict.

Effect of Micro-Entrepreneurial Skills acquired and their benefits on trained IDPs towards Economic Self-reliance

In a study conducted by O. O. Olabaju (2020), the study examined the relationship between capacity-building programmes and women empowerment and self-reliance. It concluded that adult literacy and skill acquisition programmes correlates significantly with women-empowerment and self-reliance in the Gambia. The research employed a descriptive design of

survey type with 250 participants, where data collected through questionnaire were analyzed using t-test, mean and simply frequency.

Mshelia (2018) used secondary data sourced from literatures and research works where they concluded that since there is no guarantee that IDPs problems will end soon. The paper recommended that entrepreneurial skills training should be developed amongst the IDPs in order to boost entrepreneurship development in Borno State.

Methodology

The Study Area

The study was carried out in Maiduguri metropolis, Borno state, Nigeria. It is located in the north-eastern part of Nigeria boarded by Cameroun Republic to the east, Chad Republic to the north east and Niger Republic to the north, which makes Maiduguri a trade cross border. Borno State lies on latitude 10°N and 14°N and longitude $11^{\circ}.30' \text{ E}$ and $14^{\circ}.45' \text{ E}$ and around 350m above sea level with temperature ranging between 32°C to 48°C . It is also bounded by Adamawa state in the south, Gombe state in the west and Yobe state towards North-West. Climatically, Borno has a hot and dry weather. The hot and dry season starts in March to july and rainy season is between July to September. The rainy season which varies with location ranges between 300mm to 500 mm from July to September in the Northern part and 700 mm to 1000 mm between the months of May to October in the southern part of the state (Mustapha, Gwary and Makinta, 2014).

The most outstanding economic activity in the state is agriculture. In the Northern part, the land is suitable for the production of beans, millet, sweet and Irish potatoes, wheat, gum Arabic, ground nut, vegetables and fruits. The southern part which experiences higher level of rainfall is also fertile for the production of groundnut, maize, guinea corn, beans, pepper, cotton, rice, soya beans, cassava, and sweet potatoes. Others are tomatoes, large pepper, mango, guava, sugar cane, banana, local cucumber, etc. In addition, animal production include fishery, poultry and animal fattening are common practices.

Data Collection and data Analysis

Source of Data:

This study used primary data to achieve its objectives. The primary data was gathered by the use of structured questionnaire through which the respondents indicated their responses. The study used a Likert-type five-point scale to measure respondents' attitude to a particular question or statement. The questionnaire was adapted from Seun (2017) and modified to suit the study.

Population of the Study

The study population was drawn from those that have undergone skill acquisition training in various fields. They are the trained IDPs who lived with their host families in Maiduguri Metropolis and not those in camps. They were traced through their sponsors who know of their locations, telephone numbers and addresses.

Table 3.1 Population

Sources	centers	number of trainees
UNDP	Ramat/Polytechnic, Maiduguri	233
UNHCR/AUN	State/mechanical workshop	90
UNHCR/AUN	Women/Development Center	50
NAISH	Agency for Mass Literacy	190
Total		563

Sample and Sampling Technique

Snowball sampling method was used as sampling technique for the data collection. This is because referral was used to generate the sample. The respondents are the IDPs that have been trained to acquire the entrepreneurial skills at (Ramat Polytechnic Centre, State mechanical workshop, Women Development Centre and Agency for Mass literacy). The statistical apparatuses of Cochran (1977) was used to calculate the sample size at 95% confidence level. The Cochran formula is:

$$n = \frac{n_o}{1 + \frac{n_o - 1}{N}}$$

To arrive at the sample size below, the study used 95% confidence and 5% plus or minus-precision. A 95% confidence level gives Z value of 1.96 per the normal table.

$$n_o = \frac{z^2 pq}{e^2}$$

n_o = Cochran's Sample size

p = estimated proportion of the population = 0.5

q = 1 – p

q = 1-0.5 = 0.5

e = level of precision (margin of error)

So the result is $((1.96)^2 (0.5) (0.5) / (0.5)^2 = 385$

The sample size of the population therefore is;

$$n = \frac{n_o}{1 + \frac{n_o - 1}{N}}$$

n=sample size

n_o=Cochran sample size

N=population

$$n = \frac{385}{1 + \frac{385-1}{563}} = \frac{385}{1 + 0.68} = \frac{385}{1.68} = 229$$

Total Population = 563

Table 3.2 sample frame/size

Ramat polytechnic center	State center	Mech-workshop	Agency for mass literacy center	women center	development
N = 233, S = 95	<i>N = 90, S = 37</i>		N = 190, S = 77	N = 50, S = 20	

Total N = 563

Total S = 229

Source: Author's computation

Method of Data Analysis

The Socio-Economic characteristics was analyzed with the use of statistical package for social sciences (SPSS). Descriptive statistics was used on the respondents in selected training centers in Maiduguri, to determine the frequency, percentage, mean and standard deviation with regards to gender participation, marital status, working experience, household size, educational qualification and income per month and how this influence self-reliance of the trained IDPs.

Socio-economics and Demographic characteristics of the respondents in Maiduguri.

The socio-economic characteristic of the IDPs used for this study include Sex, Age, marital status, household size, educational qualification, working experience on skills acquired and monthly income.

Table 4.1. Socio-economic characteristics of the trained IDPs in selected training centers in Maiduguri.

Sex	Frequency	Percent	Mean	Std. dev
Male	101	56.1		
Female	79	43.9		
AGE				
15—20	25	13.9		
21-25	47	26.1		
26-30	59	32.8	30	1.023
>30	49	27.2		
Marital status				
Single	71	39.4		
Married	95	52.8		
Widower	12	6.7		
Separated	2	1.1		
Household size				

1—3	47	26.1		
4—6	67	37.2	6	0.231
7—9	39	21.7		
10—12	14	7.8		
>12	13	7.2		
Educational qualification				
Primary school	31	17.2		
Junior secondary school	22	12.2		
Senior secondary school	69	38.3		
Tertiary education	43	23.9		
No formal education	15	8.3		
Working experience on skill acquired				
1—3	139	77.2	2	0.023
4—6	27	15.0		
>6	14	7.8		
Income per month				
<10,000	43	23.9		
10,000-20,000	75	41.7	11,000	1020.324
21,000-30000	46	25.6		
31,000-40,000	8	4.4		
>40,000	8	4.4		

Source: Field Survey, 2019

From the results presented in table 4.1. The study revealed that majority (56.1%) of the respondents were males whereas 43.9% were females. This shows there is no gender discrimination in the selection of the respondents since the gap is not wide.

The result on age revealed that between 26 – 30 years of the respondents are the majority who participated in the entrepreneurship skill training centers in Maiduguri with the percentage score 32.8. The mean value is 30 and the standard deviation is 1.023. The sub-ceding age is 30 years and above with 27.2 percent. The result above shows that majority of the participants are active youth, who benefited from the entrepreneurship skills acquired. Furthermore, the least number of participants are those whose age falls in the range of 15-20 with 13.9 percent ratio.

The result on marital status shows that 52.8 percent of the respondents are married. This revealed that there is much responsibility on the individual household. Their participation in the entrepreneurial skills acquisition was therefore a necessity. This is followed by the singles with 39.4 percent. This shows that since they are not married, it was an opportunity to develop themselves to be economically self-reliant through the skills acquired. The result on house-hold size revealed that the household whose population is between 4-6, has higher participation ratio in the entrepreneurship skills acquired. The percentage ratio of the participants is 37.2 percent, average mean 6 and the standard deviation is 0.231.

The result on the educational qualification of the respondents shows that majority of them are secondary school leavers. The percentage ratio of these participants is 38.3 while that of the participants who have no formal education is 8.3%.

The result on working experience on skills acquired revealed that those with 1-3 years working experience had the highest benefits of acquiring the entrepreneurship skills with 77.2 percent level of participation. The mean value is 2 and the standard deviation is 0.023. On the other hand, participants with 6 years and above working experience had least benefits with 7.8 percent level of participation.

The result on income per month shows that respondents whose income fall between ten to twenty thousand naira (#10,000-#20,000) income had the highest participation ratio with 41.7 percent. The mean income is #11,000.00 while the standard deviation value is 1020.324. Respondents with income above forty thousand naira (>#40,000.00) had the lowest participation ratio with 4.4 percent.

Exploratory Factor Analysis

Exploratory Factor Analysis (EFA) was used to describe the data. EFA is an important tool for determining the amount of continuous latent variables. The variables play the role in explaining the correlations amongst a group of observed variables. Decoster (1998) said EFA is used when a researcher wants to discover the number of factors influencing variables and to analyze which variables "go together". EFA was used to achieve objective which is to examine the effects of micro-entrepreneurial skills acquired on the trained IDPs on self-reliance.

Test of Validity: Composite Validity

Test of validity was used to ascertain the appropriateness or true representative of the content of the property being measured. Reliability of the instrument was to know the suitability of the instrument to be considered. The coefficient of reliability should be greater than 0.5 but <1 for the survey instrument to be considered reliable. For this study, the Cronbach's Alpha value from the use of two items is .891, hence reliable. The more the value approaches 1, the more reliable the instrument in use.

Table 4.3 Factor Loading (Outer Loading)

	Org Sm	Sm Mean	Std Dev.	T Statistics	Prob. V
ESK2 <- SA	0.739	0.734	0.072	10.221	0.000
ESK4 <- SA	0.432	0.421	0.131	3.305	0.001
ESK5 <- SA	0.894	0.889	0.030	29.934	0.000
R ²	0.257				
Adj. R ²	0.248				

Note: the denotation ** mean 1% and *** at 5%

Table 4.3 above shows the results on factor loading (Outer Loading) on some selected variables employed in the model. The result on entrepreneurial skills acquired (ESK2) indicates that about

74 percent influence was recorded on the skill acquired by the respondents on the various skills they were trained on. This means the respondents were practicing the skills they were trained on and that greatly improved their performance. The result on ESK4 indicates about 43 percent influence on skill acquired. The implication is that some of the respondents recorded low improvement compared to their previous knowledge on the skills they were trained on and this could be attributed to their literacy level. ESK5 result shows 89 percent influence on trainees that were trained by the respondents after the skills acquisition. This implies that each respondent had a trainee(s) under him/her for mentorship.

The result on demographic characteristics indicates that gender(GEN) has about 57 percent influence on the respondents' participation on skills acquisition in these four centers mentioned in the study. Income per month (INCPM) result records 86 percent influence on the respondents in the study area. This means the income of the respondents has higher influence on the demographic features. The result on work experience indicates about 68 percent influence on the demographic features of the respondents.

The R^2 value is 0.257 which is about 26 percent combine effect of the latent variables employed in the model. Looking at the R^2 value, it indicates weak cumulative effect on the self-reliance of the Internally Displaced Persons (IDPs) but because the variables are a survey data, the result can be retained and the Adj R^2 value is 0.248 which is about 25% influence on self-reliance.

Construct Reliability and Validity

Table 4.4 Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
DMC	0.509	0.574	0.751	0.509
SA	0.489	0.625	0.744	0.511
SR	0.772	0.790	0.839	0.467

Table 4.4 shows the construct reliability and validity result that the Cronbach Alpha value on demographic characteristics (DMC) and Skill Acquired (SA) are 0.509 and 0.489 respectively. This indicates weak impact on the self-reliance of the respondents. On the other hand, self-reliance shows higher impact of the training received by the respondents on the various skills they acquired. The result on rho_A shows that only self-reliance indicates strong relationship with other variables in the model estimated. Composite reliability results show all the three latent variables are significant determinates in the model. The result on average variance extracted (AVE) show that two of the variables DMC and SA are adequate measures in the model according to the rule of thumb.

4.4 Convergent Validity

Table 4.5 Correlation Matrix

	DMC	SA	SR
DMC	1.000		
SA	0.265	1.000	0.490
SR	0.252	0.490	1.000

The table above shows the result on the correlation between the three latent variables (demographic characteristics, self-reliance and skills acquired). The rule of thumb said that the value in the diagonal must be less than 1 and greater than zero. The result indicates that the value in the diagonal is equal to one and the value below it is 0.490 which shows that the correlation between the three latent variables is lower.

4.5 Discriminant validity

Table 4.6

Heterotrait-Monotrait

	DMC	SA	Ted SR
DMC			
SA	0.634		
SR	0.396	0.750	

The result on table 4.6 shows the path model on Heterotrait-Monotrait (HTMT) ratio. The criterion recommended that if the value of HTMT is below 0.90 the discriminant validity has been established between two reflective constructs. Looking at the result above the value of skills acquired (SA) as against demographic characteristics (DMC) is 0.634 and self-reliance against demographic characteristics is 0.396. The last is self-reliance (SR) as against skills acquired (SA) is 0.750. The above results imply each constructs are truly distinct from other constructs as it is stated in the criterion above.

Summary of Findings

The study examined the impact of micro-entrepreneurial skills acquisition of the trained IDPs towards economic self-reliance in Maiduguri metropolis. The specific objectives were to examine the socio-economic characteristics of the trained IDPs towards their economic self-reliance.

Results of the study showed that the mean age of the participants was between 26 - 30 years which is (33%) and majority of them were married males (56 %), while females make up (44%). About 38% of the respondents hold senior secondary school leaving certificates. The study also revealed that 37.2% of the respondents have household size of 4-6. The result on working experience reveals that most of the respondents had 1-3 years working experience in their choice skills which is 77.2 percent. The result further shows that 25.6% of the participants' income generated after acquiring the training was between N21,000 – #N0,000 monthly.

Furthermore, result on the effect of micro-entrepreneurial skill acquisition on the trained IDPs shows that 75 percent of the respondents were economically self-reliant. Likewise, the result on the humanitarian support given to the trained IDPs indicate that most of the respondents benefitted from both cash and machineries as the coefficient of HS_3 is 0.5327 which means 53 percent of the respondents got cash and machineries for them to startup their businesses.

Conclusion

The study concluded that the impact of micro-entrepreneurial skills acquisition towards economic self-reliance of trained IDPs in Maiduguri Metropolis reveals significant impact as the overall coefficient of R^2 is 0.749.

Recommendations

Based on the findings of the study, the following recommendations are imperative:

- i. The result reveals that majority of those who participated in the training were married men and had senior secondary school certificate as their highest educational qualification. Therefore, this study recommends that government, Non-governmental organizations and philanthropies should encourage more women to participate in skills acquisition as they are more vulnerable in time of crisis.
- ii. The result shows great influence of the skills acquired by the trained IDPs on their economic self-reliance. Therefore, the study recommends that Government and NGOs should give greater attention to train more of the untrained IDPs. This will enhance their livelihood and better standard of living. It will also reduce the rate of dependence on the Government, NGOs and philanthropists.
- iii. In addition, the result shows that the respondents were not trained on technical aspect. This means when the machines develop problems they cannot repair them. The researcher therefore suggests that trainees especially on skills acquisition should be properly trained on how to operate the machines. Secondly, in case the machines develop minor problem they should be able to repair them. The trainers should also identify individuals and or organizations to which the trainees can take their machines in case of major repairs.

References

- Aba riot (1929). Aba Women Riot.[https:// en.m.wikipedia.org>women'war](https://en.m.wikipedia.org>women%27war).
- Adawo, M.A. (2011). Has education (human capital) contributed to the economic growth of Nigeria? *Journal of Economics and International Finance*, 3(1), 46-58.
- Adedeji, S.O. and Bamidele R.O. (2003). Economic Impact of Tertiary Education on Human
- Akpan, F., Ekanem, O. and Olofu-Adeoye, A. (2014). "Boko haram insurgency and the counter-terrorism policy in Nigeria". *Canadian Social Science* 10(2): 151-155
- Alao,D.A.C (2017).Boko Haram Insurgency in Nigeria. The challenges and lessons

- Alexandra Bilak (2017). The Bank Group.<https://blogs.worldbank.org/te>.
- Amassoma, D. and Nwosa.P. I. (2011). Investment in Human Capital and Economic Growth in Nigeria: A Causality Approach. *Canadian Social Science*, 7(4), 114-120.
- Asylum Access (2014). Global refugee work Rights Report. Oakland, CA: Asylum Access. <http://asylumaccess.org/wp-content/uploads/2014/09/FINAL.Global-Refugee-Work-Rights-Report-2014-interactive.pdf>
- Barro, R. (1991). Economic Growth in a Cross-section of Countries. *The Quarterly Journal of Economics*, (2), 407-43
- Becker, G. S. (1964). Human capital: a theoretical and empirical analysis, with special reference to education. New York: National Bureau of Economic Research, 1964.
- Boldizzoni (2008). Means and ends: The idea of capital in the West; 1500-1970, New York: Palgrave Macmillan.
- BOSON Innovations (2017). info@bosoninnov.com
- Brett.A.W,Andrys.O,George.T.B (2010).Exploratory Factor Analysis:A five step guide for Novices.*Journal of Emergency Primary Health Care*,8(3),1-13
- Capital Development in Nigeria in.: Human Resource Development in Africa. Selected Civil War (1967-1970).[https:// en.m.wikipedia.org>wiki>Nigeria](https://en.m.wikipedia.org/wiki/Nigeria).
- Claude Massop (1949-1979).[https:// prabook.com>web>mobile](https://prabook.com/web/mobile)
- Creative Associate International (2016). Program for Vocational Training at Centre for Entrepreneurship Development, Ramat Polytechnic, Maiduguri
- Dauda, R.O. (2010). Role of Human Capital in Economic Development: An Empirical Study of Nigerian Case. Oxford: Oxford Business and Economics Conference Program.
- De Coster Jamie (1998) .Over View of Factor Analysis.Retrieve 2019.[http:// www.stat-help.com](http://www.stat-help.com)
- De la Fuente, A. & Ciccone, A. (2002). Le capital humain dans une e'conomie mondiale sur la connaissance. Rapport pour la Commission Europe 'enne, Brussels.
- Ejere, S.I. (2011). Human Capital Formation as Catalyst for National Development: Nigeria in Perspective. *International Business and Management*, 2(2), 98-104.
- European Commission Jordan (2016). Towards a stronger partnership. News Release, July 20, 216. <http://europa.eu/rap;id/press-releaseIP-16-2570en.htm>
- Fatile, J.O. and Bell, W.O. (2015). Managing Internally Displaced persons in Nigeria:
- FGN (2012). National Policy on Internally Displaced Persons (IDPs) in Nigeria
- Fitzsimons, P. (1999). Human capital theory and education. *The Encyclopedia of Education*. London: Macmillan.
- Global Report on Internal Displacement (GRID,2017).
- Hafsat, S., A. (2016). NAFOWA Skill Acquisition and Vocational Training Program, 16 May, 2016 at Ramat Polytechnic, Maiduguri.
- Haldum, C. & Dukoya, O. A., (2016). Ethnic and Religious Crises in Nigeria. Conflicts are mostly ethno-religious conflicts.
- Hirschowitz, R., Slabbert, I., Clark, I., and Van der Walts, S. (1989). Skills training for small business development. Human Science Research Council: Pretoria
- Hisrich, D.Rebort., Peters P.M. and Shepherd D.A. (2007). *Entrepreneurship*, 7th Edition, New York: McGraw Hill International Company

- IDMC (2014). Internal Displacement Monitoring Centre
IDMC (2016). International displacement Monitoring Centre
IDMC (2017). International Displacement Monitoring Center.
International Committee of the Red Cross (2016). Internal Displacement in North East, Nigeria Operationalising the Kampala Convention in Borno, Adamawa and Yobe States. <http://icirnigeria.org/over-600idps-commence-skill-acquisition-training-in-borno> on 8th July, 2017
Johnson, A.O. (2011). Human Capital Development and Economic Growth in Nigeria. *European Journal of Business and Management*, 3(9), 29-38
Joseph Resort(2017).<https://www.vogue.com>fashion-shows>.
Karem, (2016). Building Livelihood Opportunities for refugee Population. Lessons from past practice
Kilby, P. (1971) Hunting the Heffalump. Entrepreneurship and Economic Development. PP:1-40. New York: The free press.
Maslow, A. (1954). Motivation and Personality. New York, NY: Harper: ISBN 006-041987-3
Matthew, A. (2017). UNDP training 575 IDPs on technology skills on September 27, 2017, News: NAN, Vanguard
Mustapha, Gwary and Makinta (2014) Harnessing the economic potentials of Borno state for poverty alleviation in Nigeria. *International Journal of research in agriculture and food sciences*. Vol.2, No.5
Nathan, F. (2013). Economic Consequent of Forced Displacement
National Population Commission of Nigeria (NPC,2016).
NRC (2009). Nigerian Red Cross
OCHA (2004). Eds. "Guiding Principles on Internally Displacement. Available at <http://www.unhcr.org/43ce/cff2.html>
OECD – Organisation for Economic Cooperation and Development. The knowledge-based economy. Paris: OECD, 1996.
Olufunke, P.F. and Oluwole, A. D. (2016). Improving self-reliance of Internally Displaced Persons affected by the Boko haram Insurgency Attacks in the North-eastern part of Nigeria
Plesheltter, L.A. (2009) Must have skills for Entrepreneurs: <http://www.powerhomebiz.com/vol69/entreskills.htm>2009
Robert Kelly. C (2021). Why are factors of production important to Economic Growth.Otdash, Investopedia publishing family.
Salgado-Banda (2005) Entrepreneurship and economic growth. An empirical analysis
Sarah, Haynes (2011). Displaced people and the challenges to development.Women and Human Development.The Capabilities Approach,Cambridge University press,pp78-81.
UNHCR (2005). United Nations Handbook for Self-Reliance. United Nations High Commission for Refugees
Victor Chibuike O. and Onuaha Chijioko B (2016). The Nigerian-State and Management of IDPs from 2012-2016.*African Journal of Politics and Society*. Department of political Science and Public Administration, Rhema University, Abba, Abia State.

- Vosloo, W.B. (1994). Entrepreneurship and economic growth. Human Science Research Council. Pretoria. SAJEMS NS 8 (2005) no.2.
- Wickham, P.A. (1998). Strategic entrepreneurship: Decision-making approach to new venture creation and management, London: Pitman. SAJEMS NS.8 (2005). No.2
- William G.Cochran (1977,modified,2018).Cochran theorem. Wikipedia.

Involvement Culture and Corporate Sustainability of Oil and Gas Firms in South-South, Nigeria

Diboye-Suku, Zion Alaso¹ & Adekemi. D. Alagah (Ph.D.)²

¹Doctoral Candidate, Department of Management, University of Port – Harcourt, Nigeria

²Associate Professor, Department of Management, University of Port – Harcourt, Nigeria

Abstract: *The purpose of this study was to investigate the relationship between involvement culture and corporate sustainability in oil and gas organizations in the South-South region, Nigeria. The study population consisted of 54 oil and gas exploration and production (E&P) organizations working in the South-South region. 270 sets of questionnaires were distributed to five functional managers at each E&P organization, and 257 questionnaires were returned promptly and appropriate for analysis. Spearman rank-order correlation coefficient was utilized to test our hypotheses using the Statistical Package for Social Sciences (SPSS) version 20.0. The findings indicated that employee involvement culture has a strong positive relationship with indicators of corporate sustainability. As a result, it was determined that involvement is critical for maintaining social, environmental, and economic sustainability. Thus, we suggest that management must start programs that are focused on effective delegation of power; in turn, this action will engage workers in achieving economic sustainability.*

Keywords: *Involvement Culture, Corporate Sustainability, Social, Environmental and Economic Sustainability*

Introduction

Rapid technical advancements, global and local competitiveness, capital flight, and high societal expectations have all posed serious difficulties to managers and their organizations (Nwaeke & Obiekwe, 2017). To guarantee business sustainability, managers must successfully handle and deal with these difficulties (Khattak, Igbal & Khattak, 2012). In the current day, corporate sustainability is arguably one of the most important issues of the business. A worldwide mandate to maintain and replicate productive potential has elevated the idea to much more than a phrase or term (Kuhlman & Farrington, 2010). Sustainability is defined by Hamson (2010) as long-term management of the environment, people, economy, and society. In this context, it is reasonable to claim that sustainability efforts may significantly reduce pollution and poverty in many developing nations. For businesses, Deloitte (2018) defines Corporate Sustainability as a holistic strategy for long-term economic, social, and environmental value creation. Montiel and Delgado-

Cebellos (2014) proposed social, economic, and environmental sustainability as corporate sustainability metrics. The literature inspired this research to use social, environmental, and economic sustainability as indicators of business sustainability. According to Nwaeke and Obiekwe (2017) workers are the sole means of moving a company forward. Across the globe, individuals with strong technical, professional, and conceptual abilities are driving organizations' vision, goals, and objectives. The study shows that successful organizations empower and engage their employees, create teams, and enhance human potential at all levels (Block, 1991; Katzenbach & Smith, 1993; Lawler, 1986; Spreitzer, 1995; 1996; Buckingham & Coffman, 1999).

While over 75% of CEOs globally believed that corporate sustainability was economically beneficial, fewer than 40% attempted to incorporate it into their company operations (Mirvis, Googins & Kinnicutt, 2010). An example in point is the Niger Delta, where approximately 11 million gallons of oil was spilled annually for the last five decades in Nigeria's oil-producing area (Murphy, 2013). Although 60% of the population is reliant on agriculture, environmental restoration may take 30 years (Nwonwu, 2010; UNEP, 2011). The ongoing environmental degradation has decreased the economic worth of land and water, resulting in poverty and hostility, jeopardizing the livelihood of residents and oil corporations working in the area (Adekunle, Igbuku, Oguns & Shekwolo, 2013; Imobighe, 2011). The connection between involvement culture and corporate sustainability has developed in the last decade (e.g., Linnenlueck & Griffiths, 2010). However, these publications tended to be more theoretical, with little empirical support or proof. Enough said. Previous researches, mainly done in wealthy nations, may not be applicable in a country as varied and dynamic as Nigeria.

Aim and Objectives of the Study

This research undertaken aims to examine the relationship between involvement culture and corporate sustainability of oil and gas firms in South-South, Nigeria. Whereas, the objectives were to;

- Evaluate the relationship between involvement and social sustainability.
- Examine the relationship between involvement and environmental sustainability.
- Investigate the relationship between involvement and economic sustainability.

Research Questions

- i. What is the relationship between involvement culture and social sustainability?
- ii. What is the relationship between involvement culture and environmental sustainability?
- iii. What is the relationship between involvement culture and economic sustainability?

Research Hypotheses

H₀₁: There is no significant relationship between involvement culture and social sustainability.

H₀₂: There is no significant relationship between involvement culture and environmental sustainability.

H₀₃: There is no significant relationship between involvement culture and economic sustainability.

Literature Review

This study's theoretical foundation is stakeholder theory. An increasing number of academics and practitioners have been experimenting with ideas and models that help us comprehend today's business problems. Stakeholder theory, or "stakeholder thinking," is a new narrative that connects ethics and capitalism. "Any group or person who may influence or is affected by the accomplishment of the organization's objectives," said Freeman (1984). Stakeholders include customers, suppliers, workers, financiers, and communities (Dunham, Freeman & Liedtka, 2006, p. 125). An important part of stakeholder theory is that connections with external stakeholders help a company succeed. Sustainable business practices include global impacts like climate change or cultural changes brought on by marketing and advertising that affect everyone. It's a well-known fact This concept seeks to help companies in strengthening their ties with other groups, giving them an advantage in the marketplace. The stakeholder theory may benefit from the addition of commercial arguments on why companies should aim for sustainable development. A business's best economic interest is said to be served by working toward improving stakeholder relationships, which in turn helps the firm accomplish its commercial objectives. In order for a company to survive, it has to understand how connections work and change through time. To optimize value generation for stakeholders and maintain control over value distribution, the CEO must manage and build these relationships with the workforce (Harrison, Bosse & Phillips, 2010). It's a moral task to manage stakeholder relationships since it includes a large group of people's values, choices, potential harm, and benefits (Phillips, 2003).

Empirical Review

The idea of employee involvement was originally introduced in the academic study by Kahn (1990) in his paper "Psychological Conditions of Personal Involvement and Dis-involvement at Work" in an Academy of Management Journal (Junghoon 2012; Kular et al., 2008; Simpson, 2009). Meaningfulness, safety, and long-term viability were all significantly linked with Kahn's (1990) notion of employee engagement in the first empirical research (Chang, 2011; Kular et al., 2008).

The authors of Harter et al., (2002) used a large database to demonstrate that higher levels of employee engagement were linked to better business unit results, including increased corporate sustainability (Chang, 2011; Shuck & Wollard, 2010, p. 269). To them, engagement was defined as the degree to which a person was personally involved in their work and was pleased with it as well as excited about it. By focusing on the relationship between managerial self-efficacy, the perception of effective management practices, overall sustainability, and employee engagement, Luthans and Peterson (2002) built on Harter et al., (2002) model to produce their own findings. Employee engagement and manager self-efficacy were shown to be positively correlated when managers assessed employee effectiveness and supervisees appraised the degree of effectiveness

of their manager. Employees in the most effective work units, according to Luthans and Peterson (2002) are doing what they do well, with colleagues they like, and with a strong sense of psychological ownership. First academic research in 2006 looked at the causes and consequences of employee engagement at Saks Fifth Avenue. With the use of the social exchange model, Saks identified the emergence of several types of employee engagement, such as job participation and organizational participation. The relationship between antecedent and outcome variables was mitigated by employee engagement, according to Saks (2006). The supporting atmosphere, work characteristics, and justice were all important antecedent factors. When people are emotionally and intellectually involved, it leads to long-term economic success, expanding the Schaufeli et al., (2002a) paradigm (Brad & Shuck, 2011). They discovered that work engagement moderated the connection between value congruence and perceived organizational support, core self-evaluation, and the two outcome variables, task performance and organizational citizenship behavior (Kahn, 1990) in an empirical research performed following Kahn (1990). On the basis of Kahn's (1990) theory, researchers Rich et al., (2010) investigated the extent to which participation serves as an important mechanism via which engagement' antecedents affect organizational sustainability. Shuck, Reio and Rocco (2011) found a connection between high performance and employee commitment, as well as employee engagement in their study of the dependent variables of performance and turnover intention. Six scales were provided to a wide range of companies in the service and technology sectors using an Internet-based survey battery. Engagement of employees showed a high connection with excellent performance, emotional commitment, and psychological environment, while employee involvement also had a significant correlation with both discretionary effort, and a desire to quit the organization. For Fairlie (2011) engagement and other outcomes like burnout, job satisfaction, organizational commitment and turnover have an effect on these domains. However, cognitive and meaningful work characteristics had the strongest connections to employee outcomes, whereas other employment attributes showed minimal association. Furthermore, the existence of important work skills was the most important individual predictor of participation. Sardar, Rehman, Yousaf, and Aijaz investigated the participation of employees in Pakistan's banking sector (2011). When comparing the results to a non-significant connection, a strong correlation was discovered between employee engagement and decision making/coordination, incentive schemes, and staff involvement.. Concentration, activation, and positive affect are all required for work role participation. Kahn, (1990) Psychological circumstances for personal engagement and dis-involvement in the workplace theory was further developed by Soane et al., (2012) based on their findings. Intellectual, social and emotional aspects were operationalized with the use of an instrument called the ISA Involvement Scale (ISA Involvement Scale). This has resulted in positive associations between job performance, organizational citizenship behavior (OCB), and desire to turn over. According to research, organizational citizenship behavior (OCB) and counterproductive work behavior (CWB) are both associated with employee engagement (Ariani, 2013). However, employee engagement had a significant negative association with CWB and OCB, with no meaningful relationship between the two. As a result, the research found no gender disparities in employee engagement.

Concept of Involvement Culture

Organizations are today earnestly looking for ways of achieving their “going concern” cravings, and gaining competitive advantage in the game of business since the business arena is full of uncertainties (Nwaeke & Obiekwe, 2017). Effective organizations put a high value on involving their workers in achieving their objectives. In today's business world, skilled and informed workers are more important than ever before, as they are the heartbeat of every company and serve as its engine for growth and production (Nwaeke & Obiekwe, 2017). To motivate their workers and create a competitive advantage, companies are implementing rules that let them participate in specific operations (Khattak, Igbal & Khattak, 2012). Different writers have characterized involvement in different ways. When workers take part in management decision-making and enhance activities that are appropriate to their job levels, it implies that the company has an involvement culture (Kumari and Kumari, 2014). Employee participation was seen by Price (2004) as a process that connects involvement, communication, and decision-making, leading to industrial democracy and motivation among workers. He said that including staff in running of a company encourages and empowers them to efficiently and profitably contribute meaningfully. It means enabling workers take part in choices that impact them, gives them greater power and responsibility. It also increases employees' commitment, motivation, and satisfaction with their employment. Joint decision-making is defined by Locke and Schweiger (1979) as decision-making that involves both supervisors and subordinates. It's the way people are organized and directed that determines how much they can give to their company (Khattak et al., 2013). Employer involvement is viewed as allowing workers to contribute continuously to the success of the company (Agyeman, 2012). Similarly, a low-level employee's simple idea may show a company the path to innovate or reduce expenses and produce an increase in sales. To guarantee the success and achievement of choices that directly impact them, workers must be given a chance to take part in the formulation and execution of decisions, even if this is done through delegation of authority.

Employees that are emotionally invested have a strong connection to their company and work tirelessly to ensure its success. They will go above and beyond to help their company succeed. Anyone who has been carried along puts in a lot of effort to see that those decisions are carried out successfully. Utilizing employees' private information can also lead to beneficial results for the company by way of - increase employee zeal in identifying with corporate goals, improve decision quality, and increase willingness to accept authority, reduce resistance to change and receptivity to change, improve organizational productivity (Preuss & Latham, 2010; Williamson, 2008; Muindi, 2011; Helms, 2006). A positive company culture is characterized by active participation from all employees. A positive company culture always results in policies that increase the effectiveness of the firm (Apostolou, 2000). Amah, (2014) discovered a link between company performance and organizational culture. A culture that fosters participation anticipates environmental changes and, as a result, offers workers the opportunity to participate actively in organizational operations (Chen, 1999).

Concept of Corporate Sustainability

The lifestyles of industrialized nations and economic development throughout the 1960s and 1970s exacerbated a severe imbalance in the planet's ecological, economic, and natural security systems (Blewitt, 2008). In response to these problems created by poor resource management, the word "sustainability" was developed and is now widely accepted (McKenzie, 2004). An increasing number of people are becoming aware of environmental degradation and the human impact on it. The establishment of limitations in this area was the result of many important events. Rachel Carson's book *Silent Spring* from 1962 shows clearly that despite people's belief that natural resources were unlimited, human activity can cause serious and long-lasting damage to the environment (Hardisty, 2010). It's possible to view business sustainability as a new and evolving paradigm of company management. The phrase 'paradigm' is deliberately employed since traditional growth and profit maximization are not synonymous with long-term company sustainability (Friedman, 2000). The significance of corporate growth and profitability is recognized, but corporate sustainability also demands the company to achieve societal objectives, especially those linked to sustainable development, such as environmental preservation, social justice and equality, and economic development. Because the idea of business sustainability is so complicated, there isn't a widely accepted definition (Valor, 2005; Dahlstrud, 2008). An illustration of this idea is Dylick and Hockerts (2002, p. 13), who state that it is "fulfilling the requirements of a firm's direct and indirect stakeholders without compromising the firm's ability to meet future stakeholder demands." This definition is criticized by Wijen (2014) because it fails to take into consideration the three major parts of the construct. Sustainable development is interpreted in a political sense, at best. Despite this, a comprehensive review of the relevant literature on CS shows that the construct is based on three more well-established ideas: sustainable development, corporate social responsibility, and accountability for corporations (Bjorn & Ropke, 2018). The advancement of CS follows closely with the advancement of these concepts. Environmental preservation, social justice and equality, and economic growth are all part of sustainable development, which defines the performance areas on which companies should focus their efforts. Sustainable development also contributes to the corporation's vision and societal goals. Stakeholder theory provides economic reasons for businesses to work toward these goals, while corporate social responsibility provides ethical ones (Korten, 2001). Why Businesses Should Report Their Performance to Society on These Issues is explained by Corporate Responsibility.

Social Sustainability

The sub-concept of social sustainability was downplayed in comparison to environmental and economic sustainability in the first decade after the introduction of the concept of sustainable development in 1987 (Weingaertner & Moberg, 2014). Environmental and economic issues appeared to predominate in the discussion, with social issues taking a backseat. Until the late 1990s, social sustainability was considered essential to the sustainability agenda. It gained traction as a result of this (Jaeger et al., 2011). There has been a great deal of investigation on social sustainability, but no comprehensive definition has yet been established (hman et al., 2013; Jaeger et al., 2011; Littig and Griebler, 2005; Weingaertner & Moberg, 2014). In other

words, social sustainability may refer to the need of maintaining particular institutions in societies and communities or it can be viewed as an imperative for sustainable growth by some (Sachs, 1999).

Some academics believe that sustainable development is primarily concerned with social issues. Cuthill (2010) asserts that sustainability has three facets: economic, environmental, and social. Rather of focusing on nature as a whole, he views environmental problems as social issues because of the human impact on it. In addition, he claims that economics serves people, not the other way around, which is especially important when it comes to equitable resource distribution. Three sub-categories of the concept of social sustainability were identified by Vallance, Perkins, and Dixon (2011) in their framework. In order to have a sustainable development, it must meet fundamental social demands such as equality (both inter- and intra-generational), employment, education, justice, freedom, and access to influential decision-making. Bridge Sustainability focuses on behavioral change as the only way to accomplish biophysical environmental goals. This is a term that describes how people react to change, including whether they embrace or reject its socio-cultural features and how they maintain their sustainability in the face of changing (Vallance et al., 2011). Because of the expansion of civil society, social sustainability refers to growth that may and will lead to a more prosperous environment, as outlined by Polèse and Stren (2000). Moreover, social integration, cultural variety, and equality were all emphasized by the authors as critical components of their vision of social sustainability. When we talk about urban culture, we're mostly talking about things like social integration, civic society, cultural diversity, and the economy. Social sustainability has been defined with more specificity for the built environment and housing. Sustainability in society is described by Caistor-Arendar (2011) as the process of creating a prosperous society by fully comprehending the needs of the people who live in it. Before trying to design such spaces, one must first understand what people desire and need from the areas where they live and work.

Environmental Sustainability

'Sustainable development' or 'corporate sustainability' is now often described in terms of 'environmental sustainability'. It is a logical error to assume that the present global growth pattern is faulty due to environmental destruction. However, this is a naive view that fails to take into account business interests as well as societal injustices that contribute to environmental degradation. For Moldan, Janouková, and Hák (2012) sustainability was formerly described as social and economic progress that did not harm the environment before the concept of the three pillars was put into place. Before this idea, social and economic sustainability were seen as separate yet interdependent pillars of sustainable development. Each of these sustainability concepts must thus be defined and discussed separately. As well as this, they emphasized the need of differentiating between environmental and economic sustainability. Morelli (2013) recommends a hierarchical model since economic and social sustainability is strongly reliant on environmental sustainability. This equilibrium, resilience, and connectedness allows human civilization to satisfy its requirements without depleting the ecosystems that sustain it or decreasing biological diversity needed to do so (Morelli, 2013, p. 5). A former Victorian State

Commissioner for Environmental Sustainability, Sutton (2004) emphasized the need of preserving natural support systems in her work. A 'suitable degree' of protection of natural resources and natural services is defined by Moldan et al., (2012). Goodland's (1995, p. 10) wide notion of "natural capital maintenance" is comparable to this idea. He went on to say that input-output concepts are at the core of this idea.

These environmental sustainability criteria lead us to believe that this concept can be defined as the upkeep and improvement of all-natural support systems and services for current and future generations of humans as well as all other living creatures at intergenerational levels for all living things.

Economic Sustainability

Goals serve as internal benchmarks for companies, allowing management to monitor their progress over time. Nevertheless, the company's financial resources and social responsibilities must limit these milestones. This requirement ties the business's operations to societal norms. Long-term financial and social value strategic plans are often used by companies to define their goals. Economic sustainability, broadly defined, refers to a system's ability to continue operating properly even under unfavorable environmental conditions (Haffar & Searcy, 2015). Economics defines sustainability as a company's capacity to remain solvent at a certain point in its life cycle, and how those resources are then utilized to provide high-quality financial results. A company's goals for economic sustainability assist to define the acceptable level of risk and the warning signals of excessive risk tolerance that may lead to a liquidity crisis for the business. Unrealistic growth targets may cause companies to overshoot their supply capacity. Because of this, these organizations would cease to exist and stop using sustainable practices. Bankruptcy is a natural outcome of taking a big risk, and doing so breaches sustainability requirements (2019). Strategic planning requires management to make an educated guess about future development potentials. As a result, all stakeholders in the company should work towards a realistic objective. If the organization's goal-setting process excludes other stakeholders, it is the management's responsibility. When purchasing and marketing are tied to long-term goals, organizations avoid the pitfalls of poor decision-making that may lead to failure. Setting financial sustainability goals requires familiarity with relevant theories that explain the probable consequences of pursuing a specific sustainability component.

The capability of an organization to fulfill all of its financial obligations, such as those owed to its employees, other organizations and the government, in light of current economic circumstances is referred to as its economic sustainability. There are a few ways to measure a company's bankruptcy risk. One way is to look at the difference between its net income and its net spending, or as an excess of net income over costs. When revenues consistently exceed expenditures, the economy is considered sustainable. You can shift money around with ease, which encourages a never-ending manufacturing and sales cycle. In order to be really sustainable, a company must establish economic sustainability across all aspects of its production and commercial activities. The analysis of the economic sustainability of the organization should begin with a look at its capital structure and competitiveness in the market

for financial resources. When compared to other organizations, the financial stability of this one is regarded as superior. A bank loan and other outside financing are considerably easier to come by for a company like this. A financially sound company has an advantage when it comes to recruiting and choosing suppliers. Several factors influence the category of financial sustainability, which may be found in a variety of assessed indicators of a company's financial well-being.

Methodology

This study endeavored to conduct a cross-sectional survey of the 54 oil and gas exploration and production companies operating in South – South, Nigeria, as identified by the Department of Petroleum Resources (DPR, 2018). The research included five managers from each company on a random basis. Since the researcher could accommodate the target population, no sampling technique was used. This research included both primary and secondary data, with primary data collected through a well-structured questionnaire. However, of the 270 devices distributed, only 257 were suitable for data analysis. SPSS was used to evaluate the hypotheses using the spearman rank order correlation (version 22.0).

Results and Discussion of Findings

Testing of Hypothesis one

H₀₁: There is no significant relationship between involvement culture and social sustainability.

Table 1: Analysis on the relationship between involvement culture and social sustainability

		Correlations	
		Involvement Culture	Social_Sustainability
Spearman's rho	Correlation Coefficient	1.000	.324**
	Sig. (2-tailed)	.	.000
	N	257	257
	Correlation Coefficient	.324**	1.000
Social_sustainability	Sig. (2-tailed)	.000	.
	N	257	257

** . Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS 22.0 output on research data

Our first hypothesis revealed a significant relationship between involvement culture and social sustainability with a correlation coefficient of 0.324 and a p-value of 0.000 which is less than

alpha of 0.05. With this result, we reject the stated null hypothesis. The finding translates that, the higher

employees are empowered and involved in the decision making process of the firm, the higher the level of social sustainability. The moderate relationship found implies that social sustainability can be averagely achieved when workers are involved in the operations of the firm. The overall implication of this result is that every employee has something to offer, and until they are provided with the opportunity to develop and showcase their skills and expertise, the social aspect of sustainability may not be actualized. This finding was supported by Sardar et al., (2011) who inferred from their investigation that there was a significant relationship between involvement and decision making in Pakistani banking sector.

Testing of Hypothesis Two

H₀₂: There is no significant relationship between involvement culture and environmental sustainability.

Table 2: Analysis on the relationship between involvement culture and environmental sustainability.

Correlations		Involvement Culture	Environmental Sustainability
Involvement	Correlation Coefficient	1.000	.522**
	Sig. (2-tailed)	.	.000
	N	257	257
Spearman's rho	Correlation Coefficient	.522**	1.000
	Sig. (2-tailed)	.000	.
	N	257	257

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS 22.0 output on research data

Our second hypothesis revealed a significant relationship between involvement culture and environmental sustainability with a correlation coefficient of 0.522 and a p-value of 0.000 which is less than alpha of 0.05. With this result, we reject the stated null hypothesis. It can be interpreted that, the more workers are relied upon to make decisions for their organization by virtue of permits from management, the greater the level of environmental sustainability. This entails that environmental sustainability can be highly achieved when staff are carried along to make decisions for the company. Furthermore, firms can hold on to or adopt employee

involvement as part of its corporate culture so as to enjoy the dividends of environmental sustainability. This finding aligns with that of Dauly and Huang, (2011) who posited that an emphasis on involvement suggests that the firm invests in the development and capacity of its human resource, thus, is committed to pursuing environmental sustainability.

Testing of Hypothesis Three

H₀₃: There is no significant relationship between involvement culture and economic sustainability

Table 3: Analysis on the relationship between involvement culture and economic sustainability

Correlations		Involvement Culture	Eco_Sustainability
Spearman's rho	Correlation Coefficient	1.000	.198**
	Involvement		
	Sig. (2-tailed)	.	.000
	N	257	257
	Eco_Sustainability		
	Sig. (2-tailed)	.000	.
		257	257

** . Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS 22.0 output on research data

Our third hypothesis revealed a significant relationship between involvement culture and economic sustainability with a correlation coefficient of 0.198 and a p-value of 0.000 which is less than alpha of 0.05. With this result, we reject the stated null hypothesis. This outcome tells that the higher an organization involves its employees by empowering and training them to make good decisions for the firm, the higher it can likely attain economic sustainability. Our finding indicates that although expenditures on staff development may tend to adversely affect profits at the first instance, in the long run, these expenses result in compensating added value through increased quality of products and services for firms. This finding agrees with Super and Neivell (1986) who found that organizational culture plays a significant role and affect the managerial effectiveness in the organization.

Conclusion

The aim of this study was to empirically investigate the relationship between involvement culture and corporate sustainability of oil and gas firms in South- South region, Nigeria. On the strength of our findings, we conclude that employee involvement can significantly bring about corporate sustainability. This implies that the more employees are empowered to contribute in the decision making process of their firms, the greater the chances of achieving corporate sustainability.

Recommendations

- v) Oil and gas firms should create equal opportunities to empower their employees to enable them to be better involved in the decision making processes in order to enhance their social sustainability.
- vi) The management of oil and gas firms should encourage the cooperation of staff across different parts of the organization so as to reduce the environmental impacts in order to achieve environmental sustainability.
- vii) Management should initiate programs that are driven towards effective delegation of authority. In return, this action will serve as a means to involve employees in order to achieve economic sustainability.

References

- Achterkamp, M. C., & Vos, J. F. J. (2008). Investigating the use of the stakeholder notion in project management literature, a meta-analysis. *International Journal of Project Management*, 26, 749-757.
- Adekunle, I. M., Igbuku, A. O. O., Oguns, O., & Shekwolo, P. D. (2013). Emerging trending natural resource utilization for bioremediation of oil-based drilling waste in Nigeria. Chapters in: Rolando Chamy (ed), *Biodegradation – Engineering and Technology*, IntechOpen.
- Agyeman, R. D. (2012). An investigation into the effect of employee involvement practice on decision making process: A case study of Kumasi Anglican Senior High School. MBA Thesis submitted to the School of Graduate Studies, Kwame Nkrumah University of Science and Technology.
- Åhman, E. A. (2013). Social sustainability - society at the intersection of development and maintenance. *Local Environment*, 18(10), 1153-1166. doi:10.1080/13549839.2013.788480
- Amah, E. (2014). *Corporate culture and organizational effectiveness*. Ibadan: University of Ibadan Press.

- Apostolou, A. (2000). Employee involvement: Dissemination of innovation and knowledge management techniques. Technical University of Crete. Retrieved from: www.urenio.or/tools/employeeinvolvement.pdf.
- Ariani, D. W. (2013). The relationship between employee involvement, organizational citizenship behavior, and counterproductive work behavior. *International Journal of Business Administration*, 4(2), 46-56. doi:10.5430/ijba.v4n2p46
- Blewitt, J. (2008). Understanding sustainable development. Sterling, VA; London: Earthscan.
- Chang, W. J. (2011). The concept of employee involvement: a comprehensive review from a positive organizational behavior perspective. *Performance Improvement Quarterly*, 24(2), 49-69. doi: 10.1002/piq.20110
- Crawford, E. R., LePine, J. A., & Rich, B. L. (2010). Linking job demands and resources to employee involvement and burnout: A theoretical extension and meta-analytic test. *Journal of Applied Psychology*, 95(5), 834-848. doi:10.1037/a0019364.
- Cuthill, M. (2010). Strengthening the 'social' in sustainable development: Developing a conceptual framework for social sustainability in a rapid urban growth region in Australia. *Sustainable Development*, 18(6), 362-373.
- Daly, H. E. (1990). Toward some operational principles of sustainable development. *Ecological economics*, 2(1), 1-6.
- Dunham, L., Freeman, R. E., & Liedtka, J. (2006). Enhancing Stakeholder Practice: A Particularized Exploration of Community. *Business Ethics Quarterly*, 16(1), 23-42.
- Fairlie, P. (2011). Meaningful Work, Employee Involvement, and Other Key Employee Outcomes: Implications for Human Resource Development. *Advances in Developing Human Resources*, 13(4), 508-525. doi:10.1177/1523422311431679
- Freeman, R. E. (1984). In his 1984 book *Strategic Management: A Stakeholder Approach*. Boston, Mass, Pitman Books.
- Friedman, T. L. (2000). *The Lexus and the Olive Tree. Understanding Globalization*. New York: Anchor Books.
- Goodland, R. (1995). Environmental sustainability: universal Ž and rigorous. *Sustainable Development*, 3(5), 7-19
- Haffar, M., & Searcy, C. (2015). Classification of trade-offs encountered in the practice of corporate sustainability. *Journal of Business Ethics*, 140(3), 495-522. <https://doi.org/10.1007/s10551-015-2678-1>

- Hardisty, P. E. (2010). Environmental and economic sustainability. Boca Raton: CRC Press/Taylor & Francis.
- Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee involvement, and business outcomes: A meta-analysis. *Journal of Applied Psychology*, 87(2), 268-279. doi: 10.1037/0021-9010.87.2.268
- Harrison, J. S., Bosse, D. A., & Phillips, R. A. (2010). Managing for stakeholders, stakeholder utility functions & competitive advantage. *Strategic Management Journal*, 58-74.
- Imobighe, M. D. (2011). Paradox of oil wealth in the Niger Delta Region of Nigeria: How sustainable is it for national development. *Journal of Sustainable Development*, 4(1), 160-168.
- Kahn, W. (1990). Psychological Conditions of Personal involvement and disinvolvement at work. *Academy of Management Journal*, 33(4), 692-724. doi: 10.2307/256287.
- Khattak, M. A., Igbal, N., & Khattak, S.R. (2013). Relationship between employee involvement and organizational performance in Milieu of Pakistan. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 3(1), 219-230.
- Korten, D. (2001) When Corporations Rule the World, second edition. San Fransisco, CA: Berrett-Koehler Publishers.
- Kular, S., Gatenby, M., Rees, C., Soane, E., & Truss, K. (2008). Employee involvement: a literature review. uk: Kingston university.
- Kumari, M.K. & Kumari, V.L.P (2014). Influence of employee involvement and organizational culture on productivity: A theoretical concept. *International Journal of Business Research*, 5(27), 423-431.
- Littig, B., & Griebler, E. (2005). Social sustainability: A catchword between political pragmatism and social theory. *International Journal of Sustainable Development*, 8(1-2), 65-79.
- Locke, E. A., & Schweiger, D. M. (1979). Involvement in decision-making: One more looks. *Research in Organizational Behaviour*, 1, 265-339.
- Luthans, F., & Peterson, S. J. (2002). Employee involvement and manager self-efficacy. *Journal of Management Development*, 21(5), 376-387. doi: 10.1108/02621710210426864.
- McKenzie, S. (2004). Social sustainability: towards some definitions: Hawke Research Institute, University of South Australia Magill.

- Mirvis, P., Googins, B., & Kinnicutt, S. (2010). Vision, mission, values: Guideposts to sustainability. *Organization Dynamics*, 39, 316-324.
- Moldan, B., Janoušková, S., & Hák, T. (2012). How to understand and measure environmental sustainability: Indicators and targets. *Ecological Indicators*, 17, 4-13.
- Morelli, J. (2013). Environmental sustainability: A definition for environmental professionals. *Journal of Environmental Sustainability*, 1(1), 2.
- Muindi, F. K. (2011). The relationship between involvement in decision making and job satisfaction among academic staff in the school of business, University of Nairobi. *Journal of Human Resources Management Research*, 4, 1-34.
- Murphy, M. N. (2013). Petro-Piracy: oil and troubled waters. *Orbis*, 57, 424-437.
- Nwaeke, L. I., & Obiekwe, O. (2017). Impact of manpower training and development on organizational productivity and performance: A theoretical review. *European Journal of Business and Management*, 9(4), 154-159.
- Nwonwu, F. (2010). The politics of oil exploitation: Rationalising the coexistence of oil wealth and extreme poverty in the Niger Delta Region of Nigeria. In V. Ojakorotu & L. D. Gilbert (Eds.). *Checkmating the resurgence of oil violence in the Niger Delta of Nigeria* (pp. 100-110). Potomac, MD: Institute for the Analysis of Global Security.
- Polèse, M., & Stren, R. E. (2000). *The social sustainability of cities: Diversity and the management of change*: University of Toronto Press.
- Preuss, G. A., & Lautsch, P. (2002). The effect of formal versus informal job security on employee involvement programs. *Industrial Relations*, 57(3), 517- 541.
- Price, A. (2004). *Human resource management in a business context*. London: Thompson Learning.
- Rice, K. (187). Empowering teachers: A search for professional autonomy, Master's thesis, Dominican College of San Rafael, ERIC Document Reproduction Service No. ED 282-845.
- Rich, B. L., Lepine, J. A., & Crawford, E. R. (2010). Job involvement: Antecedents and Effects on Job Performance. *Academy of Management Journal*, 53(3), 617-635. doi: 10.5465/amj.2010.51468988
- Saks, A. M. (2006). Antecedents and consequences of employee involvement. *Journal of Managerial Psychology*, 21(7), 600-619. doi: 10.1108/02683940610690169.
- Sardar, S., Rehman, A., Yousaf, U., & Aijaz, A. (2011). Impact of HR practices on employee involvement in banking sector of Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, 2(9), 378-389.

- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and involvement: a multi-sample study. *Journal of Organizational Behavior*, 25(3), 293-315. doi: 10.1002/job.248.
- Shuck, B., & Wollard, K. (2010). Employee Involvement and HRD: A seminal review of the foundations. *Human Resource Development Review*, 9(1), 89-110. doi: 10.1177/1534484309353560.
- Shuck, B., Reio, T. G., & Rocco, T. S. (2011). Employee involvement: an examination of antecedent and outcome variables. *Human Resource Development International*, 14(4), 427-445. doi: 10.1080/13678868.2011.601587.
- Soane, E., Truss, K., Alfes, K., Shantz, A., Rees, C., & Gatenby, M. (2012). Development and application of a new measure of employee involvement: The ISA Involvement Scale. *Human Resource Development International*.
- Sofijanovska, E., & Zabijakin-Chatleska, V. (2013). Employee involvement and organizational performance: Evidence from the manufacturing sector in Republic of Macedonia. *Traka Journal of Science*, 11(1), 31-36.
- Sutton, P. (2004). A perspective on environmental sustainability. Paper on the Victorian Commissioner for Environmental Sustainability.
- UNEP (2011). Environmental assessment of Ogoniland. Retrieved from United Nation Environment Programme website: http://postconflict.unep.ch/publications/OEA/UNEP_OEA.pdf
- Vallance, S., Perkins, H. C., & Dixon, J. E. (2011). What is social sustainability? A clarification of concepts. *Geoforum*, 42(3), 342-348.
- Weingaertner, C., & Moberg, Å. (2014). Exploring social sustainability: learning from perspectives on urban development and companies and products. *Sustainable Development*, 22(2), 122-133.
- Williamson, M.G. (2008). The effects of expanding employee decision making on contributions to firm value in an informal reward environment. *Contemporary Accounting Research*, 25 (4), 1184-1209.

Sense-making and Employee Deviant Behaviour in Deposit Money Banks in Rivers State, Nigeria

Yakie, Ebisidor Favour

Department of Management, Faculty of Management Sciences, Rivers, State University,
Nkpolu- Oroworukwo, PMB 5080, Port Harcourt, Nigeria

M.D. Tamunomiebi PhD

Department of Management, Faculty of Management Sciences, Rivers, State University,
Nkpolu- Oroworukwo, PMB 5080, Port Harcourt, Nigeria

Abstract: *This study examined the relationship between Sense-making and Employee Deviant Behaviour in Deposit Money Banks in Rivers State. The study adopted a cross-sectional survey in its investigation of the variables. Primary data was generated through structured questionnaire. The population for the study is the 202 employees from the 18 Deposit Money Banks in Nigeria. The study concentrated on the headquarters of the various banks as they oversee the activities of other branches within the state. The sample size of 134 was determined using census method since our population was small. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman's Rank Order Correlation Coefficient with the aid of Statistical Package for Social Sciences version 23.0. The tests were carried out at a 95% confidence interval and a 0.05 level of significance. The findings revealed that there is a significant relationship between Sense-making Employee Deviant Behaviour in Deposit Money Banks in Rivers State. The study thus recommends that Management of Deposit Money Banks should advocate sense making as a means of reducing production deviance.*

Keywords: *Sense-making, Employee Deviant Behaviour, Property Deviance, Production Deviance, Personal Deviance*

INTRODUCTION

Deviant workplace behaviour (DWB) is a prevalent and costly phenomenon for organizations. Studies have shown that deviant workplace behaviour not only cost organizations substantial amount of money annually but have negative and psychological consequences for employees as well (McCardle, 2007; Milkovich & Newman, 2008; Baharom *et al.*, 2017). Deviant workplace behaviour in this context refers to voluntary behaviour that violates significant organizational norms and, in so doing, threatens the well-being of the organization or its members (Bennett & Robinson, 2000; Johnson & Indvik, 2001). It was reported that employees accounted for a higher percentage of retail thefts than did customers (Appelbaum, Iaconi & Matousek, 2007). Annual costs of workplace violence are estimated at \$4.2 billion per year (Everton *et al.*, 2007). A report had it that employee theft, and fraudulent behaviour cost organizations \$200 billion and \$400

billion yearly respectively (Kidwell & Kochanowski, 2005). Interpersonal deviances lead to job stress and less job satisfaction and subsequently reduce productivity (Appelbaum *et al.*, 2007). Businesses pay more than \$150 billion annually for managing occupational stress of absenteeism of employees (Spector, Fox, Penney, Bruursema, Goh & Kessler, 2006).

Attitudes exhibited by employees can directly affect the atmosphere and productivity within organizations. An environment that is professional and conducive for work needs to be created by an employer in order to keep employees motivated. If this environment is created, the employees are likely to work hard and successfully complete each assignment as expected of them. An attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour (Eagly & Chaiken 1998). Attitude describes the way an employee feels inside. These are an employee's feelings toward his employer, his co-workers and his position within the organisation. All employees have attitudes toward their working environment. One important predictor of this attitude is employee sense-making.

Sense-making is concerned with the interpretations of events and situations. Schutte (2016) describes sense-making as a process of assigning meaning and interpretations to one's context. However, from the angle of workplace spirituality, it details enriched and conscious interpretations and understanding of events or outcomes which enable the employee to make decisions or act in ways that are not only responsible but also considerate of others. Schutte (2016) also asserts that employees with a clear sense of their environment and the knowledge of the underlying systematic features of their relationships tend to be more cautious of their behaviour. This is as Kesari and Pradhan (2018) argue that the line between transcendence and sense-making was blurred, given that both are concerned with the perceptions of one's context, however, this could be contended based on an overview of operational definitions drawn from previous studies (Bansal, 2015; Marschke, Preziosi & Harrington, 2016; Walt, 2018) which emphasize on transcendence as primarily rising above emotional turmoil and avoiding the frivolities of actions such as retaliation and negativity in dealing with situations, and the definition of sense-making as the understanding of relative events as well as the apportioning of meaning to situations. Therefore, this study sought to examine the relationship between sense-making as a dimension of workplace spirituality and employee deviant behaviour in Deposit Money Banks in Rivers State. This study was guided by the following research question:

This study was guided by the following research question:

- i. What is the relationship between sense-making and property deviance in Deposit Money Banks in Rivers State?
- ii. What is the relationship between sense-making and production deviance in Deposit Money Banks in Rivers State?
- iii. What is the relationship between sense-making and personal deviance in Deposit Money Banks in Rivers State?

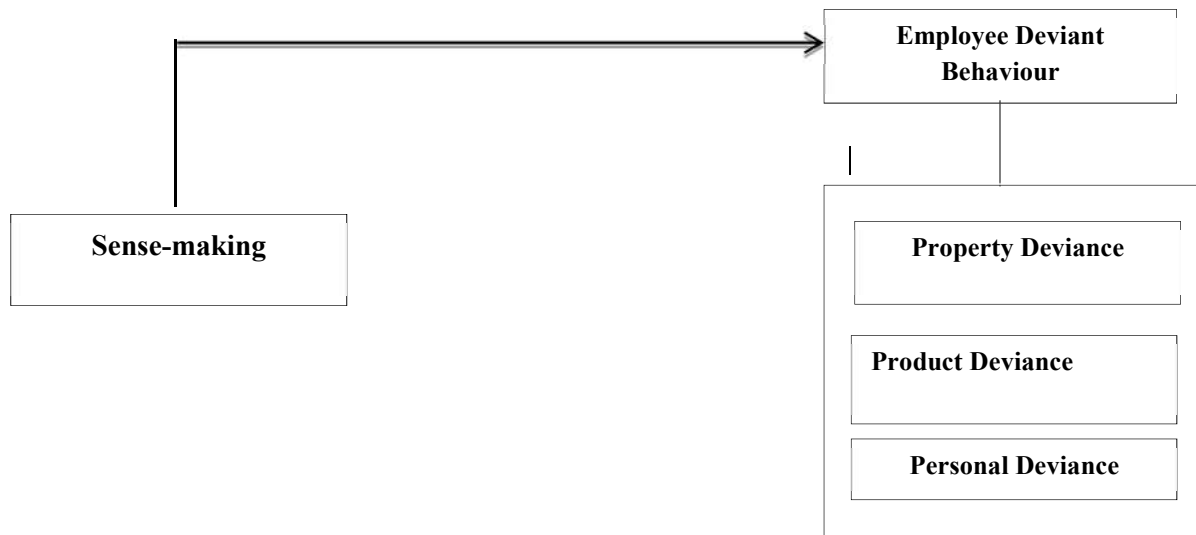


Figure 1.1: Conceptual framework for sense making and Employee deviant Behaviour

Source: Researchers (2021)

LITERATURE REVIEW

Theoretical Foundation

Social Exchange Theory

In understanding the motives for communicative actions within relationships, many have compared relationships to that of a fiscal market (Osborn, 2012). Exchange theorists have shown that individuals invest in relationships and expect to receive gains in return (Dunbar, 2015). Rather than merely investing monetary currency, however, investments may include time, energy, love, face-work, and countless other life currencies. Theorists who take this perspective tend to assume that individuals are motivated by a desire to improve their situations while also minimizing the amount of effort to do so (Dunbar, 215). In comparing relationships to an exchange, scholars have hoped to understand what factors influence why a relationship begins, how long it will last, and when it will end (Ribarsky, 2013).

Social exchange theory proposes that every relationship involves inputs (costs/investments) and outcomes (rewards) and that the combination of these costs and rewards allows for the prediction of relational outcomes. Additionally, this theory provides further insight into why individuals engage in face-saving techniques for their partners. Specifically, individuals make decisions based on predictions of what will occur as a result of their actions (Ko & Hur, 2014). Therefore, individuals will make decisions on how to help others manage face based on predictions of what

will occur. Even in romantic relationships, individuals often choose the course of action that they believe will bring the most reward with the least amount of effort (Ribarsky, 2013).

Concept of Sense-making

This is concerned with the interpretations of events and situations. Schutte (2016) describes sense-making as a process of assigning meaning and interpretations to one's context. However, from the angle of workplace spirituality, it details enriched and conscious interpretations and understanding of events or outcomes which enable the employee to make decisions or act in ways that are not only responsible but also considerate of others. Schutte (2016) also asserts that employees with a clear sense of their environment and the knowledge of the underlying systematic features of their relationships tend to be more cautious of their behaviour. This is as Kesari and Pradhan (2018) argue that the line between transcendence and sense-making was blurred, given that both are concerned with the perceptions of one's context, however, this could be contended based on an overview of operational definitions drawn from previous studies (Bansal, 2015; Marschke, Preziosi and Harrington, 2016; Walt, 2018) which emphasize on transcendence as primarily rising above emotional turmoil and avoiding the frivolities of actions such as retaliation and negativity in dealing with situations, and the definition of sense-making as the understanding of relative events as well as the apportioning of meaning to situations.

Sense-making is the process that involves the meaning people give to their experiences (Weick, 2020) and through which they work to get a hold on events that appear to them as uncommon, unexpected and complicated, or are not in line with their expectations (Maitlis & Christianson, 2014). Sense-making involves the active construction of events and frameworks for understanding; since individuals construct the situations they try to understand (Maitlis & Christianson, 2014). It gathers information, after which a cognitive process grows to create meaning about the unknown event (George & Jones, 2001). Sense-making is describing and understanding organizational life from an employee perspective (Weick, 1995). Sense-making is relevant for the study of organizational life because identified salient characteristics associated with change are viewed as a triggering signal to the employees. Sense-making is a process by which an employee ascertains the extent to which there is a revision in what the employer provides to the employee. It includes the decision-making process by the employee regarding how to respond to these revisions (Weick, 2020).

Employee Deviant Behaviour

Employee deviant behaviour is expressed in actions and attitudes that contradict and go against clearly established expectations and in that way can be considered detrimental or destructive. Employee deviant behaviour according to Goodboy, Martin and Bolkan (2017) is traceable to conflict situations between the employee or staff of interest and other key or significant members of the organization. However, Ramlee, Osman, Salahudin, Yeng, Ling and Safizal (2016) argue that employee deviant behaviour could also be linked to factors outside the organization but for some reason, is expressed within the organization. Balogun *et al.*, (2018) argue that deviance is

an expression of frustration that is manifested through anger at co-workers and at the organization itself. It is as such a conscious and deliberate action that is demonstrated through the employee's disorderly and destructive actions which ultimately impact the organization.

The employee deviant workplace behaviour phenomenon is increasingly becoming popular and this issue had attracted many researchers to study the phenomenon as it impacts employees' productivity and well-being (Tamunomiebi & Zeb-Obipi, 2009). According to Appelbaum, Laconi and Matousek (2007), the review of various scholars describes employee deviant behaviour in the workplace. Joseph (2020) describes employee deviant behaviours as misbehaviour in the workplace that is categorized into aggressive behaviour which consists of sexual harassment, intimidation, open hostility towards co-workers and so on. unproductive behaviour which constitutes coming late at work, sneaking out of work during working hours, being involved with taking extended lunch and so on. abuse of property and organizational politics which involves spreading out false rumours and gossip.

Robinson and Benneth (2015) define workplace employee deviant behaviour as volunteer behaviour from members of an organization that infringes organizational norms by doing that which would threaten the growth of the organization with its employees. Robinson and Bennett (2015) have given different names for employee deviant behaviour like workplace deviance, counterproductive behaviour (Mangione 2012), antisocial behaviour (Giacalone & Greenberg 1997), and misbehaviour (Vardi *et al.*, 2004). Behaviour is seen deviating when organizations' customs and policies are infringed by individuals who can endanger the growth of the organization with its employees. Employee deviant Behaviour in the workplace exist at different organizational levels and this behaviour includes; unpunctuality at the place of work, spending working time for personal reasons, using working facilities for personal matters and needs, using inappropriate and different standards and procedures in working, displaying unfair attitudes to colleagues (Eliyana, 2015).

Property deviance

This concept is adopted in measuring or manifesting acts or behaviour which are detrimental to the physical or tangible assets of the organization (Narayanan & Murphy, 2017). Employees express property deviance in the nonchalant and disorderly way they handle the organizations' properties such as their use of components such the organizations' computer systems, the closing of doors, use of equipment such as photocopiers or printers and other valuable materials or hardware within the workplace. Actions that deviate from the norms and acceptable practices of use and management of the organizations' properties or equipment are considered as employee deviant and in most cases involve the abuse and disregard of such properties or equipment. Narayanan and Murphy (2017) argue that such actions could be destructive and result in the wastage of materials and the inefficient running of the organization.

Organizational deviance encompasses production and property deviance. All behaviours in which employee deviant employees partake eventually have a negative impact on the overall

productivity of the organization. According to Robinson and Benett (1995), Property deviance can be described as those instances where employees acquire or damage the tangible property or assets of the work organization without authorization. Property deviance harms the organizations and is quite severe. Sabotaging equipment, accepting kickbacks, lying about hours worked, releasing confidential information, making intentional errors, misusing funds or expense accounts, theft and stealing from the company are forms of property deviance. Some of these acts are connected with direct costs for the organization since the equipment has to be replaced (Robinson & Benett 1995). Furthermore, these can affect productivity because work cannot be performed until the equipment is replaced. Everton, Jolton and Mastrangelo (2005) define theft as the unauthorized taking, control, or transfer of money and property of the formal work organization that is perpetrated by an employee during occupational activity.

Production deviance

The dimension of production deviance is concerned with the evident drop in production quality or quantity due to the behaviour of the worker. Organizations often establish production standards in terms of quality and quantity (Darvishmotevali, Arasli&Kilic, 2017). These standards require adherence and are important for growing the market base and profit of the business. However, production deviance occurs where workers or employees of the organization either knowingly or unknowingly act in ways that can be considered detrimental to the production capacities and goals of the organization. Rahim and Cosby (2016) argue that organizations depend primarily on the actions of their workers, thus shifts in behaviour or expressions of deviance from expected standards or frameworks could have serious or significant implications for the survival and performance of the organization. It is from this position evident that production deviance not only affects functional processes in the organization but also impacts the organization's overall wellbeing.

Robinson and Benett (1995) define production deviance as behaviours that violate the formally proscribed organizational norms delineating the minimal quality and quantity of work to be accomplished as part of one's job. For instance, most employees develop strategies to disrupt production in the organization. Such strategies include: being late to work, leaving early, taking excessive breaks, making personal calls, withholding effort that is, intentionally working slow, wasting resources, cyberloafing where one surfs the web doing non-work related tasks such as chatting on social networks sites, using drugs and alcohol in the workplace, giving unnecessary excuses like calling in sick when well (absenteeism) are forms of production deviance. Withholding effort describes the incidence where an individual gives less than full effort on a job-related task. An employee might withhold effort because he has negative views about the group or the organization. Kidwell and Kochanowski (1995) 2005 proposed that all these behaviours have an impact on the productivity of organizations. Lateness and absenteeism are closely linked to each other. Those employees who are absent frequently also tend to be unpunctual (Everton *et al.*, 2005).

Personal deviance

Deviance which is personal is that which directly affects the relationships and lines of communication or interaction of the individual. Personal deviance is expressed through actions that could be described as uncivil and abusive. It reflects behaviour that falls outside the norm of the organization and which significant others find uncomfortable, toxic and even harassing in nature. Sharma, Schuster and Singh (2016) argue that personal deviance portends the individual as being problematic and wayward. It is also depicted in the refusal to conform to the behavioural standards of the organization. Farhadi, Nasir, Omar and Nouri (2015) observe that such behaviour can be dangerous for the organization since it could affect the customers and the impression they have of the organization. The author further noted that while policies and regulatory frameworks are useful in addressing such tendencies within the workplace, these suggest an overly authoritative that coercive approach to the challenge; hence organizations should also consider alternatives such as mentoring, job design and other actions structured towards enhancing meaning and motivating the employee.

Violence that is initiated by co-workers can happen everywhere: No industry, no organization, and no employee can exclude the occurrence of such behaviour. Personal deviance is when an individual behaves in an aggressive or hostile manner towards others. Robinson and Benett (1995) affirmed that most employees develop some forms of personal deviance such as; sexual harassment, rape, verbal abuse, physical assaults, sabotaging the work of co-workers, stealing from co-workers, destroying property of co-workers, and endangering co-workers are forms of personal aggression. Everton *et al.*, (2005) narrate those employees who have more health problems either physical or emotional are less committed to the organization because they tend to be more depressed and have less job satisfaction than those who are not victims of aggression by their co-workers. When victims of such employee deviant behaviour receive and feel supported, there is a higher positive report of employee well-being than those not being supported. Everton *et al.*, (2005) suggest that organizations are faced with greater costs when individuals possess this type of behaviour. The costs are incurred as a result of lower productivity, lost work time, inferior quality, medical and legal expenses, and a damaged public image. Van Fleet and Griffin (2006) posit that verbal aggression and obstruction usually take place covertly in the workplace. Hence, harming the victims- whether they are individuals or the organization- can be carried out with little danger (Appelbaum, Deguire& Lay 2005).

Sense-Making and Employee Deviant Behaviour

Sense-making suggests an approach towards relationships anchored on enriched interpretations of such related interactions and exchanges that are unbiased or prejudiced. Rajappan *et al.*, (2017) argue that the perception of the external environment is highly subjective for employees with strong levels of spirituality. This is as they tend to offer meaning for their experiences based on their level of consciousness, understanding and heightened sense-making of their environment and of the feelings and conditions of others – thus spirituality allows for interpretations of the environment from a subjective basis rather than from an external basis.

Schutte (2016) argues that the actions and behaviour of individuals are consequent to their patterns of thought and their perception of their social environment. This also agrees with Bansal's (2015) observation that organizational members' perceptions shape their relationship with significant others such as their co-workers, customers and even the management of their organizations. Sense-making as such can be described as influencing the behaviour of the individual and in various ways enriches their perceptions – reducing their tendencies for deviance. The relationship between the variables is expressed in the following null hypotheses:

H₀₁: There is no significant relationship between sense-making and property deviance in Deposit Money Banks in Rivers State

H₀₂: There is no significant relationship between sense-making and production deviance in Deposit Money Banks in Rivers State

H₀₃: There is no significant relationship between sense-making and personal deviance in Deposit Money Banks in Rivers State

METHODOLOGY

The study adopted a cross-sectional survey in its investigation of the variables. Primary data was generated through structured questionnaire. The population for the study is the 202 employees from the 18 Deposit Money Banks in Nigeria. The study concentrated on the headquarters of the various banks as they oversee the activities of other branches within the state. The sample size of 134 was determined using census method since our population was small. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman's Rank Order Correlation Coefficient with the aid of Statistical Package for Social Sciences version 23.0. The tests were carried out at a 95% confidence interval and a 0.05 level of significance.

DATA ANALYSIS AND RESULTS

The level of significance 0.05 was adopted as a criterion for the probability of accepting the null hypothesis in ($p > 0.05$) or rejecting the null hypothesis in ($p < 0.05$). The level of relationship between sense-making with each of the measures of employee deviant behaviour is to examine the extent sense-making can impact on the outcome of each measure of employee deviant behaviour.

Table 1 Correlation for Sense-making on the Measures of Employee Deviant Behaviour

			Sense-making	Property Deviance	Production Deviance	Personal Deviance
Spearman's rho	Sense-making	Correlation Coefficient	1.000	.868**	.722**	.585**
		Sig. (2-tailed)	.	.000	.000	.000
		N	117	117	117	117
	Property Deviance	Correlation Coefficient	.868**	.868**	1.000	.779**
		Sig. (2-tailed)	.000	.000	.	.000
		N	117	117	117	117
	Production Deviance	Correlation Coefficient	.722**	1.000	.868**	.853**
		Sig. (2-tailed)	.000	.	.000	.000
		N	117	117	117	117
	Personal Deviance	Correlation Coefficient	.585**	.853**	.779**	1.000
		Sig. (2-tailed)	.000	.000	.000	.
		N	117	117	117	117

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Research data, 2021

H₀₁: There is no significant relationship between sense-making and property deviance in Deposit Money Banks in Rivers State, Nigeria.

The correlation coefficient (r) shows that there is a significant and positive relationship between sense-making and property deviance. The *rho* value 0.868 indicates the direction and magnitude of this relationship which represents a very strong correlation. Also displayed is the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained from table 1, the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between sense-making and property deviance in Deposit Money Banks in Rivers State, Nigeria.

H₀₂: There is no significant relationship between sense-making and production deviance in Deposit Money Banks in Rivers State, Nigeria.

The correlation coefficient (r) shows that there is a significant and positive relationship between sense-making and production deviance. The *rho* value 0.722 indicates the direction and magnitude of this relationship which represents a strong correlation. Also displayed is the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained from table 1, the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between sense-making and production deviance in Deposit Money Banks in Rivers State, Nigeria.

H₀₃: There is no significant relationship between sense-making and personal deviance in Deposit Money Banks in Rivers State, Nigeria.

The correlation coefficient (r) shows that there is a significant and positive relationship between sense-making and personal deviance. The ρ value 0.585 indicates the direction and magnitude of this relationship which represents a moderate correlation. Also displayed is the statistical test of significance (p -value) which makes possible the generalization of our findings to the study population. From the result obtained from table 1, the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between sense-making and personal deviance in Deposit Money Banks in Rivers State, Nigeria.

DISCUSSION OF FINDINGS

The results from the analysis reveal significant relationship between sense-making and employee deviant behaviour in Deposit Money Banks in Rivers State. The findings linked the effect of sense-making on employee deviant behaviour in Deposit Money Banks in Rivers State, that is using sense-making to build employee deviant behaviour. A critical appraisal of the finding reveals that sense-making has a strong positive and significant effect on property deviance; sense-making has a strong positive and significant effect on production deviance; sense-making has a positive and significant effect on personal deviance. In all, sense-making has a strong positive and significant relationship with employee deviant behaviour in Deposit Money Banks in Rivers State.

Sense-making suggests an approach towards relationships anchored on enriched interpretations of such related interactions and exchanges that are unbiased or prejudiced. Rajappan *et al.*, (2017) argue that the perception of the external environment is highly subjective for employees with strong levels of spirituality. This is as they tend to offer meaning for their experiences based on their level of consciousness, understanding and heightened sense-making of their environment and of the feelings and conditions of others – thus spirituality allows for interpretations of the environment from a subjective basis rather than from an external basis.

CONCLUSION AND RECOMMENDATION

Based on the foregoing findings, it was concluded that sense-making has a significant influence on employee deviant behaviour in Deposit Money Banks in Rivers State. Implying that an increase in employee mindfulness would discourage deviant behaviours in employees in Deposit Money Banks in Rivers State.

Therefore, it was recommended that that Management of Deposit Money Banks should encourage employee sense-making as a way of discouraging deviant work behaviours.

REFERENCES

- Appelbaum, S.H., Iaconi, G.D., & Matousek, A. (2007). Positive and negative deviant workplace behaviors: Causes, impacts, and solutions. *Corporate Governance: The International Journal of Business in Society*, 7(5), 586-598.

- Baharom, M.N., Sharfuddin, M.D.K.B. & Iqbal, J. (2017). A systematic review on the deviant workplace behaviour. *Review Public Administration Management*, 5(3), 231-238
- Balogun, A.G., Oluyemi, T.S. & Afolabi, O.A. (2018). Psychological contract breach and workplace deviance: Does emotional intelligence matter? *Journal of Psychology in Africa*, 28(1), 8–14
- Bansal, A.A. (2015). Workplace spirituality: An effective HR to enhance productivity scenario in India. *International Journal of Research in Economics and Social Science*, 5(11), 1–7.
- Barnett, T. and C. Vaicys, 2000. The moderating effect of individuals' perceptions of ethical work climate on ethical judgments and behavioral intentions. *Journal of Business Ethics*, 27(4), 351-362.
- Beery, T., Linda, B., Fowler, C. & Allen, G. (2002). Spirituality in persons with heart failure. *Journal of Holistic Nursing*, (20), 5-25.
- Darvishmotevali, M., Arasli, H., & Kilic, H. (2017). Effect of job insecurity on frontline employee's performance. *International Journal of Contemporary Hospitality Management*, 29(6), 1724- 1744.
- Eagly, A. H., & Chaiken, S. (1998). Attitude structure and function. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.), *the handbook of social psychology* (4th ed., 269–322). New York: McGraw–Hill
- Eliyana, A. (2015). Peran moderator workplace passion padapengaruh workplace deviant behaviour terhadapkepuasankerja. Surabaya: UniversitasAirlangga.
- Everton, W.J., Jolton, J.A., & Mastrangelo, P.M. (2007). Be nice and fair or else: Understanding reasons for employees' deviant behaviors. *Journal of Management Development*, 26(2), 117-131.
- Everton, W.J., Jolton, J.A., & Mastrangelo, P.M. (2005). Be nice and fair or else: understanding reasons for employees' deviant behaviours. *Journal of Management Development*.
- Farhadi, H., Nasir, R., Omar, F. & Nouri, A. (2015). Understanding employee's deviant behaviour: the role of agreeableness and stress related to work. *Journal of Social Sciences and Humanities*, 2, 102-107.
- George, J.M. & Jones, G.R. (2001).Towards a process model of individual change in organizations. *Human Relations*, 54, 419-444.
- Giacalone, R.A., & Greenberg, J. (1997). *Antisocial behaviour in organizations*. Thousand Oaks, CA: Sage.

- Goodboy, A.K., Martin, M.M. & Bolkan, S. (2017). Workplace bullying and work engagement: A self-determination model. *Journal of Interpersonal Violence*, 1 –23.
- Gørill, H., Toril, R., Randi, H., Helge, G.& Geir, A.E. (2011).The relationships between self-transcendence and spiritual well-being in cognitively intact nursing home patients. *Journal of Older People Nursing*, 21, 427-453.
- Grant, C., & Osanloo, A. (2014). Understanding, selecting, and integrating a theoretical framework in dissertation research: Developing a “blueprint” for your house. *Administrative Issues Journal*
- Johnson, P.R. & Indvik, J. (2001). Rudeness at work: Impulse over restraint. *Public Personnel Management*, 30(4), 457- 465.
- Joseph, C. (2020). What are common kinds of workplace deviance? Available: <https://smallbusiness.chron.com/common-kinds-workplace-deviance-10178.html>
- Kesari, J.L., & Pradhan S. (2018). The mediating role of organisational citizenship behaviour: A study of workplace spirituality and employee retention in Indian industries. *Performance Improvement*. 57(6), 17–35.
- Kesari, J.L., & Pradhan S. (2018). The mediating role of organisational citizenship behaviour: A study of workplace spirituality and employee retention in Indian industries. *Performance Improvement*. 57(6), 17–35.
- Kidwell Jr, R.E., & Kochanowski, S.M. (2005). The morality of employee theft: Teaching about ethics and deviant behaviour in the workplace. *Journal of management education*, 29(1), 135-152.
- Maitlis, S. & Christianson, M. (2014). Sense making in organizations: taking stock and moving forward. *The Academy of Management Journals*, 8(1), 57-125.
- Mangione, T. W. (2012). Job satisfaction, counter-productive behaviour and drug use at work. *Journal of Applied Psychology*, 60, 114-116.
- Marschke, E., Preziosi, R. & Harrington, W. (2016). Professionals and executives support a relationship between organizational commitment and spirituality in the workplace. *Journal of Business & Economics Research (JBER)*, 7(8), 33–48.
- McCardle, J.G. (2007). Organizational justice and workplace deviance: The role of organizational structure, powerlessness, and information salience. Doctoral Dissertation. Florida: University of Central Florida Orlando
- Milkovich, G.T. & Newman, J.M. (2008). *Compensation*. 8th Edn., New York: McGraw-Hill Irwin

- Narayanan, K. & Murphy, S.E. (2017). Conceptual framework on workplace deviance behaviour: A Review. *Journal of Human Values*, 23(3), 218–233.
- Rahim, M.A., & Cosby, D.M. (2016). A model of workplace incivility, job burnout, turnover intentions, and job performance. *Journal of Management Development*, 35(10), 1255-1265.
- Rajappan, S., Nair, R.S., Priyadarshini, M.K., & Sivakumar, V. (2017). Exploring the effect of workplace spirituality on job embeddedness among higher secondary school teachers in Ernakulam district. *Cogent Business & Management*, 4(1).
- Ramlee, N., Osman, A., Salahudin, S.N., Yeng, S K., Ling S.C. & Safizal, M. (2016). The influence of religiosity, stress and job attitude towards organisational behaviour: Evidence from public universities in Malaysia. *Procedia Economics and Finance*, 35, 563-573.
- Robinson, S.L. & Bennett, R.J. (1995). A typology of deviant workplace behaviours: a multidimensional scaling study. *Academy of Management Journal*, 38, 555–572.
- Schutte, P.J. (2016). Workplace spirituality: A tool or a trend? HTS teologiese Studies/*Theological Studies*, 72(4), 3294.
- Spector, P.E., S. Fox, L.M. Penney, K. Bruursema, A. Goh and S. Kessler, 2006. The dimensionality of counterproductivity: Are all counterproductive behaviors created equal? *Journal of Vocational Behavior*, 68(3), 446-460
- Tamunomiebi, M. D. & Zeb-Obibi, I. (2009), *Managing Human Resources. Basic Principles*. 2nd Edition, Port Harcourt: Dokus Press.
- Walt, F.V. (2018). Workplace spirituality, employee engagement, and thriving at work. *SA Journal of Industrial Psychology*, 44, 1-10.
- Weick, K.E. (1995). *Sense making in organizations*. Thousand Oaks, CA: Sage.
- Weick, K.E. (2020). Sense making, organizing, and surpassing: A handoff. *Journal of Management Studies*, 57(7), 1420-1431.

Help Desk Operations Management and Service Quality of Telecommunication Companies in Rivers State

Henry Oghenewaire Udoro

Department of Office Technology Management, School of Business Studies, Delta State Polytechnic, Otefe-Oghara

Abstract: Help desk is a customer support center in an organization that provides information, administrative and technical supports to users, with the view to solving problems that users encountered in the course of using the organization resources or facilities. This study examined the relationship between helpdesk operations management and service quality of Global System for Mobile Communication (GSM) companies in Rivers State, Nigeria. The study adopted the cross-sectional survey in its investigation of the variables. Primary source of data was generated through structured questionnaire. The population of the study was 134 employees of 4 Global System for Mobile Communication (GSM) in Port Harcourt. A sample of one hundred (100) respondents was calculated using the Taro Yamane's formula for sample size determination. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. Data generated were analyzed and presented using both descriptive and inferential statistical techniques. The hypotheses were tested using the Spearman's Rank Order Correlation Statistics. The tests were carried out at a 0.05 level of significance. The findings revealed that there is a relationship helpdesk operations management and service quality of Global System for Mobile Communication (GSM) companies in Rivers State, Nigeria. The study concludes that when Global System for Mobile Communication (GSM) companies improve upon their helpdesk operations management it would enhance the quality of their service delivery. Therefore, the study recommends that Global System for Mobile Communication (GSM) companies should build internal knowledge base of customer needs and complaints by regularly collecting and implementing employee feedback.

Keywords: Helpdesk, Service Quality, Responsiveness, Reliability, Empathy

INTRODUCTION

Helpdesk is a customer support centre in an organization that provides information, administrative and technical supports to users, with the view to solving problems that users encounter in the course of using the organization resources or facilities. A helpdesk could comprise of one person or group of persons that make use of telephone devices or software applications to keep track of problem(s) status and thus provide solution(s) that satisfy the users (Murray & Young, 2008; Weiss & Apte, 2002). Helpdesk could also be seen as an information and assistance resource that supports the functionality of an organization by responding to users' requests in a timely manner (Khanapure & Chirchi, 2014). It is hence, a core sector through which problems, complaints and requests are reported, managed, coordinated and resolved (McNamara, Williams & Carolan, 2013). Helpdesk software is a solution application that is used for managing organization's helpdesk (Murray & Young, 2008). It is accessible to customer support personnel who could direct request(s) to servicing department(s).

A help desk or service desk is a one-stop point of contact that provides centralized information and support management services to handle a company's internal or external queries, David, Hayes and Ninemeier, 2004). Hence, a help desk is a resource intended to provide the customer or end user with information and support related to a company's or institution's products and services. The purpose of a help desk is usually to troubleshoot problems or provide guidance about products such as computers, electronic equipment, food, apparel, or software. Corporations usually provide help desk support to their customers through various channels such as toll-free numbers, websites, instant messaging or email (Gary, Joreme, Vallen, 2009). Walker, (2009) suggests that a help desk is typically seen as more tactical, with the primary goal of helping to quickly resolve end-users immediate needs and technical issues and incidents. Thus, the help desk is reactive in nature, but is expected to be efficient and speedy.

The purpose of this paper therefore was to examine the relationship between helpdesk operations management and service quality of Global System for Mobile Communication (GSM) companies in Rivers State, Nigeria. The specific objectives of the study included:

- i. Examine the relationship between helpdesk management and responsiveness of Mobile Communication (GSM) companies in Rivers State, Nigeria.
- ii. Examine the relationship between helpdesk management and reliability of Mobile Communication (GSM) companies in Rivers State, Nigeria.
- iii. Examine the relationship between helpdesk management and empathy of Mobile Communication (GSM) companies in Rivers State, Nigeria.

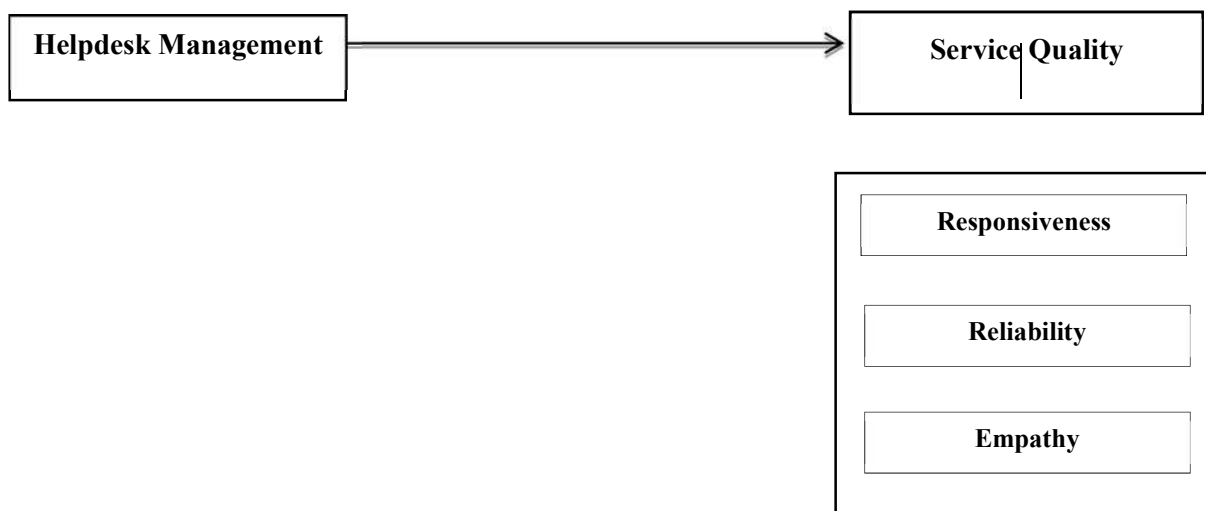


Figure 1: Conceptual model for the relationship between helpdesk management and service quality

Source: Desk Research (2021)

LITERATURE REVIEW

The Concept of Help Desk Operations

The concept of help desk operations is centered on the “assistance” meaning a department or unit of an organization responsible and providing the clients/customers or end-user with information and support related to a company’s or institution’s products and services. According to Cahill (2008), a help desk operations simply put is a communication center where customers (employees and other stakeholders) can find help about the organization, their products and services and complaints of clients and customers, this help may take the form of incident resolution, or request fulfillment, but regardless of what type of help is being provided, the goal of a help desk is to deliver high-quality service to customers in a timely manner.

Help desk management as defined by Anton (2000) is the process of services provided on centralized information and support management service to handle a company’s internal or external queries and operational problems about IT-related processes, policies, systems and usage. Services include product support capabilities, including elements of hardware and software support, logging of problems, and results analysis (results analysis means analyzing the results of calls taken to resolution of those calls for entry into self-help database, problem trends to suggest permanent fixes and so forth); dispatch of service technicians or parts; training coordination; and other IT-related issues.

Types of Help Desk

The different types of help desk server systems are categorized based on various factors, such as the method of deployment, the size of the organization, target users, and customer support function. There are two types of help desks based on Customer/client Support, which is internal or external to the organization (Thomas, 1996; Hackman & Guskey 1998).

Internal Help Desks-are usually organized as part of the IT Department. It has been observed that the internal help desk has a great impact on the productivity of the organization since the help desk is resolving problems that may stop, delay, or otherwise impact the completion of daily business activities (Held, 1992). As an example, in the company we studied a problem with a network router prevented employees from accessing an important server. Such a problem has significant deleterious effect on the productivity of the affected employees since they could not perform their primary job function. The faster the help desk can troubleshoot and resolve the problem the better (Lazarov & Shoval, 1992; Marcella & Middleton, 1996).

External Help Desks-are for paying clients of the company who have service agreements for technical support. In the case of the external help desk, it is an important value-added service provided to the client. The speed and quality of the solutions provided influence customer satisfaction and therefore the business’s image (Feinberg, Kim et al, 2000; Heckman & Guskey, 1998).

Axelos (2017) presented other types of help desk software:

Web Help Desk: This cloud-based software or software-as-a-service (SaaS) **helpdesk** is rented on a subscription basis. This way, users can easily scale up when necessary, saving them money in the long run. The program is rented out to companies that need technical support, system maintenance and upgrade, as well as data backup.

On-premises Helpdesk: This refers to a licensed software that a company buys and installs on their own. The company has a complete control over the help desk and they are responsible for its system maintenance and overall function.

Enterprise Help Desk: This type of software offers more than just the basic features. It addresses customer concerns, manages IT assets, and fulfills service requests. Most enterprise help desk solutions are modified to suit a company's workflows.

Open Source Helpdesk: Open-source help desk software enables developers to access its source code without paying for user licenses or asking permissions. This lessens their dependencies and makes it easier for them to modify and enhance the application.

Concept of Service Quality Delivery

Service quality is an assessment of how well a delivered service conforms to the client's expectations. Service providers often assess the service quality provided to their customers in order to improve their service, to quickly identify problems, and to better assess client satisfaction. To this end, many authors agree that service quality plays a pivotal role since its inception in terms of getting positive results in a firm's performance. Offering superior level of service quality will surely enhance the firm's image and increase her chances of acquiring new customers (Elmayar, 2011; Siddiqi, 2011).

Johnston (1987) defines service quality with the phrase "customer satisfaction," that is the grade of correspondent between customer's expectation and perceptions of service. Further, the service attributes of perceived service quality relate to customer satisfaction (Parasuraman & Berry, 1991). Responsiveness or dissatisfaction helps to gain information and experience with the service, which impact the perceived quality of the service. According to Zeithaml (1988) perceived quality is defined as: "Consumers' appraisal of a product's overall excellence or superiority". Previous researchers agreed that perceived service quality can be recognised as matching the customer service actual performance perceptions with the service performance expectations (Gronroos, 2006).

Service quality is defined as customer's perception of how well a service meets or exceeds their expectations (Parasuraman, Berry and Zeithaml 1985). Service quality is often judged by customers and not by the organization itself (Abbasi, Khalid, Azam and Riaz, 2010). Martin (1999) suggested that a service is characterized by attributes such as intangibility, heterogeneity, perishability and inseparability which delineate a service from a good which further complicates the evaluation of the performance of a service. This creates the need for an organization to develop new models or use already existing models to measure the performance of the services and the perceptions that customers have towards the company.

Parasuraman *et al.* (1985) mention that if customer's expectations are superior to the performance of the service, the service quality is deemed to be unsatisfactory which results in

dissonance on the part of the customer. The service will be considered excellent if perceptions exceed expectations. Parasuraman, Berry and Zeithmal (1988) developed an instrument, the SERVQUAL model, which was among the first models used to measure service quality. The model is based on five factors reliability, responsiveness, assurance, empathy and tangibles. The SERVQUAL model is built around the gap that exists between the services offered vis-à-vis the expected service quality as perceived by the customer. To measure service quality, researchers have developed various instruments that relied on their classification of the quality. It is worthwhile to say that researchers are continuing to use SERVQUAL tool that was developed by Parasuraman and Zeithaml in 1985 to measure the service quality; because SERVQUAL is considered as a reliable tool to measure service quality (Lewis & Mitchell, 1990).

Measures of Service Quality

Responsiveness

Providing service in a timely manner is highly appreciated by customers. Good service providers understand this aspect (Iqbal et al., 2010). Furthermore, firms that value efficiency pay attention to the services that they offer so that they can have an advantage and use this to keep off competitors (Karim & Chowdhury, 2014). Customer satisfaction may be achieved in the fast food industry when the service provider is willing to assist its customers when required Akbaba (2009) also stated that “responsiveness is positively related to customer satisfaction and customers can refer others if satisfied”. Therefore, word of mouth (WOM) advertisements are important for the fast food outlets. Key aspects under responsiveness include keeping customers informed as to when services will be performed, prompt service to customers, willingness to help customers and Readiness to respond to customers request (Armstrong, 2012).

According to Timothy (2012) the steps taken to keep customers informed when problems occur can strengthen or harm the relationship. Keeping customers well informed of what is going on can have lasting effects on the relationship. By letting customers work out their problems and not being proactive, firms miss an opportunity to strengthen customer relationships (Armstrong, 2012). If the customer gets the understanding that you’re working hard trying to fix the problem, then the customer will feel well taken care of and feels that he is getting his money worth (Ramzi, 2010).

Besides being trained on how to deal with customers, employees should be given the freedom to enable them use discretion in informing customers on the progress of their demand and a platform of asking when they are not sure (Saghier & Nathan, 2013). Employees should know their customers' needs and what they think of the firm. Firms may be able to develop relationships with customers that will benefit both parties by talking to them about their needs. Moreover fast food outlets can form a platform where customers can give their views about products or services to ensure that they meet their needs. Greater understanding of their requirements and informing them through feedback from customer communications increases customer satisfaction (Lau et al., 2013).

In today's economy, customers are more aware and have a pool of choice as to where to spend their money and time. Letting customers know as to when services will be performed increases a firm's chance of retaining current customers as well as gaining new ones (Armstrong, 2012). Also, being concise and getting to the point quickly is a good way to respect customer's time that shows responsiveness. Regular and honest feedback while informing customers is a must. For this to happen properly, firm staff must be proactive and specific. The firm should be able to develop a progress and development plan. Moreover it should be able to link the employee's performance with the firm's goals so that they can offer services that will satisfy customers (Ojo, 2010).

Mudassar et al., (2013) argued that however skilled you are at workplace, always provide customers with exceptional service as desired. These includes providing timely responses to customer questions and inquiries, and informing your clients promptly. Greeting them warmly, involving them to determine what they have come for, and responding promptly and accurately to inquiries show customers' quick understanding of the firm. Failure to do so can result in lost business or damage a firm reputation (Kariru & Aloo, 2014). The most common customer complaint is being kept waiting. Being reluctant to return calls or fulfill orders may lead to loss of customers. The customers may be pushed to switch to another company. They may also engage in negative word of mouth due to the dissatisfaction felt (Armstrong, 2012).

Dharmalingam et al. (2011) assert that customers expect firms to treat them in a consistent way and that they will do what they say they will do promptly. By acting in accordance with these wants, a firm provides the customer with a sense of viewing it as company that gives customers' priority. This builds loyalty. Customers will view the service provider as being competent enough to offer the service. The customer will not be satisfied if he or she does feel that the services offered mostly delay. It brings doubt about the competence of the service provider (Ramzi, 2010). The service that the employees provide and the relationships they build are vital to success of customer satisfaction. The employees need to understand, believe in and be proud of the firm they are a part of. This will lead them to serving their customers promptly (Al-Rousan & Mohamed, 2010).

Untimely response to customer requests is one of the stamps of poor customer service. Customers want to feel valued. They want to know their presence and input to the business is appreciated. However when customers feel neglected and unappreciated, there are high chances that they will move to the next competitor (Klemz & Boshoff, 2011). Moreover, they will swiftly do so if they have an immediate need for a service that a firm is failing to deliver, or if they simply do not see work ethics. Poor response time, especially if done repeatedly, results in loss of customers and revenue (Armstrong 2012). The key to generating loyal customers is to provide them with efficient service by the required time frame. The employees should have adequate knowledge to enable them quickly respond to customer (Mudassar et al., 2013).

Reliability

Safwan et al. (2010) argued that reliability shows the service provider's ability to perform services in a dependable and accurate manner. Furthermore, it involves doing it right the first time and it is a crucial service component of customers (Messay, 2012). It is noted that being reliable is an exceptionally important quality to have, especially in the banking industry (Ghost & Gnanadhas, 2011). Reliability improvement is key in service quality enhancement efforts. This is because when a firm is unreliable, they communicate less concern to what customers care about. Customers may form a negative perception about the firm and will switch to a competitor without second thoughts (Sakhaei et al., 2014).

It is not easy for many types of service businesses to maintain a higher level of reliability day in day out. Customers view, experience and judge mishaps in the service sector immediately they interact with the firm (Mudassar et al., 2013). In such a sector, variability occurs largely when services are being offered. It is difficult for service providers to control such variations since each employee is somewhat different from the others in personality, skills and attitudes (Mohammad & Alhamadani, 2011). The key aspects under reliability include providing service as promised, dependability in handling customer service problems, performing services right at the first time and maintaining error free records (Armstrong, 2012).

According to Klemz and Boshof (2011), the major reason for customers to choose fast food outlets for investment funds is because of the reliability and reputation of fast food outlets. Fast food outlets usually give their word to customers about security during transactions. If the desired service is offered to customers by employees, customers will have more confidence and trust (Dado et al., 2012).

Ramzi (2010) pointed out that providing services as promised is one of the important factors of customer satisfaction. A good way of impressing customers is by doing what you promised and doing it right at the first time experience. This will enhance repeat business. Research has shown that delivery is the most important factor for customers and is one of the main causes of account abandonment if not achieved (Messay, 2012). Providing service as promised is hence fundamental in any business. This will build a firm's reputation and with good reputation, there is high chances of repeat business. In addition, new business will be generated by word of mouth and it will set a firm apart from its competitors as well. This is because they may sell similar products but their company could lack in delivering as promised (Armstrong, 2012).

According to Lau et al. (2013) providing services as promised is also important at the bank because if a customer is expecting the bank to do something for them, they should be able to rely on them to do it on the day that they want it done. Consequently, if they do not then the reputation of the bank may be affected and that customer will not believe that they are reliable. They may lose trust and decide to open another account in another bank if trust is lost (Atlik, 2009). A reliable service may not drastically affect customer satisfaction in a good manner. However a company that is seen to offer unreliable product or service will highly be viewed

incompetent hence a negative effect on customer satisfaction. Reliability is viewed as one of the prerequisite for customer satisfaction (Chau & Kau, 2009).

Empathy

The basis of empathy is rooted in understanding the needs of customers and giving them individual attention. Employee and customer interactions are reflected through the empathy dimension (Armstrong, 2012). Service customers have an expectation on how the service provider should understand and be concerned about their individual needs and wants. As a service provider, trying to understand the situation from the customer's point of view gives a clearer picture of what is happening (Toosi & Kohonali, 2011). Showing an understanding and having knowledge to solve customers' problems are key factors in the fast food industry. The key aspects under empathy include giving customers' individual attention, employees who deal with customers in a caring fashion and employees who understand the needs of their customers (Armstrong, 2012).

Saghier and Nathan (2013) argued that customer satisfaction increases if customers feel that they have been served in a way that considers their own personal needs. When delivering customer service, firms frequently deal with a large number of customers who seem to be the same, but it is important to remember that each customer is an individual. Anything that can be done to make each customer feel that they have had the firms complete attention and have been dealt with personally increases their sense of satisfaction (Boon-itt & Rompho, 2012). Creating a two-way communication between customers and the business, tracking customer activities and providing tailored information to customers makes them have a sense of belonging to a given brand or company (Messay, 2012).

In today's competitive business world, any positive change is likely to create competitive advantage. Employees who pay attention to their customers certainly provide a positive impression in the mind of a customer (Siddiqi, 2011). Customers appreciate a company that offers them options and alternatives, especially when the company representatives make them feel like they would like their customers to have the best interests by giving them individual attention. This technique makes customers feel important and that they are provided special treatment (Kariru & Aloo, 2014). It is important not only to understand what a customer says, but how a customer feels so as to give them the desired attention. A required skill to assist in offering this is being able to recognize and understand customer's emotional state (Mohsan et al., 2011).

Jayanthy and Umaram (2012) suggested that knowing and understanding customer needs is at the heart of every successful business, whether it sells directly to individuals or other businesses. Every business needs a reason for their customers to buy from them and not their competitor. Companies like Argos and Cadburys have exceptional levels of customer satisfaction. It is not surprising because these companies emphasize market research and marketing as the tools for finding out what customers want and need (Kariru & Aloo, 2014). Knowing what customers

wants and making it possible to direct actions to fulfill their needs will bring loyalty (Ilyas et al., 2011).

According to Gbadeyan and Gbonda (2011) when dealing with a customer, a true professional should always respond in a way that will show they understand customers' needs. The most successful business relationships also have that idea reciprocated in their operations. Mudassar et al. (2013) argued that the customers who are satisfied tell others about their experiences. Consequently this will increase positive WOM advertising. Existing customers are often an untapped source of wealth that can produce savings of time and money for businesses through referrals. It makes sense to keep them around as long as possible. To win in today's competitive market, a company must ensure that more of its customers are loyal, emotionally engaged customers who not only continue to spend with you, but who also generate income by advocating the company to others. In this way, fast food outlets can increase customers by being proactive by understanding the needs of their customers and bring satisfaction (Hossan, 2012).

Help Desk Management and Service Quality

According to Abbott and Lewry (2010), considering the advancement of technology and the present day complex business activities, the role of the help desk has expanded to include much more larger role and skill to play in the organization. Most organizations depending on the size and scope of their business now deploy the use of first level support, second level support, etc. the first level support may be able to resolve a customer concern or issue on their own. This can be done either through their own knowledge or by consulting external database: often the answers are gathered in a FAQ manual. Larger help desks will have further levels of support to manage more complex questions, as soon as a customer inquiry exceeds the level of knowledge or the technical scope of the current level support, the concern is forwarded to the next level. This means that if the first level support technician is unable to resolve the issue and require more support, they can seek further advice in the second level support, furthermore, first level support is responsible for providing accurate and up-to-date information regarding company products and services. They record events and problems and their resolutions in logs (Hamilton and Francis 2007). In the case of extended queries, they also follow up and update customers' status and information, pass on any feedback or suggestions by customers to the appropriate internal team.

The Help Desk Management System is essentially a central point or support center through which problems or issues are reported and subsequently managed and coordinated. From a general or wider perspective, it is an integral part of the service function, responsible for bringing resources together to address a problem or other issue.

Hoscan (2003) added that help desks serve an important role of the information technology department by providing the primary point of contact for clients to contact analysts to help them resolve problems with information technology including hardware, software, and networks. To resolve the information technology problems reported by callers, the help desk analysts must possess knowledge of the information technologies supported by the help desk.

Helpdesk could also be seen as an information and assistance resource that supports the functionality of an organization by responding to users' requests in a timely manner. It is hence, a core sector through which problems, complaints and requests are reported, managed, coordinated and resolved. Help desk software is a solution application that is used for managing organization's help desk. It is accessible to customer support personnel who could direct request(s) to servicing department(s).

Technical concerns are becoming a normal scenario in everyday work environment both in education and corporate. Thus, need to constantly and effectively monitor these concerns. These require a system that can handle them. With this in mind, an Automated Help Desk: Customer Support for Information Technology Resource Center is a fit solution that can provide effective approach in handling all reported technical concerns with proper record keeping and monitoring to clients and technical personnel as well as systems administrators (Ogolla, 2012; Lavie, 2006).

Based on the foregoing, the study thus hypothesized that:

H₀₁: There is no significant relationship between helpdesk management and responsiveness of Mobile Communication (GSM) companies in Rivers State, Nigeria.

H₀₂: There is no significant relationship between helpdesk management and reliability of Mobile Communication (GSM) companies in Rivers State, Nigeria.

H₀₃: There is no significant the relationship between helpdesk management and empathy of Mobile Communication (GSM) companies in Rivers State, Nigeria.

METHODOLOGY

The study adopted the cross-sectional survey in its investigation of the variables. Primary source of data was generated through structured questionnaire. The population of the study was 134 employees of 4 Global System for Mobile Communication (GSM) in Port Harcourt. A sample of one hundred (100) respondents was calculated using the Taro Yamane's formula for sample size determination. 79 copies of questionnaire were returned and used for data analysis. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. Data generated were analyzed and presented using both descriptive and inferential statistical techniques. The hypotheses were tested using the Spearman's Rank Order Correlation Statistics. The tests were carried out at a 0.05 level of significance.

DATA ANALYSIS AND RESULTS

Table 1 shows the result of correlation matrix obtained for helpdesk management and service quality. Also displayed in the table is the statistical test of significance (p - value), which makes enable to use test hypotheses 1-3 and also generalize our findings to the study population.

Table 1: Correlations for Helpdesk and Measures of Service Quality

			Helpdesk	Responsiveness	Reliability	Empathy
Spearman's rho	Helpdesk	Correlation Coefficient	1.000	.637**	.912**	.866**
		Sig. (2-tailed)	.	.000	.000	.000
		N	79	79	79	79
	Responsiveness	Correlation Coefficient	.637**	1.000	.586**	.819**
		Sig. (2-tailed)	.000	.	.000	.000
		N	79	79	79	79
	Reliability	Correlation Coefficient	.912**	.586**	1.000	.755**
		Sig. (2-tailed)	.000	.000	.	.000
		N	79	79	79	79
	Empathy	Correlation Coefficient	.866**	.819**	.755**	1.000
		Sig. (2-tailed)	.000	.000	.000	.
		N	79	79	79	79

** . Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output

H₀₁: There is no significant relationship between helpdesk management and responsiveness of Mobile Communication (GSM) companies in Rivers State, Nigeria.

Table 1 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.637 on the relationship between helpdesk management and responsiveness. This value implies that a strong relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in responsiveness was as a result of the adoption of helpdesk management. From the result obtained, the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between helpdesk management and responsiveness of Mobile Communication (GSM) companies in Rivers State, Nigeria.

H₀₂: There is no significant relationship between helpdesk management and reliability of Mobile Communication (GSM) companies in Rivers State, Nigeria.

Table 1 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.912 on the relationship between helpdesk management and reliability. This value implies that a very strong relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in reliability was as a result of the adoption of helpdesk management. From the result obtained, the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between helpdesk management and reliability of Mobile Communication (GSM) companies in Rivers State, Nigeria.

H₀₃: There is no significant relationship between helpdesk management and empathy of Mobile Communication (GSM) companies in Rivers State, Nigeria.

Table 1 shows a Spearman Rank Order Correlation Coefficient (ρ) of 0.866 on the relationship between helpdesk management and empathy. This value implies that a very strong relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in empathy was as a result of the adoption of helpdesk management. From the result obtained, the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between helpdesk management and empathy of Mobile Communication (GSM) companies in Rivers State, Nigeria.

DISCUSSION OF FINDINGS

The revealed indicated that there is a significant relationship between helpdesk management and service quality of Mobile Communication (GSM) companies in Rivers State, Nigeria. This findings correlate with the conceptual arguments of Abbott and Lewry (2010) who argued that considering the advancement of technology and the present day complex business activities, the role of the help desk has expanded to include much more larger role and skill to play in the organization. Most organizations depending on the size and scope of their business now deploy the use of first level support, second level support, etc. the first level support may be able to resolve a customer concern or issue on their own.

The finding also confirms the views of Hoscan (2003) who posited that help desks serve an important role of the information technology department by providing the primary point of contact for clients to contact analysts to help them resolve problems with information technology including hardware, software, and networks. To resolve the information technology problems reported by callers, the help desk analysts must possess knowledge of the information technologies supported by the help desk. Helpdesk could also be seen as an information and assistance resource that supports the functionality of an organization by responding to users' requests in a timely manner. It is hence, a core sector through which problems, complaints and requests are reported, managed, coordinated and resolved. Help desk software is a solution application that is used for managing organization's help desk. It is accessible to customer support personnel who could direct request(s) to servicing department(s).

CONCLUSION AND RECOMMENDATION

The help desk is increasing its importance as companies move to client-server architectures. Users who interface with the help desk often form a general perception of the information system group. Information systems help desks plays an important role within an organization. Helpdesk could also be seen as an information and assistance resource that supports the functionality of an organization by responding to users' requests in a timely manner. The study concludes that when Global System for Mobile Communication (GSM) companies improve upon their helpdesk operations management it would enhance the quality of their service delivery.

Therefore, the study recommends that Global System for Mobile Communication (GSM) companies should build internal knowledge base of customer needs and complaints by regularly collecting and implementing employee feedback.

REFERENCES

- Anton, J. (2000). The past, present, and future of customer access centers. *International Journal of Service Industry Management*, 11 (2) (2000) 120 – 130.
- Axelos. (2017). ITSM Roles, Service Desk Manager. URL: <https://www.axelos.com/enhance-your-skills-withaxelos/career-paths/itsm-careers-path/itsmroles/service-desk-manager> [Nov 30th 2017]
- Bacharach, S.B. (1989). Organizational Theories: Some Criteria for Evaluation. *Academy of Management Review*, 14 (1): 496-515.
- Buchanan, K. (2006). Job performance and satisfaction. [online]. Available from: <http://ezinearticles.com/?Job-Performance-and-Satisfaction&id=290072> [Accessed: 15/06/10]
- Carroll, S, Keflas, R. & Watson, (1964). *Job Satisfaction and Productivity*. Irwin: Illinois.
- Child, J. (1972). Organization Structure and Strategies of Control: A Replication of the Aston Study, *Administrative Science Quarterly*, 6 (2), 163-177
- Cornett, I. (2019). Three Critical Components of Organizational Success. Corporate Culture. Eagle's Flight
- Crowell, C. R. (1998). The Road to Organizational Success. CRC Publication. http://umpir.ump.edu.my/id/eprint/3714/1/LOW_SIEW_PEI.PDF
- Davis Tony, Maggie, Cutt Neil Flynn(2007) Talent assessment ,a new strategy for talent management .Gower,United States.Retrieved on 22 march 2013
- Ford, J.D., & Slocum, J.W. (1977). Environment, Technology and the Structure of Organizations. *Academy of Management Review*, 2 (3): 561-575
- Fry, L.W. (1982). Technology-Structure Research: Three Critical Issues. *Academy of Management Journal*, 25 (2), 532-551
- Hall, Richard H. (1962). *Organizations: Structure and Process*. Engel-wood Cliffs, NJ: Prentice Hall; New York-USA
- Harburg, F. (2003).The three essential elements of learning and development. Retrieved 2nd June 2013 from <http://clomedia.com/articles/view/the-three-essential-elements-of-learning-and-development>
- Heckman, R., & Guskey, A. (1998) Sources of customer satisfaction and dissatisfaction with information technology help desks. *Journal of Market Focused Management*, 3, 59 – 89.

- Held, G. (1992). *Network Management: Techniques, Tools, and Systems*. Wiley, Chichester, UK, 1992.
- Isaiah O., & Ugboro, K. O. (2000). Top management leadership, employee empowerment, job satisfaction, and customer satisfaction in TQM organizations: an empirical study. *Journal of Quality Management*, 5, 247-272.
- Jacqueline, A.M., Coyle-Shapiro, L. M. S. (2007). The employee–organization relationship: Where do we go from here? *Human Resource Management Review*, 17, 166– 179.
- Kandie, P. Y. (2009). The Influence of Organizational Strategy and Institutional Factors on Performance of Small and Medium Enterprises (SMEs) in Kenya; (Unpublished Ph.D Theses), University of Nairobi
- Lavie, D. (2006). Capability reconfiguration: An analysis of incumbent responses to technology change. *Academy of Management Executive*, 31(1), 152- 174
- Lawrence, P.R., & Lorsch, J.W. (1969). *Developing Organizations: Diagnosis and Action*. Addison-Wesley Publishing Company Inc. New York-USA
- Lazarov, A and Shoval, P. (2002) A rule-based system for automatic assignment of technicians to service faults. *Decision Support Systems*, 32 (2002) 343 – 360.
- Loshin, D. (2009). Data Quality and Master Data Management. <https://www.sciencedirect.com/topics/computer-science/timeliness>
- Marcella, R., & Middleton, I. (1996). The role of the help desk in the strategic management of information systems. *OCLC Systems and Services*, 12 (4), 4 – 19.
- Mintzberg, H. (1979). *The Structuring of Organizations*. Englewood Cliffs, New Jersey; Prentice Hall, Incorporated.
- Ngo, D. (2009). Importance of employee satisfaction. [online]. Available from:
- Ogolla, K. O. (2012). Organizational configuration, stage of development and performance of commercial banks in Kenya. Unpublished PhD thesis, University of Nairobi, Kenya
- Perrott, Bruce E. (2008). Managing Strategy in Turbulent Environments. *Journal of General Management*, 33(3), 21-30.
- Pugh, D.S., Hickson, J.D. Hinnings, C.R., & Turner (1968). Dimensions of Organization Structure. *Administrative Quarterly*, 13: 65-105.
- Pugh, D.S., Hickson, J.D., Hinnings, C.R., & Turner (1969a).The context of organization structures. *Administrative Science Quarterly*, 14, 91-114

- Pugh, D.S., Hickson, J.D., Hinnings, C.R., & Turner (1969b). An Empirical Taxonomy of Structures of Work Organizations. *Administrative Science Quarterly*, 14, 115-126
- Rachel, W.Y., Yee, A.C.L. Yeung, T.C., & Edwin C. (2008). The impact of employee satisfaction on quality and profitability in high-contact service industries. *Journal of Operations Management*, 26 (2008) 651–668.
- Robbins, S.P. (2008). *Organizational Behavior (9th Edition)*. New Jersey: Prentice Hall.
- Saari, L.M., & Judge, T.A. (2004). Employee Attitudes and Job Satisfaction. *Human Resource Management*, 43 (4), 395-407.
- Sheehan, M. (2008). The Help Desk as a Pivot Point for IT Agility. 2007 EDUCAUSE Midwest Regional Conference, Chicago, Illinois.
- Thomas, A. H. (1996). *The Virtual Help Desk*. New York: Thomson Computer Press.
- Zheng, A. Y., & Kleiner, Brian, H. (2001). Developments concerning career development and transition. *Journal of Management Research*, 24(3), 33-39

Improving the Effectiveness of Local Government Administrators through Office Virtualization in the Era of Covid-19

Chux-Nyeche, Gloria Chinyere (Ph.D)

Department of Office and Information Management
Faculty of Business Studies, Ignatius Ajuru University of Education, Port Harcourt

&

Egeonu, Ahuruezeama Favour

Department of Office and Information Management
Faculty of Business Studies, Ignatius Ajuru University of Education, Port Harcourt

Abstract: *This paper examined the Covid-19 Era Effectiveness of Local Government Administrators through office virtualization. Office virtualization (which includes online meeting, email facilities, social media and blogging) are the predictor variable while local government administrators' effectiveness is the criterion variable of this paper. The objective of this paper was to theoretically examine the impact of the predictor variable (office virtualization) on local government effectiveness (criterion variable) in this corona virus era. Literally, it was found that virtual office helps reduce cost, improve quality and productivity as well as encourage the use of innovative and creative methods for solving problems in the modern office workplace. Six (6) recommendations were made to guide the smooth running of the organization, These includes that employees should be kept abreast of all information about the technological changes that offices plan to bring and the skills that will be needed for it. The technicality of the use of complex computer applications and other technologies used in the office. Secondly, local government authority should include in its learning and development intervention plans a continuous series of training for its employees for every update or advancement that technology undergo amongst others.*

Keywords: Covid-19, Office Virtualization, Local Government Administrators

Introduction

Nigeria has been severely hit by the spread of COVID-19 and the associated sharp decline in all facets of life. A range of measures have been implemented to contain the spread of the virus, including closure of international airports, public and private schools, universities, stores and markets, and suspension of public gatherings. A lockdown was declared in Lagos, Abuja and Ogun states at the first instance and later throughout most of the states of the federation. Work at home is also encouraged in several states and government institutions while isolation centres are being expanded in Lagos state (Somuah, 2020). Testing capacity is increasing as NCDC now

deploys digital platforms for people to get results sooner than before. With the daily cases increasing recently, Nigeria has entered a second wave of COVID-19 infections (NCDC, 2020). The Federal Government adopted a revised budget for 2020 in response to the COVID-19 shock. A N500 billion (0.3 per cent of GDP) COVID-19 intervention fund is included in the revised budget to channel resources to additional health-related current and capital spending (tests, supplies and facilities) and public works programs to support the incomes of the vulnerable, including N7.5 billion to Nigeria's Centre for Disease Control and grant of N10 billion to Lagos State (Shereen, Khan, Kazmi, Bashir & Siddique, 2020).

Workplace or office virtualization is ability to abstract a user's workflow and unite it from the constraints of physical desktop according to Joe (2019). It is vital for governments to provide accurate, useful and up-to-date information to people, particularly during times of crisis. During the COVID-19 pandemic, governments started providing information on their national portals, mobile apps or through social media platforms. A review of the national portals of the 193 United Nations Member States showed that by 25th March 2020, 57 per cent (110 countries) have put in place some kind of information on COVID-19, while around 43 per cent (83 countries) did not provide any information; but a further analysis showed that by 8th April 2020, around 86 percent (167 countries) have included information and guidance about COVID-19 in their portals (WHO, 2020). The COVID-19 crisis has also brought new needs for digital government services and more demand on existing services. Developers in governments were mobilized and engaged in designing new apps and services to help in the fight against COVID-19. Some of these new services include delivering food and other essential items to those most in need by optimizing the entire supply chain via digital government services (AlSayyad & Guvenc, 2015).

COVID-19 is both a global health crisis and an international economic threat. The worldwide lockdown of businesses and industries that were implemented and mandated to curb the spread of the virus generated a wide array of unique and fundamental challenges for both employees and employers across the globe (NCDC, 2020). These recent months have been marked by difficulties and distress for some, but also by creativity and resilience that have helped both the citizens and their local authorities to adapt relatively fast to a new setting. Some of the measures so far adopted have shown unprecedented courage on matters where advancement was not easy before. This is the case of measures such as the temporary regularization of migrants to ensure they benefit from free health care; the allocation of work permits and unemployment allowances to migrants working in the agricultural sector; the building of hosting facilities for homeless people including migrants; the public recognition of the solidarity effort showed by the migrant communities who fundraised for the host health systems, and many more (Somuah, 2020).

COVID-19 has caused governments at all levels to operate in a context of radical uncertainty. The regional and local impact of the COVID-19 crisis is highly heterogeneous, with significant implications for crisis management and policy responses. The services from local governments have always been critical to the well-being of citizens, but never more so than they are today during the COVID-19 pandemic (Ede, 2020). When a crisis at the magnitude of the COVID-19 pandemic happens, it is local governments that step into the front line. They provide emergency

services, communicate with citizens on measures to contain the spread of the virus, as well as ensure that the services that keep communities functioning continue to be delivered to the best standards. Local government authorities are closer to the populations they serve than the state and federal government authorities (Shereen, Khan, Kazmi, Bashir & Siddique, 2020).

During the COVID-19 pandemic, there has also been a wave of fake news and viral hoaxes (Goodman, & Giles, 2020). Users with ill objectives or inadequate knowledge contribute to the spread of fake news and create further panic in society. Thousands of COVID-19 scam and malware sites have emerged on a daily basis, such as the sale of counterfeit surgical masks, fake self-testing kits and so on. The World Health Organization has categorized this as the secondary issue of an infodemic “an overabundance of information - some accurate and some not - that makes it hard for people to find trustworthy sources and reliable guidance when they need it.” In response, some governments have launched response units or campaigns to coordinate the fight against online misinformation about COVID-19 (WHO, 2020). Many governments have further utilized social media platforms to connect with people. Some also have partnered with influencers to disseminate accurate information about the COVID-19 outbreak, and to counter harmful misinformation. There has been a particular focus on engaging with youths and children, who are very vulnerable to fake news and might suffer from the burden the COVID-19 crisis put on parents’ social, economic and mental well-being (NCDC, 2020).

Undoubtedly, we have entered the most unusual working arrangement of this generation. The world, as we knew it came to an abrupt halt in early 2020, and governments, informed by science, had to enforce drastic measures to save lives. The challenge for policymakers is how to continue protecting the lives and health of people without doing irreversible damage to the economy in the process. The measures that ensure physical distancing - the closing of schools, grounding flights, putting a stop to large gatherings and closing workplaces - are just the beginning of the fight against the virus and serve only as a tool to slow down its spread. Easing the restrictions should not put lives at risk, or risk a new wave of infections, which some predict might be even worse than the first wave that already stretched healthcare capacity beyond its limits and put frontline workers under considerable risk and pressure. The Covid-19 pandemic is a recent phenomenon and its study is still limited (Somuah, 2020). To this end, the literatures used in the analysis of this research are largely materials conducted on other pandemics which have affected the world. In the light of the above, research conducted on the above pandemics have been used to draw parallels with the Covid-19 pandemic. This paper takes an in-depth look at improving the Covid-19 era effectiveness of local government administrators through office virtualization.

Objectives of the study

In view to the conceptual framework below, the following objectives are derived:

1. To examine the relationship between online meeting and Local Government effectiveness
2. To examine the relationship between Email Facilities and Local Government effectiveness

3. To examine the relationship between Social media and Local Government effectiveness
4. To examine the relationship between Blogging and Local Government effectiveness

Theoretical Review

Theoretical foundation represents the structure that can hold or support a theory of a research study and as such introduces and describes the theory that explains why the research problem under study exists. Thus, the essence of formulating theories is to explain, predict and understand phenomena and in many cases, to challenge and extend existing knowledge within the limits of critical bounding assumptions (Swanson, 2013). Therefore, Border theory served as the theoretical underpinnings upon which this study was anchored.

The Border Theory

This study was anchored on Border Theory developed by Sue Campbell Clark (2000). The theory states that each person's role takes place within a specific domain of life, and these domains are separated by borders that may be physical, temporal, or psychological. The theory addresses the issue of "crossing borders" between domains of life, especially the domains of home and work. Hence, this theory shows that there should be a proper balance between work and non-work activities like social life, family life, and health and so on. Borders are referred to as "lines of demarcation between domains, defining the point at which domain relevant behaviour begins or ends." The borders can be physical (example; walls, define where domain-relevant behaviour takes place), temporal (example; work hours, divide when work is done from when family responsibilities can be pursued), or psychological (rules created by individuals that dictate when thinking patterns, behavior patterns and emotions are appropriate for one domain but not the other).

According to the border theory, the flexibility and permeability of the boundaries between people's work and family lives will affect the level of integration, the ease of transitions, and the level of conflict between these domains. Boundaries that are flexible and permeable facilitate integration between work and home domains. When domains are relatively integrated, transition is easier, but work family conflict is more likely.

Conceptual Framework

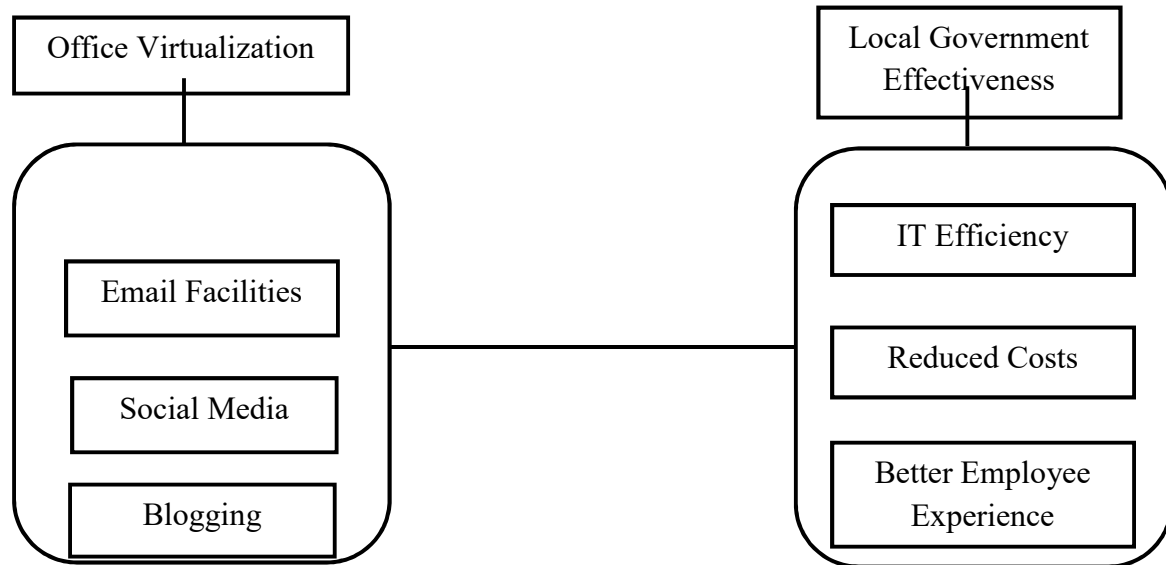


Fig. 1.1 *Conceptual Framework for the relationship between office virtualization and local government effectiveness*

Source: *Researcher's Desk (2021)*

Office Virtualization

In today's world, fast growing organizations have the tendency to want to expand the frontier of their services to other parts of the world. This may not only include regions in which they were initially set up, but also, the same state, country, continent and possibly, other continents also. As some organizations deem it fit, they may setup more than one branch office in a particular location so as to make attempts to satisfy the needs of the ever-growing population in that region (Murphy, 2013). As these companies grow, the need to communicate also increases with respect to their growth margin even as they establish branch offices to suit the needs of their target populace. In this sense, it is obvious that there is an urgent need for organizations in such category to employ a means of communication that is readily available, dependable, flexible and easily deployable as their branch offices will also be opting for this solution.

Office virtualization is the ability to abstract a user's workflow and untie it from the constraints of the physical desktop. This means that employees get the same working experience, regardless of their device or location. A user's desktop, applications and data can be available to them anywhere because it is no longer dependent upon a single workstation or operating system. Office virtualization can also be used by employees out in the field (Savrum & Leon, 2015). A virtual office is part of the flexible workspace industry that provides businesses with

any combination of services, space and/or technology, without those businesses bearing the capital expenses of owning or leasing a traditional office. A virtual office gives businesses a physical address and office-related services without the overhead of a long lease and administrative staff. With a virtual office, employees can work from anywhere but still have things like a mailing address, phone answering services, meeting rooms and videoconferencing (Ahmad, 2014). A virtual office is a service that enables employees and business owners to work remotely by providing a range of business functions accessible through the internet. It also enables an organization to create and maintain a presence in a desirable location without the need to pay rent for an actual space.

A virtual office is part of the flexible workspace industry that provide businesses with any combination of services, space and/or technology, without those businesses bearing the capital expenses of owning or leasing a traditional office, the office is surrounded with audiovisual technology. Audiovisual is electronic media possessing both sound and visual component, such as slide-tape presentations, films, television programs, corporate conferencing, church services and live theatre productions. Audiovisual service provider frequently offers web streaming, video conferencing and live broadcast services. Computer-based audiovisual equipment is often used in education, with many schools and universities installing projection equipment and using interactive whiteboard technology (Oginni, & Motui, 2015).

According to Murphy (2013), office virtualization offers several benefits which includes primarily greater IT efficiency, reduced costs and a better employee experience.

1. *Greater IT Efficiency*

Office virtualization provides greater efficiency for IT administrators because it streamlines the management of devices while meeting employee expectations. It also simplifies IT management for all users so IT personnel don't have to tend to individual machines. By centrally managing the personalization, data and settings separately from the underlying operating systems, devices and delivery platforms, IT is able to reduce the complexity often associated with managing users.

2. *Reduced Costs*

Office virtualization can also lower IT costs for businesses. It offers not only a platform for centralized management of many resources, but also standardization of equipment and service. This results in reduced IT personnel overhead, as they no longer have to support as many desktop or laptop machines, which can be taxing on a small IT staff. Office virtualization also lets businesses have a mobile and agile workforce, which can reduce the cost of office space.

3. *Better Employee Experience*

Office virtualization also benefits many businesses because it improves employees' satisfaction with the company's technology, including the devices themselves and the benefits of anytime, anywhere access. Office virtualization allows employees to work more efficiently and in a manner that more closely resembles the way they use technology in their personal lives.

Online Meeting

The COVID-19 pandemic has prompted a global shift in meetings and events, many moving from in-person gatherings to a more virtual implementation. Governments and organizations of the world have embraced these changes not only during these unprecedentedly uncertain times, but to inspire future potential for its citizens to expand their reach, engaging and empowering members and potential members to connect locally and globally, especially at a time when timely research and connection are of such great importance. In the last couple of years, the popularity of virtual meetings has hit new records in response to calls to reduce air travel and utilize climate-friendly conferencing. Moreover, the recent corona virus (COVID-19) outbreak has shed light on alternative digital options, as opposed to 'business as usual' conference set-ups. However, these recent developments are far from being all there is to say about virtual conferencing. The COVID-19 pandemic has affected many parts of our lives. Following social distancing recommendations, many organizations have shifted in-person conferences to online meetings (Savrum & Leon, 2015).

Virtual meetings, sometimes referred to as virtual conferencing, is the hosting of a meeting in a virtual environment and not face-to-face. Creating a virtual meeting room is often seen as a cost saving compared to flying/transporting employees to meet one another for a few hours. It is less disruptive to schedules and in-office work(Ogundipe, 2020). A virtual meeting is when people around the world, regardless of their location, use video, audio, and text to link up online. Virtual meetings allow people to share information and data in real-time without being physically located together. Virtual meetings use technology to allow groups to collaborate through an internet connection. These virtual meeting platforms generally have an audio and video component and are not simply a voice connection. Online conferencing allows individuals to attend events in case they are prevented from attending in person due to visa issues, travel costs, or other reasons. Put differently, such a format increases accessibility and inclusion by reducing barriers to participation. Virtual meetings help business leaders, professional service agencies, and project managers achieve cross-functional collaboration, deliver better project outcomes, and build talented, creative, and technical teams across multiple time zones(Shereen, Khan, Kazmi, Bashir & Siddique, 2020).

E-mailing Facilities

Electronic mail, also known as email or e-mail, is a method of exchanging digital messages from an author to one or more recipients. Modern email operates across the internet or other computer networks. Some early email systems required that the author and the recipient both be online at the same time, in common with instant messaging. Today's email systems are based on a store-and-forward model. Email servers accept, forward, deliver and store messages. Neither the users nor their computers are required to be online simultaneously; they need connect only briefly, typically to an email server, for as long as it takes to send or receive messages. An email message consists of three components, the message envelope, the message header, and the message body. The message header contains control information, including, minimally, an

originator's email address and one or more recipient addresses (Savrum& Leon, 2015). Usually descriptive information is also added, such as a subject header field and a message submission date/time. To send and receive mails in electronic format, an email account and an internet connection are required. There are email programs available to help you manage your emails on your computer. Some of the most commonly used email programs are Microsoft Outlook Express and Netscape Messenger(Oleribe, Salako, Ka, Akpalu, McConnochie, Foster, & Taylor-Robinson, 2015).

Many of the electronic mail systems today are already connected together in networks, so that users can send mails to one another, regardless of which mail system each of them is connected to. In the future, almost all systems will be connected in this way. This means that all the electronic mail systems, when connected, behave as one large system. This large system may eventually be comparable in size and complexity to the world-wide international telephone network, but will have more advanced technical functions, and will be more of a data-processing system than the telephone network

Social Media

Over the years, social media has become an active technological tool in Nigeria as well as news and communication channel for the citizenry of Nigeria. Access to mobile telephone especially among the technologically savvy youths has made dissemination of information easy with a snap of the finger (Oginni & Motui, 2015). In recent times, as the pandemic encroaches on and emasculates world activities, social media platforms have been utilized as an information outlet to citizens. Its significance has gained more recognition owing especially to the fact that the government implemented a lockdown policy to curb the spread of the Covid-19 virus. Thus, it has become an active tool for engagement and communication for the dissemination of plausible information as well as incredulous (MIS) information. Social media also changed journalism practice. Real-time audience engagement has given rise to crowd sourcing content, and even reporting tasks like verification can now be outsourced to the audience. On COVID-19, many information are being floated on social media platforms.

Social media platforms (Watsapp, twitter, facebook, Instagram, etc) are amongst the most widely used sources of information in the World, the easy and inexpensive access to the internet and a large number of registered users in these platforms make them one of the easiest and most effective ways to disseminate information. During major events, the overall response is usually a greater search for information be it a sports event, a disease, or a natural disaster. A good example can be seen with the peak of searches for information on the internet and social media platforms in China preceding the peak of incidence in COVID-19 cases by 10-14 days World Health Organization (2020) with which internet and social media network searches have a demonstrated correlation with the incidence of disease.

Social media platforms have also become helpful for the lay public to maintain communication with friends and family to reduce isolation and boredom which have been associated with anxiety and long-term distress, therefore becoming an important recommendation for isolation at

home to help to reduce the psychological impact of the pandemic (Ahmad, 2014). Some of the most relevant characteristics of social media platforms in this pandemic has been the rapid dissemination of protocols at regional, national, and international levels. Sharing protocols about treatment, personal protection equipment, or even proposals for fair allocation in scarce medical resource settings have now become the new normal. This allows centres with less capacity to develop protocols at sufficient speed to be able to implement or adapt other's protocols to their particular situation or resources in minimal time, something unthinkable twenty years ago when most social media platforms had not yet been born.

Social media has advantages and disadvantages. The responsible use of these tools can help during a pandemic to quickly spread new important information, sharing diagnostic, treatment and follow-up protocols, comparing different approaches from other parts of the World to adapt them to our setting and available resources, with the downside of possible dissemination of fake data, myths, and pessimist information that combined with quarantine states may lead to anxiety, depression and in some extreme cases, suicide. Therefore, it is advisable not to contribute to the infodemic and follow a responsible use of social media when disseminating information (Shereen, Khan, Kazmi, Bashir & Siddique, 2020).

Elmahdawy et al. (2017) investigated the experiences of the victims of Ebola virus as it pertained to health systems and the effects this virus had on economies of African countries. The authors canvassed for the revamping of the healthcare systems of Third World countries, militated against by inadequate information sharing systems and the need to involve donor agencies to curb the virus spread in case of a relapse occurs. Unfortunately, Africa was still gasping from Ebola virus when the Coronavirus pandemic once more exposed further several deficiencies in Africa's primary health care systems; which had been railing from poor funding by narrow-minded leaders who prefer medical tourism abroad to fixing basic primary health care infrastructure in the continent. More so, DiMaggio (2011) admits that the internet changes society and this is supported by Bowd (2016) who posits that the advent of social media came with opportunities for news outlets to engage more people thereby leading to an increased spread of information to a wider audience. Meanwhile the research conducted by Oginni and Motui (2015) analyzes the engagements of Africans with the social media. These scholars assert that the engagement of Africans with social media is relatively low and that the authors did not fully explore the impacts of social media usage for civic engagements in individual countries or sub regions of the African continent. To this end, the pandemic has made Africans, specifically Nigerians to be more active in social media in order to keep up with the global sphere.

Concept of Effectiveness of Local Government Administrators

Administrative Effectiveness at the local Government level facilitates rural development which will adequately check the influx of the skilled and unskilled manpower from these rural areas to the urban centers. To accomplish this, good local governance through proper execution of rural projects that will provide the rural population with employment opportunities, education, recreation and leisure, security, health and the like are very essential.

The principal aims of local governments are to:

- (a) Make appropriate services and development activities responsible to local wishes and initiatives by devolving or delegating them to local representative bodies.
- (b) To facilitate the exercise of democratic self-government to the local levels of our society, as well as encourage initiative and leadership potential.
- (c) To mobilize human and material resources through the involvement of members of the public in their local development.
- (d) To provide a two-way channel of communication between local communities and government (both state and federal).
- (e) Infrastructural provision like health centres, school renovations, road maintenance.
- (f) Maintenance and building of peace and security building (Orekoya and Agbugba, 2001).

These noble objectives cannot be fulfilled unless the entity entrusted with the responsibility of governing is capable of mobilizing and utilizing prudent material, human and financial resources (Dlakwa, 2001). Hence, the importance of administrative efficiency at local government level. Administrative Effectiveness is the judicious utilization of Local Government resources, proper conduct and management of Governmental affairs at the local government level to facilitate administrative effectiveness.

Virtualization and Covid-19 Era Effectiveness of Local Government Administrators

The sudden and involuntary transition to remote work caused by COVID-19 hasn't been perfectly smooth for local government administrators. Some are finding they lack the infrastructure to handle so many people working from home. They're experimenting with shift-based working hours to adhere to social distancing practices, while security experts worry about the increased attack surface with sensitive government information being accessed at home. The disruption over the past month has been real, and in many cases, the response has been fast. But once the pandemic is over, the transition from remote back to the physical office won't be easy either—and not just because of the potential for ongoing social distancing measures in the months to come. As local Government administrators continue to work at home in response to the COVID-19 pandemic, they may be undergoing a transition that they can't take back easily. Workflows will likely have to adapt, and workforces will settle in to a different kind of life balance. Remote work might not just be a short-term inconvenience. It appears that we may be on the cusp of a long-term transformation. COVID-19 has accelerated the timeline for the future of work—it's here now, and it's altering most aspects of how they work. What does that mean for local Government agencies? It means teams should consider the need to adapt to the new normal today. Leaders and policymakers, meanwhile, need to prepare for the "next normal" tomorrow, gathering the data they need to understand what works well virtually and what doesn't, so they can make intentional choices that enhance and sustain the employee experience at the same time.

The COVID-19 crisis is having a deep effect on local governance globally. The outbreak has a profound effect on local public health, an unprecedented impact on local economies around the world and it magnifies existing social issues, including inequality. In some contexts, the crisis undermines local public order, where specifically developing and fragile countries may see the crisis disrupt local democratic processes. The COVID-19 crisis is having a profound effect on local governance around the world. Also in developing countries, local governments are at the front line in addressing the effects of this unprecedented health and economic crisis. Some of the questions that come up are: 'How can we make sure that everyone has access to clean water hand-washing and sanitation to combat the virus?' 'How should communities manage their markets, to prevent further spreading of the current virus, while assuring local food supplies?' 'How are decisions taken at the local level if local councils cannot convene meetings?' 'Which part of the community is hit or most at risk by this crisis?'

This combined health and economic crisis has a profound effect on governance structures and local democracies. Obviously, some of the key principles of good governance, such as transparency, accountability, control of corruption, efficiency, inclusiveness and the rule of law have come under increased pressure as a result of this acute crisis. We believe that governance systems able to apply these principles will prove to be the most resilient to the impact of this crisis, limiting damage and preparing for recovery. Therefore, this crisis is also a test of governance. Local governments are at the forefront of the current crisis, working together with their communities and health organizations to mitigate the current outbreak of COVID-19, while maintaining an orderly functioning of public services in their territories. In times of crises, local governments can take a coordinating role, connecting with their communities through clear communication and implementing adequate mitigation measures. By implementing policies in line with national guidelines, but in cooperation with representatives of the community, they can assure the effectiveness of social distancing guidelines and adherence thereto among others. Local governments can identify vulnerable households or communities for emergency assistance (Savrum& Leon, 2015).

While local governments are currently still in the midst of the first emergency response, many want to already move towards thinking about the long-term. How can local governments assure the continuity of their service delivery beyond the crisis? Can we learn from this crisis and build back better in a way that will display this resilience, while safeguarding local democracy and all principles of good and inclusive public governance? The ability of communities to bounce back, both economically and socially, is a function of the quality of governance. It is important that governments resist the urge to promise that things will be rebuilt in the short run. This is a key lesson learnt which frequently returns during the recovery phase in the aftermath of natural disaster programmes. Local governments can make sure that investments done in the midst of a crisis are connected with longer term development plans. Existing local development plans will most probably need a review, as the (local) context has significantly changed. Local governments have a vital role in spatial planning, clean water, housing, electricity and waste management, all issues which if properly implemented, would result in improved community resilience.

Conclusion

The COVID-19 pandemic is forcing governments and societies to turn toward digital technologies to respond to the crisis in the short-term, resolve socio-economic repercussions in the mid-term and reinvent existing policies and tools in the long-term. Navigating through these challenging times requires governments to adopt an open government approach and to use digital communication channels to provide reliable information on global and national COVID-19 developments. E-participation platforms can represent useful tools to engage with vulnerable groups online and to establish digital initiatives to collectively brainstorm for policy ideas to critical social and economic challenges.

Effective public-private partnerships, through sharing technologies, expertise and tools, can support governments in restarting the economy and rebuilding societies. Developing countries, in particular, will need international cooperation and support in mitigating the crisis. Therefore, regional, national and local project-based collaborations with private sector companies, international organizations and other stakeholders are necessary. Investments in these technologies can tremendously support the future resilience of the health economy and the public services delivery.

Virtual office helps reduce costs, improve quality and productivity, and encourage the use of innovative and creative methods for solving problems in the modern office workplace. Virtual offices are of great help in making the work more efficient, but this would never eliminate employees for being the leading central players in any organization. The human workforce remains highly crucial in offices. They can never be replaced with virtual techniques. The success in the use of technology in modern office work environment depends on the sufficiency of money and technology expertise among other factors. Technology has rapidly advanced to the point of having most of the jobs done digitally that it threatens the employment of people who are not literate on technological advancements. The adoption of technology may be costly, but if used effectively, increased work performance and productivity will reduce all the rest of the production and service costs in offices in the long run. In this modern highly competitive time, the use of technology is inevitable. It is not a want but need a need especially in the field of office work of managers and secretaries where information is received, processed, analyzed and reported to aid in the decision-making process which are vital in the overall success of every organization.

Recommendations

The following recommendations are necessary for the improvement of Covid-19 era effectiveness of local government administrators:

1. Government should keep employees well-informed of all about the technological changes that offices plan to bring and the skills that will be needed for it. The technicality of the use of complex computer applications and other technology used in the office works highly requires an increasing amount of training.

2. Local government authority should include in its learning and development intervention plans a continuous series of training for its employees for every update or advancement that technology undergo. This means that instead of depending on people outside offices for technical skill when troubleshooting problems with the technology that are being used, they should instead invest in developing skills among their current employees by sending them to seminars and training.
3. Online meetings are becoming the most efficient way to hold meetings in business today. Therefore, this paper recommends that local government authorities should adopt online platforms for business meetings with colleagues and staff members, holding training sessions with employees, client interactions, document reviews and sales presentations.
4. Local government authorities should encourage the use of email facilities because email is an important method of business communication that is fast, cheap, accessible and easily replicated. Using email can greatly benefit organizations as it provides efficient and effective ways to transmit all kinds of electronic data.
5. Social media supports faster dissemination of information regarding preventive measures and has a lot of potentials. Therefore, the local government should always devise a means to integrate the use of social media in their day-to-day activities.
6. Local government authorities should promote the use of blog as a perfect way to maintain and spread a word about their services and create long-lasting bonds with prospects.

References

- Ahmad, S. (2014). Technology in organizations: Impact. *International Journal of Research in Business Management*, 2(7), 2347-4572
- AlSayyad , N., & Guvenc, M. (2015). Virtual uprisings: On the interaction of new social media, traditional media coverage and urban space during the ‘Arab Spring’. *Urban Studies*, 52(11), 2018–2034.
- Bowd, K. (2016). Social media and news media: Building new publics or fragmenting audience. In M. Griffiths & K. Barbour (Eds.), *Making public, making spaces*. University of Adelaide Press.
- DiMaggio, P. (2011). Social implications of the internet. *Annual Review of Sociology*, 1(2), 307-336.
- Dlakwa, H. D. (2001). Strategies for enhancing revenue generation and collection at the local government level. Paper read at a workshop for Local Government officials at Yola, Adamawa State on January 22-25, 2001.
- Ede, R. (2020). Mbakadeniesreporton COVID-19, solution. *Punch Newspaper*. <https://punchng.com/mbaka-denies-report-on-covid-19-solution>.
- Goodman, J. & Gil+es, C. (2020). Coronavirus and hydroxychloroquine: What do we know? *BBC Reality Check*. <https://www.bbc.com/news/51980731>.

- Murphy, J. (2013). Social media research. In C. Hill, E. Dean, J. Murphy, (Eds.), *Social media, sociality and survey research*. John Wiley and Sons.
- Oginni, S. O., & Motui, J.N. (2015). Social media and public policy process in Africa: Enhanced policy process in digital age, consilience. *The Journal of Sustainable Development*, 14(2), 158-172.
- Ogundipe, S. (2020). COVID-19: Stop indiscriminate consumption of chloroquine-ACPN. *Vanguard Newspaper*. <https://www.vanguardngr.com/2020/03/covid-19-stop-indiscriminate-consumption-of-chloroquine-acpn/>.
- Oleribe, O. O., Salako, B. L., Ka, M. M., Akpalu, A., McConnochie, M., Foster, M., & Taylor-Robinson, S. D. (2015). Ebola virus disease epidemic in West Africa: Lessons learned and issues arising from West African countries. *Article in Clinical Medicine*, 15(1), 54–57.
- Orekoya, T. & Agbugba, T. (2001). *Local government administration in Nigeria*. Pure Language Communications Ltd.
- Savrum, Y. M., & Leon, M. (2015). The role of the media in conflict, peace building and international relations. *International Journal on World Peace*, 32(4), 13–34.
- Shereen, M. A., Khan, S., Kazmi, A., Bashir, N., & Siddique, R. (2020). COVID-19 infection: Origin, transmission, and characteristics of human corona viruses. *Journal of Advanced Research*, 3(24), 91–98.
- Somuah, M. (2020). The implementation of 5G. *Facebook*. <http://m.facebook.com/photo.php?fbid=207938813863966&set-a.103891650935350&type=3%theater>.
- Swanson, K. M. (2013). Empirical range theory of nursing. *Open Journal of Nursing*, 6(12).
- World Health Organization, (2020). Coronavirus. <https://www.who.int/news-room/q-a-detail/q-a-coronaviruses>.

Compensation and Organizational Citizenship Behaviour in Courier Service Companies in Rivers State

Kingsley I. Amadi PhD and Geoffrey Bakebiokroma Enyindah Obinna (PhD)
Department of Management, Faculty of Management Sciences, Rivers, State University, Nkpolu-Oroworukwo, PMB 5080, Port Harcourt, Nigeria

Abstract: *This study examined the relationship between compensation and organizational citizenship behaviour in Courier Service Companies in Rivers State. The study adopted a cross-sectional research survey design. Primary source was generated through self-administered questionnaire. The population of this study was drawn from 24 courier service companies in Rivers State that are registered with the Courier Regulatory Department of Nigeria Postal Services (NIPOST). Three (3) managers each was selected from the 24 courier companies totaling 72 managers. Since the number of the population is small and can easily be covered, a census sampling method was used. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70 to be selected. Data generated was analyzed and presented using both descriptive and inferential statistical techniques. The hypotheses were tested using the Spearman's Rank Order Correlation Coefficient with the aid of Statistical Package for Social Sciences. The findings revealed that there is a significant relationship between compensation and the measures of organizational citizenship behaviour in courier service companies in Rivers State. The study thus concludes that compensation significantly influences organizational citizenship behaviour in courier service companies in Rivers State. The study recommends that courier service companies should improve upon the compensation that its employees receive knowing that they are exposed to all sorts of hazards carrying out their jobs. The employee and the employer should agree on the appropriate salary meant for the job to be done, to enable the employee put in their best.*

Keywords: *Compensation, Organizational Citizenship Behaviour, Civic Virtue, Conscientiousness, Courtesy*

INTRODUCTION

Compensation is arguably one of the most critical factors influences the quality and effectiveness of human capital (Dineen & Williamson, 2012). An operative reward system is another key to encourage individuals to join a firm and perform well continuously besides, important for firms to retain and strengthen human resources with fair and competitive compensation (Yang & Lin, 2009). Furthermore, compensation effects the excellence of the people who apply, the probability of job acceptance, the quality of those who are employed, the motivation and performance, number and level of the employees and the quality of who stays with the organization (Shah, Mohd & Khairudin, 2018).

According to Dessler and Tan (2009) compensation is all forms of pay or rewards given to the employee for their employment relationship with the organization. Milkovich and Bloom (1998) define compensation as all forms of financial reward and tangible benefits that an employee receives as part of an employment relationship. A well designed compensation package supports to retain the qualified employees and increases the efficiency of an organization (Nabi, Ahmed & Rahman, 2017). Compensation as a key strategic area, impacting organization through ability of employer to attract and retain employees as well as in ensuring optimal performance level from employees to have organization's strategic objectives being met (Ahmed, 2016). Compensation plays a vital role in attracting, retaining key employees to the organization and in enhancing job satisfaction as well as in motivating employees to accomplish higher levels of performance (Berber, Morley, Slavić & Poór, 2017). Compensation enhances employees' willingness to demonstrate citizenship behaviours.

The need for employees to behave in a manner that would yield a positive impact on the organization has been a great concern for management of various business units and groups. Bateman and Organ (1983) cited in Akinyemi (2012) were the first to introduce the concept organizational citizenship behaviour (OCB) where they referred to it as an individual behaviour that is discretionary not directly or explicitly recognised by the formal reward system and in aggregate, promotes the effective functioning of the organization. The implication of the term organizational citizenship behaviour is an issue that has been well documented in the literature. Its implications manifest in forms of organizational effectiveness, efficiency and group performance (Podsakoff & Mackenzie, 2010; Salami, 2009). Other effects of organizational citizenship behaviour could be manifested in higher salary and promotion, higher organizational commitment, lower turnover and intention to leave organizations. Organ (1988) and Zhang (2011) introduced five categories of organizational citizenship behaviour which include: altruism, courtesy, conscientiousness, courtesy and civic virtue.

OCB is found as a crucial aspect that enhance employee performance at workplace (Chelagat, Chepkwony, & Kemboi, 2015; Chiaburu Oh Wang & Stoverink, 2017). Incentive pay functions as a noteworthy driver of the positive attitude and behaviour of employees that increase organizational operations and effectiveness (Shaw & Gupta, 2015; Sung, Choi, & Kang, 2017). To ensure OCB, pay structures desired to be based on individual contribution, salary required to match with that of external similar organizations and competence related allowances need to be introduced (Makau, Nzulwa & Wabala, 2017). Besides compensation is a vital factor that influences employees' satisfaction (Berber, Morley, Slavić, & Poór, 2017; Mudor & Tooksoon, 2011). The purpose of this study was to examine the relationship between compensation and organizational citizenship behaviour in courier service companies in Rivers State.

Furthermore, this study was also be guided by the following research questions:

- i. What is the relationship between compensation and civic virtue in courier service companies in Rivers State?
- ii. What is the relationship between compensation and conscientiousness in courier service companies in Rivers State?

- iii. What is the relationship between compensation and courtesy in courier service companies in Rivers State?

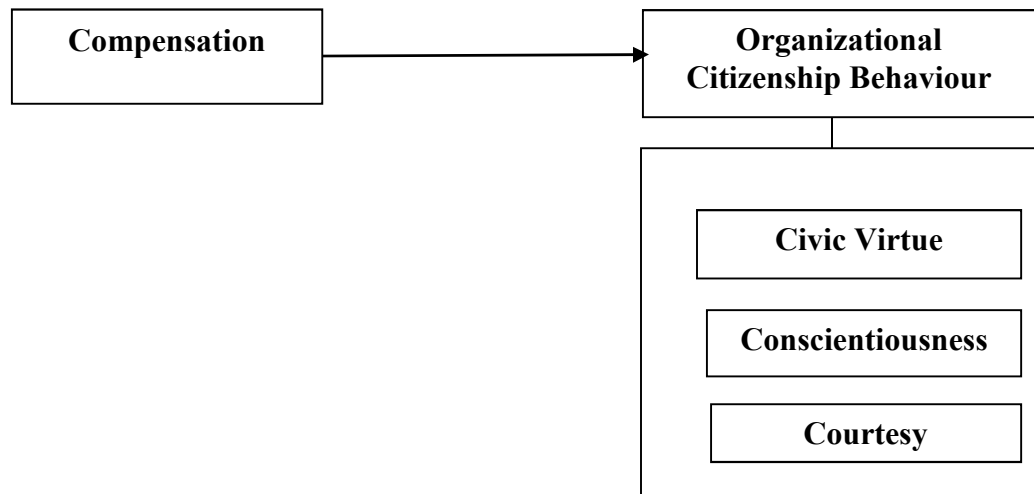


Fig.1 Conceptual Framework for the relationship between compensation and organizational citizenship behaviour

Source: Desk Research (2021)

LITERATURE REVIEW

Compensation

Compensation is defined as the cumulative financial and non-financial rewards payable to employees in return for their services (Mondy & Noe, 2005). The financial and non-financial rewards are usually based on the value of job, level of personal contributions, efforts and performance (Milkovich & Newman, 2005). At the organizational level, compensation is critical in attracting, retaining and motivating the employees to continue contributing towards organization's success (Philips & Fox, 2003). The reason being that compensation is important to influence individuals' choice to work with an organization. Many organizations not only use the compensation system to reward and recognize employees' efforts and contributions, but also as a motivation tool (Chiu, Luk & Tang, 2002) to improve employees' productivity through improving job performance, impeding the intention to leave and increasing career satisfaction.

Compensation systems have traditionally been designed to attract and retain employees and to motivate them to increase their effort and outputs toward the achievement of organizational goals (Bergmann and Scarpello, 2001). Compensation is also considered as one of the most significant costs to operating a business. Most importantly, compensation does not only influence hiring and

retention decisions but it is also an important tool to align employees' interest with organizational goals by designing and providing rewards for meeting specific goals assigned to them. Compensation is the human resource management function that deals with every type of reward individuals receive in exchange for performing organizational tasks, with a desired outcome of an employee who is attracted to the work, satisfied, and motivated to do a good job for the employer (Ivancevich, 2004). A double input-output exchange between an employee and an employer (Belcher, 1997). According to the American Compensation Association's (1995) definition, "compensation is the cash and non-cash remuneration provided by an employer for services rendered (ACA). It could be financial rewards which refer to any monetary rewards that go above and beyond basic pay. These rewards are separate and not added into basic salary. Examples of these include financial incentives, bonuses, and recognition.

Compensation can be described as direct and indirect compensation received by employees in an organization that serves to achieve employee satisfaction and retention as well as improve performance (Adeniji & Osibanjo, 2012). Direct compensation includes wages, salaries, bonuses or commission. Indirect compensation includes incentives, medical benefits, housing allowance, annual leave allowances and training opportunities. Compensation is the reward employees receive in exchange for performing organizational tasks. Compensation is direct and indirect wages. Direct compensation includes wages, salaries, bonuses or commission based on performances, overtime work, holiday premium, while indirect compensation is paid as medical benefits, housing allowance, meal allowance, utility allowances, incentive bonus, shift allowances, hospitalization expenses, out of station allowance, vehicle loan benefits, annual leave allowances, car basic allowances, etc.

Designing compensation program is significant in personnel management because of its direct influence on employees' satisfaction and performance in the company. Compensation impacts everyone in the organization to an extent and can prove to be a very valuable and powerful tool - either intentionally or unintentionally (Lawler, 1996). This compensation tool has the ability to achieve employee satisfaction and employee retention, as it comprises of financial and non-financial rewards that attract, motivate and satisfy valuable human capital, retaining effective performers as the compensation system recognizes desired behaviour towards aiding competitive advantage of the organization. Salary is the fixed or guaranteed regular monthly or annual gross payment made to employees; it varies between hierarchy of job positions, employees to employees and companies to companies (Adeniji & Osibanjo, 2012). Wage on the other hand is a regular, usually weekly or daily payment made for work or services usually to manual workers. A person's paycheck is a way to communicate the value and importance of teamwork (Caudron, 1994; Zinghem, 1997) as the Instrumentality theory explains that remuneration is a source of power, and a means of employee acquiring necessities and luxuries, and ensures the employees willingness and commitment to excel on the job, thereby ensuring employees' retention.

It is important to note that compensation is not all about money. It is a symbol of what an organization believes is valuable. It specifically communicates the extent to which an organization values its employees. Incentives are awards given for the accomplishment of pre-determined goals and are directly related to performance and has a positive influence on the employees' objectives and organizational success. Incentives are used to motivate employees towards a greater performance, and it rewards the differences in performances, which is validated by the expectancy theory, that employee will perform in certain manner in expectancy of a given outcome. According to (Vroom, 1964) $\text{Effort} = F(\text{expectation that a particular act would lead to attainment of desired outcome}) * (\text{valence of the outcome})$. Therefore, efforts plus performance and rewards equals employee satisfaction and retention, but where expectancy does not match performance, dissatisfaction occurs. Incentives are rewards offered in addition to the base wage or salary and are usually directly related to performance. They are given to encourage reimburse some particular employee for effort beyond normal performance expectations. They stimulate employees' contributions above and beyond the normal standard of expectation. Not only are those, bonuses typically after-the-fact discretionary awards given for accomplishments, behaviours, and/or other related events (Zobal, 1998).

Fringe benefits, which are supplementary in nature, not worked for, and are usually given to all employees of an organization, irrespective of their different performances such as annual leave allowances, salary advance and educational assistance (Adeniji & Osibanjo, 2012). The compensation package must be attractive enough to prevent employees from becoming dissatisfied and looking elsewhere for better salary, career development opportunities, fringe benefits, bonuses and incentives.

Among the underlying foundations of compensation theory is that compensation influences behaviour. The basic premise originated from the work of Behaviour Psychologists such as B.F. Skinner, who believed in operant conditioning (Kohn, 1993; Hitchcock, 1995). In summary, if you reward an organism for certain behaviour, that organism will be more likely to repeat that behaviour. Translated into organizational terms, if you reward an employee for exhibiting behaviours of producing results, that employee will be more likely to repeat those same actions. It is important to note that there is small fraction of individuals that do not buy into these principles (Kohn, 1993). The faction argues that human behaviour is much too complex to be controlled and manipulated through reward programs. Their argument emphasizes the real need to fully understand the role of compensation as a tool for achieving employee satisfaction and retention. It is extremely critical for an organization to comprehend the impact of its compensation system (Noe, Hollenbeck, Gerhart, & Wright, 2003).

Compensation can substantially promote an organization's success and satisfy employee career objectives. It has been emphasized that compensation must also be designed properly as if not careful during design and implementation, compensation systems can unintentionally fail to motivate the desired behaviour (e.g. ineffective compensation plan) or worse, motivate undesired behaviour (e.g. individualistic behaviour in a team environment) (Lawler, 1996). According to

(Bartol & Hagmann, 1992), results of compensation should include improved employee satisfaction, low employee turnover and better organizational performance.

Organizational Citizenship Behaviour

Every employee is expected to perform certain duties or tasks according to job specification, terms of employment and supervisors expectations. However, some individuals perform certain duties far beyond the expected outputs (Okediji, Esin, Sanni & Umoh, 2009). Some deliberately contribute to the progress and efficiency of the organization, while others go out of their way to motivate and assist their colleagues to complete their assigned tasks. These extra role behaviours beyond the call of duty do not attract any personal benefits and are not provided for in the organization's reward system (Onyishi, 2007). Such extra role behaviour is described as Organizational citizenship behaviour (Organizational Citizenship Behaviour).

Organizational Citizenship Behaviour is a terminology which encompasses all the positive and constructive actions of employees done out of their volition which supports colleagues and benefit the organization (Zhang, 2011). They are set of discretionary behaviours which goes beyond an employee's job description (Nadim et al, 2004). Organizational Citizenship Behaviour enhances organizational efficiency and effectiveness by playing a major role in resource transformation, innovation and environmental adaptability for such jobs regarding ambiguous, complex and team oriented work (Organ, 1988; Akinyemi, 2012).

Organ (1988) defined Organizational Citizenship Behaviour as individuals' behaviour that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization. He explains further that engagement in Organizational Citizenship Behaviour is generally a personal choice, and omission is not generally seen as punishable (Uhiara, Njoku, Ngozi & Jimogu, 2011).

Measures of Organizational Citizenship Behaviour

Civic Virtue

Civic virtue is defined as the behaviour which exhibits how well a person represents an organization with which they are associated, and how well that person supports their organization outside of an official capacity. According to Borman, Penner, Allen, T and Motowidlo (2001) civic virtue is to involve oneself responsibly in and of being concerned about the life of the company. Civic virtue is behaviour which exhibits how well a person represents an organization with which they are associated, and how well that person supports their organization outside of an official capacity. For example, how well someone represents their business and how they may support that business are all examples of someone's civic virtue.

When an employee is concerned about the life of the organization, shows interest, gets involved in activities, keeps up to date with happenings and generally stands up to defend the policies and practices of the organization, such employee is said to exhibit civic virtue (Organ, Podsakoff & Mackenzie, 2006). It is the commitment to the organization. This also includes exhibiting a

behaviour that reflects a person's recognition of the fact that he is an integral part of the organization, such as engaging in the governance of the organization, attending its meetings, getting involved in debates and expressing opinion about the administration of the organization.

Conscientiousness

Conscientiousness refers to a personality trait of being obedient, dutiful and self-disciplined. At the workplace, it may refer to an employee who is efficient and diligent. A person is said to be conscientious when he is efficient and organized. According to Redman & Snape (2005), conscientiousness is a discretionary behaviour that goes beyond the basic requirements of the job in terms of obeying work rules, attendance and job performance. This is contrary to a person who is disorderly and irrational or who pretends to be dutiful when he is under supervision. Conscientiousness may be an important predictor of workplace behaviours because it provides the organization and direction that are necessary to produce targeted behaviours (Gore, Kiefner, & Combs, 2012). Conscientious persons are likely to be thorough and articulate. More conscientious employees will stay informed with up-to-date knowledge about products or services offered (DeYoung, & Peterson, 2007). They are mostly conformists, compulsive and goal-oriented in their behaviour. It is a discretionary behaviour that goes beyond the basic requirements of the job in terms of obeying work rules, attendance and job performance (Redman & Snape, 2005). OCB impacts work group efficiency during times of crisis management.

Courtesy

Courtesy is defined as discretionary behaviours that aim at preventing work-related conflicts with others (Law, Wong & Chen, 2005). This dimension is a form of helping behaviour, but one that works to prevent problems from arising. It is a behaviour which is polite and considerate towards other people. Courtesy outside of a workplace setting includes behaviour such as asking how someone's morning has been or asking after the welfare of a neighbour's child. In a business context, courtesy is usually exhibited through behaviours such as inquiring about personal subjects that a co-worker has previously brought up, asking if a co-worker is having any trouble with a certain work related project, and informing co-workers about prior commitments or any other problems that might cause them to reduce their workload or be absent from work.

Courtesy not only encourages positive social interactions between employees, which improve the work environment, but they can reduce any potential stress that might occur from employees who do not have the courtesy to inform their co-workers about issues such as upcoming absences from work—and so on. It refers to the gestures that help others to prevent interpersonal problems from occurring, such as giving prior notice of the work schedule to someone who is in need, consulting others before taking any actions that would affect them (Organ, 1990). Courtesy or gestures are demonstrated in the interest of preventing creations of problems for co-workers (Organ, 1997). For example, leaving the copier or printer in good condition for other workers' use is an example of courtesy at work (Organ, Podsakoff, & MacKenzie, 2006).

Compensation and Organizational Citizenship Behaviour

Ann Dzuranin (2012) studied for the impact of cash and non-cash rewards towards employees' performance and satisfaction. It was found out that the reward that has an impact on work motivation is non-cash rewards which are employees' work motivation. It also has a direct effect on organization's achievement. Therefore, organization shall consider increasing non-cash rewards or related policies for employees' work efficiency.

To ensure OCB, pay structures preferred to be established on individual contribution, besides, salary required to match with that of external related organizations as well as competence related allowances need to be introduced (Makau, Nzulwa & Wabala, 2017). Employees who are satisfied with rewards work with passion and is more committed to the organization (Tufail, Muneer, & Manzoor, 2017). Reward is considered an incentive to the employee in exchange for the contribution of their services, however, it is an expense to the organization. Incentive pay enhanced employee commitment and competence, which, in turn, improved the operational and financial performances of firms (Sung, Choi & Kang, 2017). Incentive pay functions as a noteworthy driver of the positive attitude and behaviour of employees that increase organizational operations and effectiveness (Shaw & Gupta, 2015; Sung *et al.*, 2017). Virtually each and every aspect of organizational effectiveness, compensation can shape employee behaviour and organizational effectiveness (Gupta & Shaw, 2014). There is a significant positive relation between intrinsic reward- such as work life balance and organizational justice, feelings of achievement, sense of recognition and extrinsic reward- comprising of pay, promotion, job security, training and intrinsic rewards such and OCB (Tufail, Muneer & Manzoor, 2017). Both extrinsic and intrinsic rewards are significantly related to employee satisfaction and employee performance (Tessema & Soeters, 2006). Extrinsic and intrinsic rewards are positively correlated to OCB since satisfied employees in their job not only accomplish their prescribed role requirements but also put forth additional effort to execute other undertakings that extend beyond their formal role prerequisite (Tufail *et al.*, 2017).

The study postulates the following hypotheses to be tested:

- H₀₁:** There is no significant relationship between compensation and civic virtue in courier service companies in Rivers State.
- H₀₂:** There is no significant relationship between compensation and conscientiousness in courier service companies in Rivers State.
- H₀₃:** There is no significant relationship between compensation and courtesy in courier service companies in Rivers State.

METHODOLOGY

The study adopted a cross-sectional research survey design. Primary source was generated through self- administered questionnaire. The population of this study was drawn from 24 courier service companies in Rivers State that are registered with the Courier Regulatory

Department of Nigeria Postal Services (NIPOST). Three (3) managers each was selected from the 24 courier companies totaling 72 managers. Since the number of the population is small and can easily be covered, a census sampling method was used. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70 to be selected. Data generated was analyzed and presented using both descriptive and inferential statistical techniques. The hypotheses were tested using the Spearman's Rank Order Correlation Coefficient with the aid of Statistical Package for Social Sciences.

DATA ANALYSIS AND RESULTS

The Spearman Rank Order Correlation coefficient is calculated using the SPSS 21.0 version to establish the relationship among the empirical referents of the predictor variable and the measures of the criterion variable.

Table 1: Correlation Matrix for Compensation and Organizational Citizenship Behavior

			Compensati on	Civic virtue	Conscientio usness	courte sy
Spearman's rho	Compensation	Correlation Coefficient	1.000	.693**	.804**	.743**
		Sig. (2-tailed)	.	.000	.000	.000
		N	150	150	150	150
	Civic virtue	Correlation Coefficient	.693**	1.000	.761**	.760**
		Sig. (2-tailed)	.000	.	.000	.000
		N	150	150	150	150
	Conscientiousness	Correlation Coefficient	.804**	.761**	1.000	.844**
		Sig. (2-tailed)	.000	.000	.	.000
		N	150	150	150	150
	Courtesy	Correlation Coefficient	.743**	.760**	.844**	1.000
		Sig. (2-tailed)	.000	.000	.000	.
		N	150	150	150	150

** . Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS output

Ho₁: There is no significant relationship between compensation and civic virtue in courier service companies in Rivers State.

The correlation coefficient (r) shows that there is a significant and positive relationship between compensation and civic virtue. The *rho* value 0.693 indicates this relationship and it is significant

at $p\ 0.000 < 0.05$. The correlation coefficient represents a high correlation also indicating a strong relationship. Therefore, based on empirical findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between compensation and civic virtue in courier service companies in Rivers State.

Ho₂: There is no significant relationship between compensation and conscientiousness in courier service companies in Rivers State.

The correlation coefficient (r) shows that there is a significant and positive relationship between compensation and conscientiousness. The ρ value 0.804 indicates this relationship and it is significant at $p\ 0.000 < 0.05$. The correlation coefficient represents a very high correlation. Therefore, based on empirical findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between compensation and conscientiousness in courier service companies in Rivers State.

Ho₃: There is no significant relationship between compensation and courtesy in courier service companies in Rivers State.

The correlation coefficient (r) shows that there is a significant and positive relationship between compensation and courtesy. The ρ value 0.743 indicates this relationship and it is significant at $p\ 0.000 < 0.05$. The correlation coefficient indicates a strong relationship between the variables. Therefore, based on empirical findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between compensation and courtesy in courier service companies in Rivers State.

DISCUSSION OF FINDINGS

The test of hypotheses revealed that there is a significant relationship between compensation and civic virtue, conscientiousness and courtesy in in courier service companies in Rivers State. Hence, the null hypotheses were hereby rejected. This finding is in line with Bergmann and Scarpello, 2001 who argued that Compensation systems have traditionally been designed to attract and retain employees and to motivate them to increase their effort and outputs toward the achievement of organizational goals. Compensation is also considered as one of the most significant costs to operating a business. Most importantly, compensation does not only influence hiring and retention decisions but it is also an important tool to align employees' interest with organizational goals by designing and providing rewards for meeting specific goals assigned to them. Compensation is the human resource management function that deals with every type of reward individuals receive in exchange for performing organizational tasks, with a desired outcome of an employee who is attracted to the work, satisfied, and motivated to do a good job for the employer (Ivancevich, 2004). A double input-output exchange between an employee and an employer (Belcher, 1997).

Furthermore, Adeniji and Osibanjo (2012) suggested that compensation can be described as direct and indirect compensation received by employees in an organization that serves to achieve employee satisfaction and retention as well as improve performance. Direct compensation includes wages, salaries, bonuses or commission. Indirect compensation includes incentives,

medical benefits, housing allowance, annual leave allowances and training opportunities. Compensation is the reward employees receive in exchange for performing organizational tasks. Compensation is direct and indirect wages. Direct compensation includes wages, salaries, bonuses or commission based on performances, overtime work, holiday premium, while indirect compensation is paid as medical benefits, housing allowance, meal allowance, utility allowances, incentive bonus, shift allowances, hospitalization expenses, out of station allowance, vehicle loan benefits, annual leave allowances, car basic allowances, etc.

CONCLUSION AND RECOMMENDATIONS

This study thus concludes that compensation significantly influences organizational citizenship behaviour in courier service companies in Rivers State. This implies that a good employee compensation package is an important motivator of discretionary work behaviour in terms of virtue, conscientiousness and courtesy.

The study recommends that courier service companies should improve upon the compensation that its employees receive knowing that they are exposed to all sorts of hazards carrying out their jobs. The employee and the employer should agree on the appropriate salary meant for the job to be done, to enable the employee put in their best.

REFERENCES

- Adeniji A.S. & Osibanjo A.O. (2012). *Human Resource Management: Theory and Practice*. Pumark.
- Ahmed, N. O. A. (2016). Impact of human resource management practices on organizational citizenship behavior: An empirical investigation from banking sector of Sudan. *International Review of Management and Marketing*, 6(4), 964- 973.
- Akinyemi, B. (2012). The influence of affective commitment on citizenship behavior and intention to quit among commercial banks' employees in Nigeria. *Journal of Management and Sustainability*, 67(3), 23-31.
- Belcher, D.W. (1997). *Compensation management*. London: Engle Cliffs: Prentice Hall.
- Berber, N., Morley, M. J., Slavić, A., & Poór, J. (2017). Management compensation systems in Central and Eastern Europe: A comparative analysis. *The International Journal of Human Resource Management*, 28(12), 1661–1689.
- Bergmann, T. J., & Scarpello, V.G. (2002). *Compensation decision making*. United States: South-Western Thomson learning.
- Borman, W., Penner, L., Allen, T., & Motowidlo, S. (2001). Personality predictors of citizenship performance. *International Journal of Selection and Assessment*.

- Chelagat, L. J., Chepkwony, P. K., & Kemboi, A. (2015). Effect of Organizational Citizenship Behavior on Employee Performance in Banking Sector, Nairobi County, Kenya. *International Journal of Business, Humanities and Technology*, 5(4), 55–61.
- Chiaburu, D. S., Oh, I.-S., Wang, J., & Stoverink, A. C. (2017). A bigger piece of the pie: The relative importance of affiliative and change-oriented citizenship and task performance in predicting overall job performance. *Human Resource Management Review*, 27(1), 97–107.
- Dessler, G., & Tan, C. H. (2009). *Human resource management: An Asian perspective*. Pearson Prentice Hall.
- DeYoung, C. G., Peterson, J. B., & Higgins, D. M. (2005). Sources of Openness/Intellect: Cognitive and neuropsychological correlates of the fifth factor of personality. *Journal of Personality*, 73, 825–858.
- Dineen, B. R., & Williamson, I. O. (2012). Screening-oriented recruitment messages: Antecedents and relationships with applicant pool quality. *Human Resource Management*, 51(3), 343–360.
- Gore, J.S., Kiefner, A.E. & Combs, K.M (2012). Personality traits that predict academic citizenship behaviour. *Journal of Applied Social Psychology*, 42(10), 2433-2456.
- Ivancevich, J. M. (2004). *Human resource management*. New York: McGraw-Hill/Irwin
- Law, S. K., Wong, C., & Chen, X. Z. (2005). The construct of organizational citizenship behavior: Should we analyze after we have conceptualized? In D. L. Turnipseed (Ed.), *Handbook of organizational citizenship behavior* (47–65). New York: Nova Science Publishers.
- Makau, M. M., Nzulwa, D. J., & Wabala, S. W. (2017). Influence of compensation programs on organizational citizenship behavior among employees of Kenya women microfinance bank limited. *Strategic Journal of Business & Change Management*, 4(4), 587–604.
- Milkovich, G. T., & Bloom, M. (1998). Rethinking international compensation. *Compensation & Benefits Review*, 30(1), 15–23.
- Mudor, H., & Tooksoon, P. (2011). Conceptual framework on the relationship between human resource management practices, job satisfaction, and turnover. *Journal of Economics and Behavioral Studies*, 2(2), 41–49.
- Nabi, M. N., Ahmed, A. A. T., & Rahman, M. S. (2017). The empirical study on human resource management practices with special reference to job satisfaction and employee turnover at Investment Corporation of Bangladesh. *Human Resource Management Research*, 7(1), 54–64.

- Okediji, A.A., Esin, P.A., Sanni, K.B. & Umoh, O.O. (2009). The influence of personality characteristics and gender on organisational citizenship behaviour. *Global Journal of Social Sciences*, 8 (2), 69-76.
- Onyishi, I.E. (2007). Development and validation of organizational citizenship behaviour scale in Nigeria. *ESUT Journal of Psychological Studies*, 2(1), 55-78.
- Organ, D. W. (1988). *Organizational citizenship behaviour: The good soldier syndrome*. Lexington, MA: Lexington Books.
- Organ, D. W. (1990). The subtle significance of job satisfaction. *Clinical Laboratory Management Review*, 4, 94–98.
- Organ, D. W., Podsakoff, P. M., & Mackenzie, S. B. (2006). *Organizational citizenship behaviour: Its nature, antecedents, and consequences*. London: Sage Publications.
- Redman, T. & Snape, E. (2005) Unpacking commitment: Multiple loyalties and employee behaviour. *Journal of Management Studies*, 42, 301-328.
- Shaw, J. D., & Gupta, N. (2015). Let the evidence speak again! Financial incentives are more effective than we thought: Financial incentives are effective. *Human Resource Management Journal*, 25(3), 281–293.
- Sung, S. Y., Choi, J. N., & Kang, S.-C. (2017). Incentive pay and firm performance: Moderating roles of procedural justice climate and environmental turbulence. *Human Resource Management*, 56(2), 287–305.
- Tessema, M. T., & Soeters, J. L. (2006). Challenges and prospects of HRM in developing countries: testing the HRM–performance link in the Eritrean civil service. *The International Journal of Human Resource Management*, 17(1), 86–105.
- Tufail, M. S., Muneer, S., & Manzoor, M. (2017). How organizational rewards and organizational justice affect the organizational citizenship behavior and counterproductive work behavior: analysis of Pakistan service industries. 171–182. Retrieved from http://www.cityuniversity.edu.pk/curj/Journals/Journal/special_aic_16/18.pdf
- Yang, C.-C., & Lin, C. Y.-Y. (2009). Does intellectual capital mediate the relationship between HRM and organizational performance? Perspective of a healthcare industry in Taiwan. *The International Journal of Human Resource Management*, 20(9), 1965–1984.
- Zhang, D. (2011). Organizational citizenship behavior. *Auckland*. Retrieved from <https://cdn.auckland.ac.nz>.

- Adewale, O.O., Abolaji, A.J. & Kolade, O.J. (2011). Succession planning and organizational survival: Empirical study on Nigerian private tertiary institutions. *Serbian Journal of Management*, 6(2), 231 – 246.
- Adewale, O.O., Abolaji, A.J. & Kolade, O.J. (2011). Succession planning and organizational survival: Empirical study on Nigerian private tertiary institutions. *Serbian Journal of Management*, 6(2), 231 – 246.
- Adewale, O.O., Abolaji, A.J. & Kolade, O.J. (2011). Succession planning and organizational survival: Empirical study on Nigerian private tertiary institutions. *Serbian Journal of Management*, 6(2), 231 – 246.
- Devinney, T. M., Yip, G. S., & Johnson, G. 2009. Using frontier analysis to evaluate company performance. *British Journal of Management*, forthcoming
- Devinney, T. M., Yip, G. S., & Johnson, G. 2009. Using frontier analysis to evaluate company performance. *British Journal of Management*, forthcoming
- Devinney, T. M., Yip, G. S., & Johnson, G. 2009. Using frontier analysis to evaluate company performance. *British Journal of Management*, forthcoming

Payroll Outsourcing and Employee Commitment in the oil and Gas Sector in Rivers State, Nigeria

¹Ojo, Monday Isiramen PhD and ²Jonah Charles Tambari PhD

¹Department of Management, Faculty of Management Sciences, Rivers, State University, Nkpolu- Oroworukwo, PMB 5080, Port Harcourt, Nigeria

²Department of Management, Faculty of Management Sciences, University of Port Harcourt, Choba, Rivers State, Nigeria

Abstract: *This study investigated payroll outsourcing and employee commitment of the oil and gas sector in Rivers State, Nigeria. The study adopted a cross sectional survey research design. The population of the study was 15,299 and a sample size of 377 was determined using the Krejcie and Morgan Sample Size Determination Table. Primary data was collected through structured questionnaire. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Pearson Product Moment Correlation Coefficient with the aid of Statistical Package for Social Sciences version 20.0. The tests were carried out at a 95% confidence interval and a 0.05 level of significance. Results of data analysis revealed that there is no association between payroll outsourcing and employee commitment of the oil and gas sector in Rivers State. Consequently, the study concluded that payroll outsourcing showed no significant associations with employee commitment of the oil and gas sector in Rivers State. The study recommends therefore that oil and gas companies should make some infractions into the current payroll outsourcing system as this will decrease employees' distrust and contribute positively to their level of attitudinal, calculative and value commitments respectively.*

Keywords: *Payroll Outsourcing, Employee Commitment, Attitudinal Commitment, Calculative Commitment, Value Commitment*

INTRODUCTION

Rapidly changing external environment led to the necessity for organizations to set up strategies that will enable them compete favourably in the market. Factors of production have over the years dwindled; in this way there is the need to strategize on how companies can achieve high returns on scarce resources. One of such ways to achieving this is through human resource outsourcing practices. Outsourcing human resource activities is described as the purchase from external vendors of a value-creating activity that either was or could have been done within a firm (Gilley & Rasheed, 2000). In the same perspective, Lievens and De Corte (2008) argue that outsourcing HR functions refers to the practice of turning all or part of an organization to an external provider or providers. Adler (2003) further defines HR outsourcing as the contracting out of parts or the whole of the functions of HR to external providers, instead of performing all

the HR functions in-house. According to Brown and Wilson (2005), outsourcing human resource activities is the practice of obtaining human resource services from external vendors or consultancy firms.

It is indicated that outsourcing human resource activities has over the last few years become a dominant force in many organizations. Many firms indeed outsource at least one human resource function (Smith, Vozikis & Varaksina, 2006). Some of the human resource functions often outsourced by organizations include recruitment, human resource information system (HRIS), training, benefit administration, compensation, relocation, and HR planning and development and payroll outsourcing (Lily, Gray & Virick, 2005; Delmotte & Sels, 2008). Human resource (HR) outsourcing is one of strategic tools employed in highly competitive market. By outsourcing some of their HR functions, organizations are better positioned to focus better on their scarce resources. To cap it all, information technology (IT) and human resources are the two business functions that are most commonly and widely outsourced.

Payroll can prove to be costly and complex which requires companies to assess payroll- related processes in order to decide on the most relevant strategy and keep this critical function under control. Payroll processing involves perhaps the most transactional, routine activity involving HR and is the most frequently outsourced HRM activity (Norman, 2016). Rapid change in internet technology and its availability has enabled complex processes such as payroll to be outsourced because the organization and the vendor are in touch. It was established that Payroll is one of the most vital activities for a company. An employee's salary is his single largest connect to an organization and a foundation of employee motivation. Payroll information is critical and highly sensitive. Any seasoned HR person knows that it can make or break an employee's relationship with his employer. Given this scenario, the time and effort needed to maintain payroll administration and data security, many corporations worldwide outsource payroll to specialists.

The purpose of this study is to investigate the relationship between payroll outsourcing and employee commitment in the oil and gas sector in Rivers State, Nigeria

This study was guided by the following

- i. To determine the extent to which payroll outsourcing influences attitudinal commitment in the oil and gas sector in Rivers State, Nigeria?
- ii. To determine the extent to which payroll outsourcing influences calculative commitment in the oil and gas sector in Rivers State, Nigeria?
- iii. To determine the extent to which payroll outsourcing influences value commitment in the oil and gas sector in Rivers State, Nigeria?

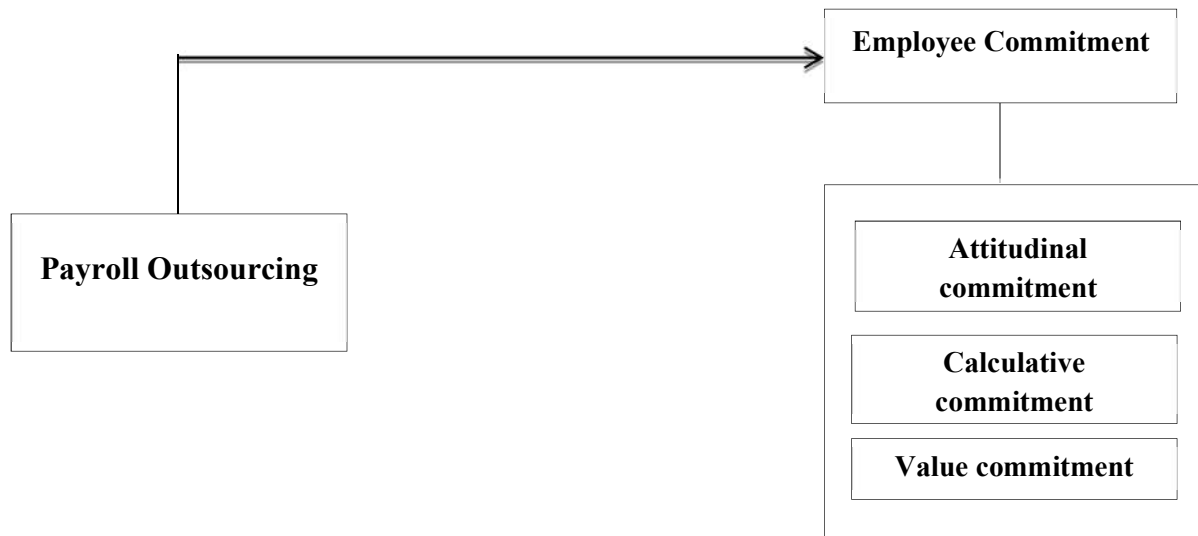


Fig.1 Conceptual framework for payroll outsourcing and employee commitment

Source: Desk Research (2021)

LITERATURE REVIEW

Theoretical Foundation

Agency Theory

Agency theory originated in 1970s but the concept behind it had existed from years ago. Dibbern *et al* identify Jensen and Meckling as key authors and refer specifically to an article written in 1976 titled “Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure.” Agency theory is concerned with the study of the problems that arise when one party, the principal delegates work to another party, agent (Eisenhardt, 2009: Lassar and Kerr 2006). Jensen and Meckling (2006) define an agency relationship as “a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent”. The mechanics of the relationship hinges on the assumption of utility maximization on the part of the individuals, if both the principal(s) and the agent seek to maximize their utility then it is proposed that the agent will act in a manner which does not suit the interests of the principal (Jensen and Meckling, 2006). Due to this divergence of interests, the principal must make an effort to provide incentives which will align the interests of the agent with that of the principal, in addition; monitoring is required in order to make sure that the agent is not acting deviantly. These efforts on the part of the principal are called agency costs and by understanding potential agency costs one can understand the actions of the individuals within a firm. The principal transfers decision rights to the agent. In order to ensure that the agent honours the terms of the contract the principal sets incentives. There are two major concerns in the agency relationship.

First, the principal and the agent may have conflicting goals and second the principal may not be able to ascertain what the agent did (Eisenhardt, 2009).

Agency theory helps expose problems of divergent interests within both markets and hierarchies. A basic assumption of this theory is that opportunism is an inherent characteristic of principal agent relation. According to Benoit et al (2008), there are three main manifestations of opportunism: Moral hazard, adverse selection and imperfect commitment. Moral hazard fell out from the fact that, it is impossible for a principal to observe the behaviour of the agent without incurring probative costs. Since the client cannot directly observe the level of effort deployed by its supplier, it cannot easily tell whether a problem is due to negligence on the part of its supplier or to an unforeseeable event. An example of agency theory in human resource outsourcing is the awarding of a contract where the organization awarding the contract is the principal while the contractor is the agent. Variables that influence the contract between the two is information systems, outcome uncertainty, goal conflict and relationship length (Eisenhardt, 2009).

Payroll Outsourcing

Payroll outsourcing is the delegation of series of accounting transactions involved in the process of paying employees for the services rendered after taking all the statutory and non-statutory deductions into account to an external provider or contractor, in conformance with the terms of employment, company policy and the law of the land i.e., payment of payroll taxes, insurance premiums, employee benefits and other deductions. An efficient payroll system facilitates an error-free, accurate and timely employee payment while ensuring that the employment is well within the valid work permit.

Payroll outsourcing is commonly outsourced for two reasons: it's a time-consuming administrative task for employers, and there are many specialist companies with the technology and knowledge to run it efficiently and compliantly. An increasing number of companies large and small, local and multinational and in all sectors are outsourcing payroll to an external specialist. Certainly the complex, administrative and non-core nature of payroll "naturally" lends itself to outsourcing. Payroll however remains a critical component in labour relations and one of the most reliable sources of information on human resources. The decision to outsource is therefore strategic. Payroll is perceived as a recurring company commodity, at best known as a succession of standardized tasks aimed at issuing pay slips on a regular basis in compliance with legal requirements. Outsourcing the payroll function means that the collection of payroll-related data is still kept in-house, but that the processing of that data is now the responsibility of a payroll supplier. The supplier's facility contains a set of payroll processing programs and a related database that contains the payroll records submitted by its many customers. The facility does routine payroll tax calculations on the submitted data and creates payroll checks or issues direct deposit payments back to the employees of its customers. In addition to these basic tasks, the facility calculates all taxes due to various government entities and submits the tax payments along with any required tax forms. Other services include the issuance of annual W-2 forms, quarterly wage reports, and the federal unemployment tax return (Bragg, 2005).

Shifting the payroll function to such a supplier is nearly automatic for smaller firms, which can thereby avoid an array of in-house payroll costs, as well as avoiding the risk of incurring tax penalties for making late or incorrect tax payments to various government entities. The decision to shift to a supplier is more difficult for large firms, who may find that the supplier's fees do not adequately offset the services rendered.

Companies rightly expect outsourcing to bring them greater cost control and to free up energy and resources to focus on more strategic activities. The more international amongst them will also aim for global human resource reporting, coupled with integrated business processes. By outsourcing payroll, companies are taking steps to improve their human resource performance, which is now measured at the highest level. As they strive for additional value, Human Resource departments are also discovering that outsourcing can be a means of optimizing other talent management functions such as training, performance, recruitment and many more. For a company to run steadily and implement ambitious human resource strategies, paying employees accurately and on time is a basic requirement. Achieving this is not simple in every country; payroll turns out to be a complex and costly activity. Assessing payroll related processes is significant efforts that can help companies decide on the most relevant strategy for keeping such a critical function under control (Bragg, 2005).

Behind the scenes, payroll is complex. A quick look at a payslip with its many and varied lines confirms this. And this is just the tip of the iceberg. The amount of data to be collected and processed before employees can get paid is impressive. Worldwide, payroll is about handling a wealth of information of all kinds. It turns out to be a multifaceted, fragmented, and very exacting activity. Payroll operations are made up of multiple sub-processes combined in a consistent value chain. From data collection to reporting, from checking and controls to declarations, fourteen different sub-processes can be identified, each requiring dedicated skills and expertise. This makes payroll processing a world apart and definitely a matter for experts within Human Resource departments. Payroll processing skills have a lot in common with those required for personnel administration. Since both are mainly administrative Human Resource activities, they are often performed by the same Human Resource experts within companies. Moreover, personnel administration is a key data source for payroll processing, as it handles employee fixed data (family status, bank details, etc.), variable data (absence, attendance, bonus, etc.), work contracts and social benefits (Bragg, 2005). As an essential part of their skills, payroll experts must understand and remain up to date on a wide variety of regulations that govern their activity such as national tax and labour laws, regional variations, industry-specific rules, company agreements.

Employee Commitment

Employee commitment (OC) is, in general terms, an employee's sense of attachment and loyalty to the work organization with which the employee is associated. It is defined in terms of an employee's attitudes and intentions (understood as the precursors of behaviour). Employees are said to be committed to the organization when their goals are congruent with those of the organization, when they are willing to exert effort on behalf of the organization, and when they desire to maintain their connection with the organization.

Employee commitment is when a member of a certain group identifies himself with the group and is willing to work intensely on its behalf. In these cases, an organizationally committed person takes a large part of his personal identity from the group and has positive associations with it. This is not the same as organizational identification or motivation, but is much broader than both. Commitment can be specifically seen as a broader concept of self-definition.

Generally defined as a psychological link between the employee and his/her organization, Organizational Commitment has been found to be related to major work outcomes, namely, turnover intention and actual turnover (Mathieu and Zajac, 2000). Indeed, employees who are strongly committed to their organization are less likely to leave. Moreover, the understanding of employee withdrawal has been enhanced by the emergence of multidimensional conceptualizations of commitment.

Generally, employee commitment could be defined as a psychological link between the employee and his/her organisation. Commitment is a person's belief in a cause and pursuing that course willingly, intentionally, voluntarily, actively, passionately and relentlessly. Genuine individual commitment to a cause cannot be enforced or imposed, it is volitional. It is usually the outcome of an individuals' decision-making process during which the particular cause is weighed against interest, desired outcome, perceived cost and/or benefit. Kanter (2008) succinctly describes commitment as "the willingness of social actors to give their energy and loyalty to social systems, the attachment of personality systems to social relations, which are seen as self-expressive". However, once this binding to a cause has occurred, it could be enhanced and sustained through extrinsic motivational strategies. It is also possible for commitment to wane especially if the initial basis for commitment is not sustained or improved upon according to a person's perception and understanding.

Cohen (2003), states that "commitment is a force that binds an individual to a course of action of relevance to one or more targets". This general description of commitment relates to the definition of employee commitment by Arnold (2005) namely that it is "the relative strength of an individual's identification with and involvement in an organisation". Miller (2003), also states that employee commitment is "a state in which an employee identifies with a particular organisation and its goals, and wishes to maintain membership in the organisation". Employee commitment is therefore, the degree in which an employee is willing to maintain membership due to interest and association with the organisation's goals and values. Pareek (2004), defines employee commitment as a person's feeling with regard to continuing his or her association with the organization, acceptance of the values and goals of the organization, and willingness to help the organization achieve such goals and values.

Measures of Employee Commitment

One of the most widely used theories in employee commitment is Allen and Meyer's (2007) three component model (Markovits, Boer and van Dick 2013; Garcia-Gabrera and Garcia-Soto 2012). It is the most widely accepted conceptualization of employee commitment (Herrbach

2006). It sees commitment as having three separable forms: attitudinal commitment, calculative commitment and value commitment.

Attitudinal Commitment

Attitudinal commitment is a phenomenon related to personality traits and job-related factors, and leads to the willingness of an employee to support organizational goals. Attitudinal commitment often encompasses an exchange relationship and is defined by three dimensions: positive affect for the organization, identification with the organization, and a willingness to exert effort on behalf of the organization (Jaussi, 2007). Loyalty to the organization is the state of attachment experienced by an organizational member as a feeling of allegiance and faithfulness (Fletcher, 2003).

According to the attitudinal approach, commitment develops as a result of some combination of work experiences, perceptions of the organization, and personal characteristics, which lead to positive feelings about an organization which in turn becomes commitment. Further explanation is offered under the guise of exchange theory in which persons with positive attitudes are pre-disposed to offer commitment in exchange for anticipated future rewards (Angle and Perry, 1983).

Attitudinal commitment describes the employees' allegiance to the organization. In this approach, the source of the commitment of the employees is their feelings towards the organization which is referred to as the individual's emotional attachment to and involvement and identification with the organization (Brown and Griffeth, 2007). In this type of commitment, to make a part of the organization gives pleasure and pride from emotional point of view. The organization represents much for its employees both materially and spiritually. Therefore, attitudinal commitment is accepted as a strong type of commitment.

Calculative Commitment

In this dimension, continuance commitment is approached from a calculative perspective in which individuals are viewed as remaining in an organization for extrinsic rewards and accumulated interests (Finegan, 2000). Calculative commitment, the second construct of employee commitment propounded by Penley and Gould (1988), is built upon the Becker's side-bet theory. According to this theory, when an individual works for several years in an organization, he tends to accumulate investments in the form of time, job effort and organization specific skills which are too costly to lose. Calculative is the result of an employee's perception that organizational membership will serve his self-interest and results in the continued participation of the individual in the organization (Griffeth and Hom, 2008).

Calculative involvement, defined as either a negative or a positive orientation of low intensity, is a commitment or attachment to an organization based on an employee receiving inducements from the organization. Calculative commitment is seen to be more of a "rational" response and is an instrumental evaluation of the relative utilities of staying or leaving Alutto, Ebiniak, & Alonso, 2003). This is described by Etzioni, (2001) as analogous to inmates in a prison, people in

concentration camps, and enlisted men in basic training. These are situations in which individuals perceive a lack of control or the ability to change their environment. These people remain in the organization only because they feel they have no other options. Each dimension represents a possible description of an individual's attachment to an organization.

Calculative commitment can be regarded as an instrumental attachment to the organisation, where the individual's association with the organisation is based on an assessment of economic benefits gained (Beck and Wilson, 2010). Organisational members develop commitment to an organisation because of the positive extrinsic rewards obtained through the effort-bargain without identifying with the organisation's goals and values. Calculative commitment is a type of commitment in which the employees have financial dependence on the organization. In this type of commitment, it is the material/financial benefit that makes employees stay with the organization. Their personal benefit is the measure of the significance that organization has in their eyes. Therefore, the calculative commitment is not considered as a strong type of commitment. The employees do not make sacrifices for their organizations, except in case they are compelled to do so, and at the first opportunity (in case they find a better job with better financial opportunities) they quit the organization. Calculative commitment is commitment based on the costs that would occur if the person left the organization. Therefore, people having high calculative commitment stay in the organization because they need to. In other words, it would cost too much to leave. This would be the case, for example, if employee has used a lot of time and resources to learn something that can only be used in a particular company or at the time there are no similar or better employment opportunities available than the current position (Garcia-Gabrera and Garcia-Soto 2012).

Value Commitment

Value commitment is the third construct of organizational commitment. Value commitment demonstrates an obligation by an employee to continue employment with the organization. According to Allen and Meyer (2007), individuals with a high level of value commitment feel that they should continue providing their services to the firm. Robbins (2003) defined values as representing the basic conviction that a "specific mode of conduct or end state of existence is personally or socially preferable to an opposite or converse mode of conduct or end state of existence. Values contain judgmental elements in that they carry an individual's ideas about what is right, good or desirable."

O'Reilly and Chatman (2006) found that when there is congruence between company's values and employees' values, the latter tend to display a higher level of commitment. This type of commitment to the organization derives from the fact that the employees believe they must work in the organization due to conscientious and ethical reasons. The sources of the value commitment can be the following: The employees were treated with much favour by the organization's management, the employee has worked in the organization for a long time, the organization has been a life-saver for the employee in difficult times, or the services provided by the organization are considered as socially and spiritually important noble duties. Therefore, they consider themselves responsible before the organization in terms of value commitment. This

feeling makes their work for the organization meaningful. The more they are grateful to the organization, the more they feel pride for working for it. The employees with such commitment can do important sacrifices for their organization and generally do not consider leaving the organization.

Value commitment refers to person's feelings of obligation to stay with the organization. In other words, employees remain in the organization because they feel obligated towards the firm which has invested in them. According to Randal and Cote (2001), employees feel that when an organization has invested a lot of time and money in training and developing them, they have a moral obligation to continue to provide their services to the company. For example, when an organization has paid for the employees' education while they were continuing their studies to improve their qualifications, they feel obligated to reimburse the organization by continuing to provide their services.

Relationship between Payroll Outsourcing and Employee Commitment

The term Payroll outsourcing is a delegation of series of accounting transactions to a third party contractor involved in the process of paying employees for the services rendered after taking all the statutory and non-statutory deductions into account, in conformance with the terms of employment, company policy and the law of the land i.e., payment of payroll taxes, insurance premiums, employee benefits and other deductions. An efficient payroll system facilitates an error-free, accurate and timely employee payment while ensuring that the employment is well within the valid work permit.

A payroll is a company's list of its employees, but the term is commonly used to refer to the total amount of money that a company pays to its employees, a company's records of its employees' salaries and wages, bonuses, and withheld taxes, and the company's department that calculates funds and pays these. From a human resources viewpoint, employees are sensitive to payroll errors and irregularities, such as late paychecks. As such, maintaining good employee morale requires payroll to be paid timely and accurately. The primary mission of the payroll department is to ensure that all employees are paid accurately and timely with the correct withholdings and deductions, and that the withholdings and deductions are remitted in a timely manner. This includes salary payments, tax withholdings, and deductions from paycheck.

Bragg (2012) did a study on Payroll outsourcing. The study was carried out in Colorado United States of America. The study was meant to describe seven best practices related to various aspects of the payroll and benefits administration functions. The findings are that the first four services are available to all companies while the final three being cost-effective are only for large organizations.

Outsourcing the payroll function means that the collection of payroll-related data is still kept in-house, but that the processing of that data is now the responsibility of a payroll supplier. The supplier's facility contains a set of payroll processing programs and a related database that contains the payroll records submitted by its many customers. The facility does routine payroll tax calculations on the submitted data and creates payroll checks or issues direct deposit payments back to the employees of its customers. In addition to these basic tasks, the facility

calculates all taxes due to various government entities and submits the tax payments along with any required tax forms. Other services include the issuance of annual W-2 forms, (A form used to report gross pay and tax deductions for each employee to the IRS for a calendar year) quarterly wage reports, and the federal unemployment tax return. Shifting the payroll function to such a supplier is nearly automatic for smaller firms, which can thereby avoid an array of in-house payroll costs, as well as avoiding the risk of incurring tax penalties for making late or incorrect tax payments to various government entities. The decision to shift to a supplier is more difficult for large firms, who may find that the supplier's fees do not adequately offset the services rendered (Taylor and Bain, 2004).

An increasing number of companies large and small, local and multinational and in all sectors are outsourcing payroll to an external specialist. Certainly the complex, administrative and non-core nature of payroll "naturally" lends itself to outsourcing. Payroll however remains a critical component in labour relations and one of the most reliable sources of information on human resources. The decision to outsource is therefore strategic. Companies rightly expect outsourcing to bring them greater cost control and to free up energy and resources to focus on more strategic activities. By outsourcing payroll, companies are taking steps to improve their Human Resource performance, which is now measured at the highest level. As they strive for additional value, Human Resource departments are also discovering that outsourcing can be a means of optimizing other talent management functions such as training, performance, recruitment and many more.

Payroll is perceived as a recurring company commodity, at best known as a succession of standardized tasks aimed at issuing payslips on a regular basis in compliance with legal requirements. Behind the scenes, payroll is complex. A quick look at a payslip with its many and varied lines confirms this. And this is just the tip of the iceberg. The amount of data to be collected and processed before employees can get paid is impressive. Worldwide, payroll is about handling a wealth of information of all kinds. It turns out to be a multifaceted, fragmented, and very exacting activity (Sorensen and Weinkopf, 2009).

Moreover, personnel administration is a key data source for payroll processing, as it handles employee fixed data (family status, bank details, etc.), variable data (absence, attendance, bonus, etc.), work contracts and social benefits.

Based on this position, the following hypotheses are put forward:

- H₀₁:** There is no significant relationship between payroll outsourcing and attitudinal commitment in the oil and gas industry in South-South Nigeria.
- H₀₂:** There is no significant relationship between payroll outsourcing and calculative commitment in the oil and gas industry in South-South Nigeria.

H₀₃: There is no significant relationship between payroll outsourcing and value commitment in the oil and gas industry in South-South Nigeria.

METHODOLOGY

The study adopted a cross sectional survey research design. The population of the study was 15,299 and sample size of 377 was determined using the Krejcie and Morgan Sample Size Determination Table. Primary data was collected through structured questionnaire. The reliability of the instrument was achieved by the use of the Cronbach Alpha Coefficient with all the items scoring above 0.70. The hypotheses were tested using the Pearson Product Moment Correlation Coefficient with the aid of Statistical Package for Social Sciences version 20.0.

DATA ANALYSIS AND RESULTS

Bivariate Analysis

The level of significance 0.05 was adopted as a criterion for the probability of accepting the null hypothesis in ($p > 0.05$) or rejecting the null hypothesis in ($p < 0.05$).

Table 1: Payroll Outsourcing and Attitudinal Commitment

		payroll	Attitude
Payroll	Pearson Correlation	1	.283
	Sig. (2-tailed)		.213
	N	350	350
Attitude	Pearson Correlation	.283	1
	Sig. (2-tailed)	.213	
	N	350	350

Source: SPSS Output

H₀₁: There is no significant relationship between payroll outsourcing and attitudinal commitment in the oil and gas industry in South-South Nigeria.

The above table shows a positive relationship between payroll outsourcing and attitudinal commitment with (r) value of 0.283. This indicates that there is a 28.3% explanation of the relationship between both variables, while 71.7% are explained by other variables not considered in this relationship. However, this statement about a positive relationship between both understudied variables may not be true as the level of significance of 0.213 is greater than 0.05, therefore, the null hypothesis is accepted. This states that there is no significant relationship between payroll outsourcing and attitudinal commitment in the oil and gas industry in South-South Nigeria.

Table 2: Payroll Outsourcing and Calculative Commitment

		payroll	Calculative
Payroll	Pearson Correlation	1	.208
	Sig. (2-tailed)		.367
	N	350	350
Calculative	Pearson Correlation	.208	1
	Sig. (2-tailed)	.367	
	N	350	350

Source: SPSS Output

H₀₂: There is no significant relationship between payroll outsourcing and calculative commitment in the oil and gas industry in South-South Nigeria.

The above table shows a positive relationship between payroll outsourcing and calculative commitment with (r) value of 0.208. This indicates that there is a 20.8% explanation of the relationship between both variables, while 79.2% are explained by other variables not considered in this relationship. However, this statement about a positive relationship between both understudied variables may not be true as the level of significance of 0.367 is greater than 0.05, therefore, the null hypothesis is accepted. This states that there is no significant relationship between payroll outsourcing and calculative commitment in the oil and gas industry in South-South Nigeria.

Table 3: Payroll Outsourcing and Calculative Commitment

		payroll	Value Commitment
Payroll	Pearson Correlation	1	.218
	Sig. (2-tailed)		.377
	N	350	350
Value Commitment	Pearson Correlation	.218	1
	Sig. (2-tailed)	.377	
	N	350	350

H₀₃: There is no significant relationship between payroll outsourcing and value commitment in the oil and gas industry in Rivers State, Nigeria.

The above table shows a positive relationship between payroll outsourcing and value commitment with (r) value of 0.218. This indicates that there is a 21.8% explanation of the relationship between both variables, while 78.2% are explained by other variables not considered in this relationship. However, this statement about a positive relationship between both understudied variables may not be true as the level of significance of 0.377 is greater than 0.05,

therefore, the null hypothesis is accepted. This states that there is no significant relationship between payroll outsourcing and value commitment in the oil and gas industry in Rivers State, Nigeria.

DISCUSSION OF FINDINGS

Payroll Outsourcing and Attitudinal Commitment

There is no association between payroll outsourcing and attitudinal commitment in the oil and gas industry in Rivers State, Nigeria. Dean, Julian and Dereje, (2014), did a study on consequences of outsourcing Strategies on employee quality of work life, attitudes, and performance. The study was carried out in Eastern Illinois University Charleston, Illinois, United States of America. The consequences of implementing outsourcing strategies in an industrial setting were studied using a field study. This study was designed to explore both the financial as well as the human aspects of outsourcing activities. The attitudinal results of this research indicated that the outsourcing strategies had a negative impact on the perceived quality of work-life dimensions. The performance results presented here provide, at best, circumspect support for the claims of outsourcing proponents that the technique improves participants' performance and productivity.

Hanover Research (2010), did a study on payroll outsourcing in higher education. The study was carried out in Pennsylvania, United States of America. The study was carried out using a field study. This study was designed to explore the pros and cons of payroll outsourcing activities. The findings are that institutions should free internal staff to “focus on strategic activities that add more value, enables decentralized structures that support higher rates of innovation and flexibility”, removes the “bureaucratic burden” of a “centralized Human Resource administration”, allows Human Resource to take part in corporate downsizing and provides “access to new ideas and approaches outside the organization”. They also suggested that outsourcing may result in “poor service, costs higher than promised, contractors with insufficient knowledge about the client, and unanticipated resources required to manage the relationship.” All in all, the author concludes that the blend between pros and cons can weigh out differently depending on the unique challenges facing a particular organization. We concluded that;

- i. Payroll outsourcing has a negative influence on attitudinal commitment in the understudied oil and gas companies

Payroll Outsourcing and Calculative Commitment

There is no association between payroll outsourcing and calculative commitment in the oil and gas industry in Rivers State, Nigeria. Though there may not be any direct relationship between payroll outsourcing and calculative commitment, this relationship can be inferred. According to Woodall (2009) and Abdul-Halim (2009), Human Resource activities decision for outsourcing has many reasons like lowering the costs, accessing the Human Resource expertise, find employees and according to requirement and aim at managerial resources that are linked to strategic issues. Hanover Research (2010), did a study on payroll outsourcing in higher education. The study was carried out in Pennsylvania, United States of America. The study was

carried out using a field study. This study was designed to explore the pros and cons of payroll outsourcing activities. The findings are that institutions should free internal staff to “focus on strategic activities that add more value, enables decentralized structures that support higher rates of innovation and flexibility”, removes the “bureaucratic burden” of a “centralized Human Resource administration”, allows Human Resource to take part in corporate downsizing and provides “access to new ideas and approaches outside the organization”. They also suggested that outsourcing may result in “poor service, costs higher than promised, contractors with insufficient knowledge about the client, and unanticipated resources required to manage the relationship.

From the ongoing discussion, it could be inferred that payroll outsourcing creates an inward feeling of resentment in the workers which leads to a negative influence on calculative commitment.

Payroll Outsourcing and Value Commitment

There is no association between payroll outsourcing and value commitment in the oil and gas industry in Rivers State, Nigeria.

Dean, Julian and Dereje, (2014), did a study on consequences of outsourcing Strategies on employee quality of work life, attitudes, and performance. The study was carried out in Eastern Illinois University Charleston, Illinois, United States of America. The consequences of implementing outsourcing strategies in an industrial setting were studied using a field study. This study was designed to explore both the financial as well as the human aspects of outsourcing activities. The attitudinal results of this research indicated that the outsourcing strategies had a negative impact on the perceived quality of work-life dimensions. The performance results presented here provide, at best, circumspect support for the claims of outsourcing proponents that the technique improves participants' performance and productivity. Although outsourcing can lead to certain gains for the organization, there are definitely human costs to be taken into account, and they should be considered as major factors contributing to the outsourcing debate, not just the financial aspects of organizations' decisions. We can conclude that;

- i. Payroll outsourcing has a negative influence on value commitment.

CONCLUSION AND RECOMMENDATION

This study presented three conclusions depicting the research questions that were conceptualized and obtained from the main purpose of the study. Below are the various conclusions reached from the findings of the study:

- i. Payroll outsourcing in the oil and gas sector in Rivers State, Nigeria has no association with attitudinal commitment.
- ii. Payroll outsourcing has no association with calculative commitment in the oil and gas sector in Rivers State, Nigeria.
- iii. Payroll outsourcing has no association with value commitment in the oil and gas sector in Rivers State, Nigeria.

- i. The study recommends that oil and gas sector should outsource the payroll function with adequate consultations being done between the organization and the outsourced firms for the interest of employees.
- ii. Also, the study recommends that payroll outsourcing should be encouraged to an expert vendor with proven capabilities.

REFERENCES

- Abdul-Halim, Hasliza; Che-Ha, Norbani; Geare, Alan (2009). The influence of business strategy on the decision to outsource human resource activities. *Journal of Human Resource Costing & Accounting*, 13(4), 274–293
- Adler, P. (2003). Making the HRM outsourcing decision. *MIT Sloan Management Review*, 45, 53-60.
- Allen, N. J., & Meyer, J. P. (2000). The measurement and antecedents of affective, continuance, and normative commitment to the organization. *Journal of Occupational Psychology*, 63, 1–18
- Alutto, J. A., Ebiniak, L. G., & Alonso, R. C. (2003). On operationalizing the concept of commitment. *Social forces*, 51, 448–454.
- Angle, H. L., & Perry, J. L. (1981). An empirical assessment of organizational commitment and organizational effectiveness. *Administrative Science Quarterly*, 26(1), 1-14.
- Angle, H. L., & Perry, J. L. (1983). Organizational commitment: Individual and organizational influences. *Work and Occupations*, 10(2), 123–146
- Arnold, J. (2005). *Work psychology: Understanding human behaviour in the workplace*, 4. London: Prentice Hall Financial Times.
- Beck, K. & Wilson, C. (2000). Development of affective organizational commitment. A cross-sequential examination of change with tenure. *Journal of Vocational Behaviour*, 56, 114 – 136
- Benoit, A. A., Aubert M. P. & Suzanne, R. (1998). Assessing the Risk of IT Outsourcing. CIRANO.
- Bragg, S. M. (2006). *Outsourcing: A guide to selecting the correct business unit negotiating the contract. Maintaining Control of the Process*. John Wiley & Sons.
- Brown, D., & Wilson, S. (2005). *The black book of outsourcing: How to manage the changes, challenges, and opportunities*. New York: John Wiley & Sons, Inc.

- Cohen, J. (1992). A Power Primer. *Psychological Bulletin*, 112(1), 155-159
- Dean, E., Julian, G., & Dereje, A. (2014). *Consequences of outsourcing strategies on employee quality of work life, attitudes, and performance*. Eastern Illinois University, Charleston, Illinois.
- Delmotte, J., & Sels, L. (2008). HR Outsourcing: Threat or Opportunity? *Personnel Review*, 37(5), 543-563.
- Dibbern, J., Goles, T., Hirschheim, R., & Jayatilaka, B. (2004). Information Systems Outsourcing: A Survey and Analysis of the Literature. *SIGMIS Database*, 35(4), 6–102.
- Eisenhardt, K. (1989). Agency theory: An assessment and review. *Academy of Management Review*, 14 (1), 57-74.
- Finegan, J. E. (2000). The impact of person and organizational values on organizational commitment. *Journal of Occupational and Organizational Psychology*, 73(2), 149-169.
- Fletcher, G. P. (1993). *Loyalty: An essay on the morality of relationships*. New York: Oxford University Press.
- Garcia-Gabrera, A. & Garcia-Soto, G. (2012). Organizational commitment in MNC subsidiary top managers' antecedents and consequences. *The International Journal of Human Resource Management*, 23 (15), 3151–3177.
- Gilley, M. & Rasheed A. (2000). Making more by doing less: An analysis of outsourcing and its effect on firm performance. *Journal of Management*, 26(4), 763-790.
- Griffeth, R. W., & Hom, P. W. (2008). A comparison of different conceptualizations of perceived alternatives in turnover research. *Journal of Organizational Behavior*, 9, 103-111.
- Herrbach, O. (2006). *A matter of feeling? The affective tone of organizational commitment and identification*, 27(5), 629–643.
- Influences. *Work and Occupations*, 10,123-146
- Jaussi, K. S. (2007). Attitudinal commitment: A human resources three-dimensional construct. *Journal of Occupational and Organizational Psychology*, 80, 51-61.
- Jensen, M.C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, Agency Costs and Ownership Structure, *Journal of Financial Economics*, 3(4), 305– 360.
- Kanter, R. M. (1968). Commitment and social organization: A study of commitment mechanisms in Utopian Communities. *American Sociological Review*, 33(4), 499-517.

- Lassar, W. M. & Kerr, J. L. (1996). Strategy and control in supplier-distributor relationships: an agency perspective. *Strategic Management Journal*, 17 (8), 613-632.
- Lievens, F., & De Corte, W. (2008). Development and test of a model of external organizational commitment in human resources outsourcing. *Human Resource Management*, 47(3), 559–579.
- Lilly, J., Gray, D., Virick, M. (2005). Outsourcing the human resource function: Environmental and organizational characteristics that affect HR performance. *Journal of Business Strategies*, 22(1), 55-73.
- Markovits, Y., Boer, D., & van Dick, R. (2013). Economic crisis and the employee: The effects of economic crisis on employee job satisfaction, commitment, and self-regulation. *European Management Journal*. In Press.
- Mathieu, J. & Zajac., D. (2000). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. *Psychological Bulletin*, 108(2), 171-194.
- Meyer, J. P., & Allen, N. (1997). *Commitment in the workplace: Theory, research, and application*. California: Sage.
- Miller, K. (2003). Values, attitudes and job satisfaction' In Robbins, S.P., Odendaal A., & Roodt, G. (eds), *Organisational Behaviour: Global and Southern African Perspectives*. Cape Town: Pearson Education South Africa.
- O'Reilly, C.A., & Chatman, J. (1986). Organizational commitment and psychological attachment: the effects of compliance, identification, and internalization on prosocial behavior. *Journal of Applied Psychology*, 71, 492-499
- Pareek, U. (2004). *Understanding organizational behaviour*. London: Oxford.
- Penley, L. E., & Gould, S. (1988). Etzioni's model of organizational involvement: A perspective for understanding commitment to organizations. *Journal of Organizational Behavior*, 9(1), 43– 59.
- Randall, D.M., & Cote, J. A. (1991). Interrelationships of work commitment constructs. *Work and Occupation*, 18, 194-211.
- Smith, P., Vozikis, G., & Varaksina, L. (2006). Outsourcing human resource management: A comparison of Russian and U.S. practices. *Journal of Labor Research*, 27(3), 305-21.
- Sorensen, O., & Weinkopf, C. (2009). Pay and working conditions in finance and utility call centers in Denmark and Germany, *European Journal of Industrial Relations*, 15(4), 395-416.

- Taylor, P., & Bain, P. (2004). India calling to the far away towns: The call centre labor process and globalization. *Work, Employment and Society*, 19(2), 261-282
- Woodall, J., Scott-Jackson, W., Newham, T., & Gurney, M. (2009). Making the decision to outsource human resources, *Personnel Review*, 38(3) 236-252

Digitization of Human Resource Practices: The Realities in the New Normal

Okoronkwo, Grace I.

Technology Transfer Division, Federal Institute of Industrial Research Oshodi, Lagos Nigeria

Abstract: Globally, companies of varying sizes are bolstering their efforts to adopt business automation strategies with particular concentration on robotics thereby reducing the number of staff that have to physically come to work facilitating social/physical distancing as recommended by the World Health Organisation (2020). Robots are also being used to perform roles workers cannot carry out remotely from home. Rapid technological advancement particularly with reference to globalization has shifted the organizations to knowledge-oriented units. With the advent of the twenty-first century came the ever increasing effect of globalization and technology. There is, therefore, a tremendous surge in the implementation of new technology and organizations have amplified the use of information systems in various functions and departments for organizational competitive advantage and success. This paper examines the use of Digitalized (IT) devices in HR practice that is employing human resource information system in to improve HR functions and position the organization to be competitive especially in the post Covid-19 era. It is a conceptual paper and largely employs a desk research methodology in the review of relevant literature.

Keywords: Human Resource Information System, E- Recruitment, E-Payroll Management, E-Performance Management, E-Training, Realities of the New Normal

INTRODUCTION

In late December 2019, the new and widespread COVID-19 disease started in China and spread rapidly worldwide, and on March 11, 2020, the World Health Organization declared it a pandemic. As of August 25, 2020, there were more than 23.3 million confirmed cases of COVID-19, and more than 800,000 deaths were reported globally (Abbas, 202; Madero Gomez, Ortiz Mendoza, Ramírez & Olivas-Lujan, 2020). According to a joint statement by the World Health Organization and the International Chamber of Commerce, COVID-19, with its dual impact on health and the economy, requires immediate action by governments to minimize its transmission. These early and effective measures can reduce short-term risks of infection for employees and reduce long-term costs for trade and the economy of countries (Yoosefi Lebni, Irandoost, Mehedi, Sedighi & Ziapour, 2021). COVID-19 is currently the biggest global health challenge, and because of its widespread and constant mutation, it has left organizations with volatility, uncertainty, complexity, and ambiguity. This pandemic has created many challenges for organizations, including business continuity, low employees' motivation, distance working,

unemployment (Abbas, Mubeen, Iorember, Raza, & Mamirkulova, 2021; Nangia & Mohsin, 2020).

Employees are one of the main factors in the formation, development, and implementation of organizational operations in any organization. The effective performance and interaction of employees ensure efficiency, which ultimately promotes productivity, sales growth, and profitability and reduces employees' turnover (Yoosefi Lebni, A. Ziapour, N. Mehedi, S.F. Irandoost, 2021; Risley, 2020; Davidescu, Apostu, Paul, Casuneanu, 2020). Therefore, in the current post covid-19 crisis, the safety, health, and well-being of employees are considered by many organizations (Dennerlein, Burke, Sabbath, Williams, Peters & Wallace, 2020). Human resource managers who are in charge of hiring people, managing employees' performance, salaries and benefits, and also developing and revising employees' classifications are looking for innovative, creative, and effective ways to solve the problems of employees, maintain their health (De Leon, 2020) and support them by creating a reliable management strategy (Roggeveen, Chen, River Harmony, Ma & Qiao, 2020). The historical challenge of COVID-19, given the exceptional and uncertain circumstances and changing economic landscape, requires deep thinking and flexibility to manage human resources properly (Risley, 2020). In response to this crisis, organizations are digitizing their human resource practices to mitigate the effect of the covid-19 pandemic.

With the advancement in technology the internet is acting like the principle driver of change in the organizations. As it acts as a better approach to exchange information more efficiently and to approach larger audiences than any time in recent memory. Today, HR professional needs to respond to increased competition for all-inclusive digitalized change and quick advances in HR technology. New sort of technical knowledge, aptitudes and abilities would be required by HR practitioners in future who are flexible and willing to deal with the ever-accelerating pace and often unpredictable changes in the worldwide workplace. The HR professionals need to assess the ramifications of a movement into an era of decentralization, which if used properly, can lead to emancipation. The era will require a new sort of association, based on a different system that can unite the commitment of independent people in a socially sustainable manner. It is consequently clear that a better approach to manage HR as a system is emerging, and new HR managers ought to manage themselves (Anyim et al, 2011).

Digital technologies play an increasingly influential role in both the working lives of employees and human resource management (HRM), which is to be affected in multiple ways (Parry & Strohmeier, 2014). Digital transformation has revolutionized the way companies relate to their customers, how companies run their operations, how they conceive of their business model and how they organize themselves (Westerman & Bonnet, 2015). It is about integrating digital technologies, such as social, mobile, analytics and cloud, in the service of transforming how businesses work (Kane et al., 2015). The integration of digital technology into business processes has become very important for the survival and competitive advantage of contemporary organizations (Bharadwaj, 2000).

Palmer, Dunford and Buchanan (2017) claimed that human resource management in a digital age is as a result more varied, more people-oriented with the responsibility of designing diverse, challenging jobs to keep the young employees more engaged in their work. Digital transformation puts into questions the traditional ways the HR functions are carried out in organisations. Bell et al. (2006) state that the digital transformation has resulted in further implications for the role of HR, its capabilities and competencies. Furthermore, Larkin (2017) argues the change to the HR department that digital technology will bring will be all pervasive and omni-directional throughout every company. Consequently, digitalization affects HRM more than just through facilitating daily administrative work. The use of technology facilitates the actual HR functions (functions addressed in this study are: HR planning; recruitment and selection; performance management; reward management; health and safety; employee relations; work design) however has also added new demands on the HR function as the latter ensures that the human capital in the organization is one that is aligned with the strategic needs of a digital era.

Hays and Kearney (2001) posit that HRM is a field that is very sensitive to changes in the broad environment. Technological innovations push mainstream personnel techniques to their expiration date. HR Managers in an era of digitalization are loyal to traditional values however dedicate more time to managing information and mastering software (Human Resource Information Systems - HRIS). Technology is changing the way HR accesses, manipulates, transmits and store massive amounts of data. Human Resource Information System (HRIS) is an important Management Information System which contributes to the human resource functions of an organization. HRIS is a computer system used to acquire, store, manipulate, analyse, retrieve and distribute information related to human resources. Modern HRIS can help organizations by automating most HR functions. HRIS becomes an important strategic tool since it collects, manages and reports information for decision-making (Nagendra & Deshpande, 2014).

LITERATURE REVIEW

Digitization of Human Resource Management

The nature of HR has evolved to a strategic function of an organization. The role of HR leaders in attracting, developing and enabling talent is critical to the success of any business. For this, it was inevitable for the HRM (Human Resources Management) to get transformed into Digital, which radically altered the way the employees and the businesses work. Digital Technology has entirely reinvented and enhanced the processes and systems in various functions across the industries, and the HR function is no exception. In the last two decades, digital tools like online job boards, applicant tracking systems (ATS), professional networking sites viz. LinkedIn, Facebook, Twitter have significantly changed the HR-dispensation right from a job posting or job application to recruitment and onboarding, employee engagement, performance management, and finally employee separation - capturing valuable insights during exit interview. HR started replacing manual processes which are of repetitive in nature, with automations. The need is to connect all HR processes across the organization over a period of time for greater transparency

and efficiency. However, digitalization of HRM should not simply be looked at only a makeover process. HR leaders must be sensitive to the fact that it entails a huge change, and employees must be hand-held throughout this change failing which it is like a broken chain. Let us not forget that Digital HR journey too has its own challenges. It requires a considerable bandwidth of team members and has lot of potential to impact the organization's overall productivity. As per report of the World Economic Forum, diversified workplaces would emerge in the industry due to mobile, cloud technology, big data and computing power. In another two years, it predicts, that AI (Artificial Intelligence), ML (Machine Learning), and advanced robotics drive the workforce increasingly. The role of electronic management in human resource is important for enhancing organizational performance. This was concluded by Rawash and Seydan in their study on impact of e-HRM on organizational market share (Rawash & Seydan, 2012). Similarly the researcher reviewed these empirical literature to be able to analyse, compare and make assumptions on the influence of e-recruitment, e-training, e-payroll and e-performance management.

HR Digitization: The Role of Human Resource Information System

Globalization has greatly contributed to enabling human resources to expand its prospects, perspectives and use of technology. As more companies become globalized, the need for an integrated system where they would manage their human resource functions emerged hence creating a greater need for. The expansion has led to the introduction of global HRIS in various multinational organizations resulting to the emergence of different HRIS opportunities, benefits and challenges (Opiyo, 2015). HRIS offers HR the opportunity to become a more efficient and strategic function by standardizing the majority of the organization's HR processes, improving the quality and speed of available information and improving services to employees (Ball, 2011). These changes form the basis of a highly competitive organization (Gatewood, 2008). If designed correctly the system manages employee data in line with how the organization is managed; hence the need for a multinational organization to implement a global HRIS (Troshani, Jerram & Rao, 2011).

Human Resource Information System refers to a systematic procedure for collecting, storing, maintaining, retrieving, validating and disseminating relevant information needed by an organization about its human resources, personnel activities, and organization unit characteristics (Lippert & Swiercz, 2005). Human Resource Information System help human resource professionals achieve human resource objectives. At the functional level, Human Resource Information System can keep track of employees, applicants, and contingent workers qualifications, demographics, performance evaluation, professional development, payroll, recruitment, and retention (Harris & Desimone, 2005). The computerization of Human Resource Information System function enabled faster decision making in the development, planning, and administration of Human Resource because data became much easier to store, retrieve, update, classify, and analyze. In addition, Human Resource Information System can strengthen the performance of employees and the general outlook of an organization. This can be achieved through tracking information concerning an applicant's or an employee's qualifications and

demographics, recruitment, professional development, performance evaluation, payroll, retention, and attrition are essential for success at the Human Resource functional level (Harris & Desimone, 2005). Perry (2010), adds that in order for an organization to increase its employee's performance they need to rely increasingly on Human Resource Information System henceforth HRIS.

Digitization of Recruitment (E-recruitment)

E - recruitment function is a sub process such as long and short-term candidate attraction, the generation, pre-screening, and processing of applications or the contracting and on boarding of new hires. Online job advertisements on corporate web sites and internet job boards, online Curriculum Vitae databases, different forms of electronic applications, applicant management systems, corporate skill databases, and IS supported workflows for the contracting phase are only few examples of the various ways by which information systems today support recruitment processes (Gurol, Wolf & Ertemsir, 2010). In HR planning process it is easier to follow workforce gaps, the quantity and quality of the labour force and to plan future workforce requirements with the help of HR knowledge systems (Dessler, 2005). Human resource information systems can support long range planning with information for labor force planning and supply and demand forecast; staffing with information on equal employment, separations and applicant qualifications; and development with information on training programs, salary forecasts, pay budgets and labor or employee relations with information on contract negotiations and employee assistance needs (Shibly, 2011).

Dery, Grant and Wiben (2009) argue that many companies have seen a need to transform the way human resource operations are performed in order to keep up with new technology and reducing the number of employees. The internet has therefore become an increasingly popular way to recruit applicants. Delivering human resource services online supports more efficient collection, storage, distribution and exchange of data. Again this is corroborated by Lengnick-Hall and Lengnick-Hall (2007), who attest that human resource information system provides a comprehensive database; which enables organizations to provide structural connectivity across units and activities and increase the speed of information transactions more particularly in recruitment processes. They observe that in so applying information system in recruitment makes the whole process easy and reducing of recruitment coats.

According to Ruel, Bondarouk and Looise (2004) the importance of records systems is increasingly being recognized in organizations. Employees require information in order to carry out their official duties and responsibilities effectively and efficiently in a transparent manner. According to Northwest Territories (2002) the role of records system is to ensure that members of staff involved in different operations have the information they need when necessary. Several studies on e-recruitment analysed online recruitment in which most of the firms were using and also to provide appropriate selection of the employees through the module this is in firms in Belgium, United Kingdom and Netherlands. Studies done by Fayyazi and Afshar (2013) on e-recruitment in Iran firms concluded that e-recruitment was mainly about cultural and behavioural

change which viewed it as end to end process which required updated networks and advertisements. The studies by Kar and Bhattacharya (2009) where they were able to assess relationship between e-recruitment and job satisfaction which they found out that the job portals had been very efficient for applying jobs for candidates and provided adequate customer satisfaction. The HRIS automation has helped the corporate human resource departments to facilitate the outsourcing of human resources (Barron, Chhabra, Hanscome & Henson, 2004).

The e-staffing systems contain an e-recruitment portal which is a subset of the HRIS system for applications for the recruiting and hiring functions. A good system will mainly automate the majority (70-80%) of the recruiting process. Companies usually used job boards like Monster.com or CareerBuilder and found large increases in applicant numbers, but many are unqualified for the positions due to the mass application being sent by the public. HRIS performs a record-keeping function. In this HRIS system, applicants' information and employees' data can be stored, retrieved and added to whenever the need arises. For example, if an HRM employee is asked to provide information on the academic documents of an applicant or employee, then he or she can quickly and efficiently search for this information in the data directory which contains details of thousands of employees (Kovach & Cathcart, 1999). This module necessarily holds the following types of data about the employees: wage history, emergency and regular contact details, education records, training and certificates, disciplinary actions, injuries or illness data, and so forth. With the introduction of HRIS human resource management functions and processes are conducted electronically. The adoption of technology has allowed human resource managers not only to focus on administrative work but also develop well researched strategies and plans, enabling human resource planning to be aligned directly with overall business objectives. According to (Cheruto, 2005) in her study she was able to established that an effective e-recruitment model in a HRIS reduce hiring costs by 90% in organizations

Empirical evidence showed that generally e-recruitment occurs at all levels of a job hierarchy but the prevalence of internal recruitment increases at higher levels though the online hires have more experience and education. The empirical evidence is consistent with using internal recruitment to create strong incentive for the firms workers, an internal recruitment policy may complement other human resource practices in particular those associated with encouraging long worker tenure. Internally hired workers have accumulated knowledge and skills that are particularly valued in the firm (Dess & Jason, 2010). The human resource information systems helped in job rotation which entailed the lateral movements of employees between jobs in the organization. It involved change in job assignment but not necessarily more responsibility or money. The HRIS provided an overview of the departments therefore reducing the boredom and fatigue for the employees. It also helped in increasing the job and career prospects. The job rotation example is where the accountant rotates through both human resource department and operations in preparation for management positions since it helps in increasing the employee knowledge and skills.

According to (Gamage, 2015) the objectives of recruitment is to get the right person to the right job, establish and maintain a good image as a good employer and maintain the recruitment process as cost effective as possible .The recruitment practices will determine who is to hired and when properly designed will identify competent candidates and accurately match them to the job .Similarly, (Rauf, 2007) discovered that e-recruitment procedures are positively related to the performance of organizations .According to (Huselid, 2011) recruitment procedures that gave a large pool of qualified applicants , pared with a valid and reliable recruitment regime. This implied that an organizations policy, human resource policies and practices represent vital elements for shaping employee behavior and attitudes. (De Varo, 2012) demonstrated that e-recruitment can lead to positive organization outcome and help the firms to grow as they have been able to get the right people for their vacancies. The self-service in human resource information systems is a technology platform that enabled employees and managers to access and modify their personal data via web browser from a desktop or centralized kiosk. The managers may use the self-service to access authorized information about the employees, their supervisors and also be able to fill up an open position.

The managers may use the HRIS to compile employee absenteeism and turnover data, to forecast human resource demand and also to manage annual employee review and compensation planning. This enables the human resource consumers to no longer interact directly with the service providers. The employee profile may include the employee name, classifications, work status, work history, jobs held in the firm, education level, training, skills competence, areas of expertise, talents, history of performance appraisals, future jobs desired, hobbies and interests which may be used for organizational planning. There are two main types of e-recruiting systems. An organization applicant tracking system is able to track demographic information, as well as the skills and competence of applicants and those in -Reviewed by the firm. The search major feature of applicant tracking systems could be screen out the qualified resumes based on certain established criteria, resulting in time saving for HR staff. Letters or e-mails can be automatically sent by the organization system to un- qualified applicants. The second major system is called a hiring management system (HMS). The primary difference between this and the applicant tracking system is that the HMS utilizes job boards and corporate websites to establish a match from a pool of applicants. An e- mail is sent to the firm when the system receives a resume that clearly matches the recruiter's desired qualifications. This means a quicker interview, which truly reduces time to hire. The major prospects can receive an offer more quickly, so a talented applicant does not go to another company.

The importance of e- recruitment is discussed hereunder:

Timely Access to information

Kovach and Cathcart, (2005); Ngai and Wat (2006), in their study on effects of e-recruitment on performance of public universities establish and are in agreement as to the timely access of information and saving administrative costs by recruiting online. Averbroom (2012) claims that

recruitment procedure is one of the last activities most organizations consider important for integration with performance, but it really is one of the most important. As talent becomes harder to find, recruiters look within their own house for the next applicant for that all-important job. Averbroom (202) further argues that recruiters want the ability to understand internal applicants in greater detail than the external candidates, including a performance history and learning details to assess their fit for open positions. The integration of performance into the HRIS, where recruiting data often is housed, would open a new door for continued focus on internal mobility. E-recruitment also would allow Kenyan public universities to profile candidate information on their qualifications and only be able to select the most qualified candidate and have access to this information in a timely span of time.

The realization that every organization faces the need to invest in its existing workforce - during the late 1990s and early 2000s, recruiting from the outside was the path organizations used to fill the need for talent. With the approach of the talent deficit of 2010, which will mean a shortage of more than 10 million knowledge workers in the United States alone, companies and institutions of all types realized that they must do a better job of re-skilling and retraining their existing labor. Cost reduction is amongst the major benefits of human resource information systems. According to Rangriz, Mehrabi and Azadegan (2011) in their study titled the impact of HRIS on strategic decisions in Iran, in which they concluded that it's time the public sector catches the wave of technological changes. These researchers observed that on-line recruiting dramatically increases exposure of an organization to applicants at a fraction of the cost of traditional job advertising methods. This response can further be corroborated by early advocates of the use of human resource information systems in the recruitment process. Johan (2014) proposes that use of e-recruitment saves on time and reduces the cost of recruitment process. Labor turnover trends can indicate particular problem areas that need to be corrected before further recruitment takes place. Alternatively if the problems are unavoidable the recruitment campaign can be modified to make allowance for them. Information such as job descriptions and person specifications is readily accessible for recruiters who need such, for example when preparing advertisements and interviewing applicants. Accordingly, human resource information systems can provide both background info to assist attraction, recruitment and selection and analytical information to evaluate its effectiveness.

Applicant Tracking

Applicant tracking is intended to identify the most qualified candidates, reduce paperwork, automate, manage workflows and tap into public to efficiently build your talent pool. It is also meant to monitor reports like time to fill a position and cost per hire with reporting capabilities that are tailored to organizational recruiting process. Besides it can enable candidates to search and apply for jobs online. Applicant-tracking systems may also include many features and capabilities, such as CV scanning and grading capabilities, profiles of job candidates schedule of duty, letter generation tools, interview-scheduling tools, cost-analysis reports, applicant demographic and equal employment opportunity information (Midiwo, 2015). Generally human

resource information systems makes provision for recording of details of recruitment activities such as cost, application tracking and evaluation, resume management, method of recruitment, interviewing and selection and time to fill the positions (Midiwo, 2015).

Digitization of Payroll Management (E- Payroll Management)

In the organizational context, performance is usually defined as the extent to which an organization member contributes to the achieving of organizational objectives. Employees are a primary source of competitive advantage in service-oriented organizations (Luthans & Stajkovic 1999). In addition, commitment performance approach views employees as resources or assets, and values their voice. Employee performance plays an important role for organization performance. The performance appraisal is a procedure which involved setting work related standard while assess the employee actual performance and providing feedback to the employee in order to remove performance deficiencies. The performance need to be clear for all so that the performance management process can be understood by both the management and the employees. Most of the studies have indicated that private and government sector firms use IT for activities related to the performance appraisal of employees and benefit administration. The benefit administration provided the administration of employee participation in the dimensions of benefits. This can be illustrated in case where the retired public servants would find it hard to claim pension payments due to lack of adequate records to show what they are entitled to in the ministries.

Hegel argues that salary administration, salary review procedure are important functions of HRM. The beginnings of human resource technology arose with the need to process large numbers of employee pay-slips which prior to 1960s was predominantly a manual or clerical exercise. The advent of use of technology to manage payroll signified the first major application of technology to an HR related problem. At the same time it was recognized that such payroll systems often held a useful repository of employee information, including data about jobs, pay, cost, absence levels and personal data. When integrated with payroll management, HRIS payroll interface can calculate salaries and provide a range of supporting functions such as preparing pay-slips and payroll reports. A HRIS may be closely linked to or even a component of an integrated financial management system (IFMIS). With a comprehensive payroll pay card, an organization can offer its employees 24/7 access to funds and on-time pay no matter what, for instance employees on vacation or sick leave and the like), elimination of time-consuming trips to the bank, and more (Hagel, 2012).

Salary Reports

A survey by Blair, Morgan, Spero and de Vries (2009) on addressing problems of Human Resource Information System in Swaziland, Uganda and Rwandan government departments revealed that due to poor payroll management, newly recruited staff were often not paid for three to four months and in a few extreme cases staff were not paid for an entire year. Some retired

staff died without receiving a pension. Several respondents noted that the process for identifying ghost workers-workers who remained on the payroll but were no longer active in the workforce due to retirement, termination, death and the like and stopping their salaries often took an average of six months, with some cases taking nearly two years. As concerns

As concerns compensation, for years, the purpose of the performance review has been to allocate annual salary increases. While this process has generally been handled manually, it also has seen a great deal of controversy and change. Compensation is truly the biggest driver of certain types of behavior and works differently for various job groups. Incentive compensation is a great tool to drive sales and specific performance targets, whereas base compensation is a great tool for driving overall employee satisfaction and improving performance. What has been missing in all links from compensation to performance is measurement of year-over-year increases in performance and the impact that compensation has on performance. Organizations that take an interactive view of the performance management process and ensure that compensation is just one of many outcomes, which might also include promotion, new opportunities for learning and development, and other forms of recognition, understand the importance of integrating performance and HRIS to measure total compensation and rewards. Organizations that still rely on a manual, semi-automated process as a once-a year, meet-the-requirement tool will soon realize that the war for talent and staffing shortages will make it necessary to approach pay-for-performance as an integrated process (Avebrok, 2012).

When a company invests in an affordable HRIS, it suddenly becomes capable of handling its workforce by looking at two of the primary components: that of payroll and that of HR. Beyond these software solutions, companies also invest in HRIS modules that help them put the full productivity of their workforce to use, including the varied experiences, talents, and skills of all staff within the enterprise (Rietsema, 2015).

Digitization of Performance Management (E-Performance Management)

Performance management (PM) is a process where the manager and employee create goals and plan to be achieved and the goals must be based on the operational plan of the organization together with the employee development path. The performance management system included with the performance appraisal and the employee development are said to be one of human resource management's risk or issues. The web-based performance system allows the managers to access extract and assess their employee faster and smoothly. It also helps a lot when the performance appraisals need to be calculated empirically. This is because, the system can help them to calculate and extract the percentage for them instead of the managers needed to calculate it manually. Other than that, the performance management system also can be categorized either as preformatted appraisal systems (a systems that allow the developmental of customized appraisals) or as a systems that diagnose performance problems. Web-based system also provides a calibration tool for the employee performance ratings that allows for visual inspection of the distribution of ratings for a population (Teotia, 2012).

Averbroom in his study of performance management defines it as an integral part of HRIS and that it allows managers and employees to monitor, schedule and complete the review process online. As a process it is a natural outshoot of all of the work that surrounds the human resource information systems. Whether the actual performance management solution exists within the same human resource information systems or in a separate application is not the issue. The issue is what the process means to the organization, what outcomes the organization desires, and that HR and human resource information systems professionals have an amazing opportunity to leverage their experience to make the performance management process a truly strategic tool to prove the value that HR brings to the organization (Averbroom, 2012).

Recent human Resource information system simulations have also been used to even predict future performances of employees (Harris, Pargett, Sutcliffe, Umulis, Ashe, 2011). The strategic role that learning functions play within organizations today demands that performance management, learning management and other strategic components of human capital management (HCM) become integrated and work together as a seamless process, instead of the silted approach that HR has taken for the past 60 years. Many organizations feel that they have an integrated process today, but what they actually have is an interface; a point at which independent systems interact. In the recently published IHRIM and Knowledge Infusion Workforce Performance survey, more than 95 percent of respondents said that their workforce performance processes are either somewhat or very limited. Organizations finally see the need to bring the two important processes of performance and learning together. The question is how to accomplish this initiative (Averbroom 2012).

Performance Appraisal

Human resource information systems can be integrated to the ERP solutions, which can enable companies to enjoy the ultimate benefit of an all-in-one system that can decrease errors, lower cycle times, reduces turnaround time, and support management decisions. Performance management is an integral part of this capability and allows managers and employees to monitor, schedule and complete the review process on line.

Again advances in technology over the past decade make it possible to deploy performance management tools to the workforce—including employees, managers and executives—with little to no infrastructure or training. Technologies such as on-demand, XML integration and hosted solutions allow HRIS professionals the opportunity to roll out new productivity measurements faster, better and cheaper than ever. Also, reporting technology, including data marts, data warehouses and executive dashboards, brings the results of these tools directly to those who make decisions about how the workforce impacts the business like never before. The performance evaluation subset of HRIS includes information regarding performance ratings, the date these ratings are received, type of appraisals that were used, comments therein and performance objectives and goals. Recent human Resource information system simulations have also been used to even predict future performances of employees (Harris, Pargett, Sutcliffe,

Umulis, Ashe, 2011). The strategic role that learning functions play within organizations today demands that performance management, learning management and other strategic components of human capital management (HCM) become integrated and work together as a seamless process, instead of the siloed approach that HR has taken for the past 60 years. Many organizations feel that they have an integrated process today, but what they actually have is an interface; a point at which independent systems interact. In the recently published IHRIM and Knowledge Infusion Workforce Performance survey, more than 95 percent of respondents said that their workforce performance processes are either somewhat or very limited. Organizations finally see the need to bring the two important processes of performance and learning together. The question is how to accomplish this initiative (Averbrook 2012).

HR Score Card

The HR score card is one of the strategies that come into focus when clarifying HR impact on organizational performance. Operational outcomes of the score card process may include customer satisfaction, service quality, speed of delivery and productivity; doing more with less (Hagood and Friedman, 2002). Further HR should improve on its score keeping process; measuring HR's impact on organizational performance as well as alternate HR roles in the score keeping process.

Employee Turn- over Record

Employee turnover, which is the total of the number of employees who resign for whatever reason, plus the number of employees terminated for performance reasons, and that total divided by the number of employees at the beginning of the year. This may be measured by analyzing the records that human resource information systems contain of each employee. The separation section lists reason and date of separation for each employee; monthly or when requested; the HRIS group will query the database and provide Departmental Heads with Turnover Reports by posting graphs of each report on the Intranet. It is only a handful of firms which have embraced this level of HRIS such as that the workforce analytics module in Human Resource Information Systems can be used to give crucial information about return on investment on employees. All this information allows for proper decision making in an organization. Furthermore recent human Resource information system simulations have also been used to even predict future performance of employees (Muriithi, Gachunga & Mburugu, 2014). All this information allows for proper decision making in an organization. As talent becomes harder to find, recruiters look within their own house for the next applicant for that all-important job. Recruiters want the ability to understand internal applicants in greater detail than the external candidates, including a performance history and learning details to assess their fit for open positions. The integration of performance into the HRIS, where recruiting data often is housed, would open a new door for continued focus on internal mobility. Also through competency management - understanding the skills and abilities of the workforce continues to baffle most executives. What has been missing in all links from compensation to performance is measurement of year-over-year increases in

performance and the impact that compensation has on performance. Organizations that take an interactive view of the performance management process and ensure that compensation is just one of many outcomes, which might also include promotion, new opportunities for learning and development, and other forms of recognition, understand the importance of integrating performance and human resource information systems to measure total compensation and rewards. Organizations that still rely on a manual, semi-automated process as a once-a-year, meet-the-requirement tool will soon realize that the war for talent and staffing shortages will make it necessary to approach pay-for performance as an integrated process (Midiwo, 2015).

Digitization of Training and Development (E-Training)

The study by Lin (1997) posited concerning e-training that the training software gives provisions for skills inventory. Lin further observes that the e-training software is used to store record of acquired skills and monitor the skill data base, at both employee and organizational levels. The system can equally be used by managers, employees and training staff to plan and administer all types of training interventions. Typically such systems will hold a range of data: a catalogue of learning options, course dates, HR skills inventory, record of training expenses incurred; competency or training requirements associated with positions/jobs, employee training data (learning plan, training history competencies, qualifications and so on).

HR Skills Inventory

The HR skills inventory capability provides succession planning tools needed to implement and maintain comprehensive talent management, and identify high potential employees as part of an organization wide succession planning process. This capability allows for the establishment of core competency requirements against roles, at all levels within the organization. Appointee's capability is then measured against the roles competencies and supports employee progress towards acquisition of competencies, through training and professional development. With regard to training and development work focus has been through human resource information systems. The system helps track training, skills and competencies. Human resource information systems can be used to manage human capital and maximize talent. The system stores electronic resumes for each current employee, which gives the company an electronic inventory of its human capital. It can track where skills are in short supply and HR can develop appropriate training; training needs analysis, training cost benefit analysis, promotion analysis; this supports decision on career management, simulation, training evaluation and decisions (Lin & Lee, 2006). De vries et al, (2008) argues that accuracy in data provides for a qualified workforce hence organization performance.

Further studies by Shibly on effects of e-recruitment on organization performance shows that for better tracking and management of employee training, specific training often is required by regulators, and documenting successful course completion can be a major burden for organizations. Employees may be required by law to complete Occupational Safety and Health Act training, sexual harassment courses or patient care procedures. An HRIS can help employees

track which courses have been successfully completed and what upcoming training opportunities may fit their needs. Managers can track the training as well as reducing redundancy and training costs. In one option, a Learning Management System (LMS) can be used to manage the administration, tracking and reporting of training in the organization. By allowing the organization and employees to develop talent and skill profiles, sign up for courses, and register course attendance, an LMS can cut costs, streamline training and empower employees to manage their own skill development more effectively-training capability provides employee engagement survey and succession planning tools, needed to implement and maintain comprehensive talent management, and identify high potential employees as part of an organization wide succession planning process. This capability allows for the establishment of core competency requirements against roles, at all levels within the organization (Shibly, 2011).

Generally HRIS is configured to evaluate programs, policies or practices, for instance to evaluate the effectiveness of a training program. The training and development sub system of HRIS includes data on an employee's skills and competencies, training courses taken, costs of courses, developmental activities and career planning in terms of which positions might be most appropriate for an employee based on skills and competencies. Human resource information systems must now be judged on whether it enhances the firm's competitive advantage by adding real value, measurable economic value for instance shortened training circle time, not merely on its perceived value like training builds skills (Huselid, Becker & Beatty, 2005).

Track and Administer Interventions

In most situations, human resource information systems will also lead to increases in efficiency when it comes to making decisions in e-training. The decisions made should also increase in quality training as a result, the productivity of both employees and managers should increase and become more effective. These systems enable employees to manage much of their own HR administrative work. They can take care of many routine transactions whenever they wish. In addition to their former operational role, HR professionals can also act as a competency manager by arranging the right people to the right positions in the right time with their new skills.

According to El – kot and Leat (2011) in their study on e-training observe that career and succession plans - most existing HR solutions provide tools and technologies to store career and succession plans for the workforce. Integrating these plans with performance management processes is crucial to support employee growth and job satisfaction. Executives have requested this data for years, as retention is a top metric within most companies. Today, this data is not a request, but a requirement, and the need to automate a very manual process is crucial for success and keeping a competitive edge. They further observe that competency management: - understanding the skills and abilities of the workforce continues to baffle most executives. Many organizations know more about their IT investments and expenses than about their people. On average, companies spend 8 percent of their total expense line on IT and 70% on labor. The fact that a company would know more about how much memory is in a computer, who sends email to whom and what Web sites get visited most frequently than what their —most important asset

knows illustrates the need for a renewed critical focus on assessing the true value of the workforce.

CONCLUSION

These days, the digitization is transforming the traditional style business model. Among all functions human resources management (HRM) is largely affected by the digitization because of increasing usage of employee related software, IT enabled HR functions, Social networks, and mobile solutions. The organizations are infusing digital approach in handling their human resources (HR). There is a need to persistently develop and innovate the human resource practices to remain competitive in the business. To deliver the best results and face the competitive market the upgrading of HR is inevitable. Therefore, technical advances are being made in the field of human resource with time and gradually the customary HRM is being replaced by new and technically advanced HRM.

RECOMMENDATIONS

- i. Organizational management and HR managers need to continue investing towards improvement of the human resource information systems with a view to enhancing their service delivery. The use of recruiting software packages that can be customized to meet organization's specific needs for each job is recommended.
- ii. Organizational management should identify the aspects of e-payroll that affects their operations. Furthered-payroll management will help the organization perform calculations that have effects on the universities as a whole including reduction of costs in HR functions thereby enhancing the overall performance.
- iii. Organizational management should establish reasons why their e-performance management fail to enhance real time communication and find practical ways to improving them.

REFERENCES

- Abbas, J. (2021). Crisis management, transnational healthcare challenges and opportunities: The intersection of COVID-19 pandemic and global mental health. *Res. Glob.*
- Abbas, J., Mubeen, R., Iorember, P.T., Raza, S., & Mamirkulova, G. (2021). Exploring the impact of COVID-19 on tourism: transformational potential and implications for a sustainable recovery of the travel and leisure industry. *Current. Res. Biblic Stud.* 2, 100033.
- Averbook, J. (2012). Integrating Performance Management and HRIS, *Journal of Management Information Systems*, 7 (8), 25 – 38.

- Barron, M., Chhabra, D., Hanscome, R., & Henson, R. (2004). Exclusive panel discussion: Tips and trends in HRIS. *HR Focus*, 81(5), 6-7. Bee, F.& Bee, R. (2002). *Managing Information and Statistics*. London: Chartered Institute of Personnel and Development.
- Bharadwaj, A. (2000). A resource-based perspective on information technology capability and firm performance: An empirical investigation. *MIS Quarterly*, 24(1).
- Blair, G., Morgan, K., Spero J.C., & de Vries, D.H. (2009). *Evaluation of human resources information system strengthening in Rwanda*. Chapel Hill, NC: Capacity Project.
- Cheruto, T. S. (2005). A survey of the use of human resource information systems in the banking sector in Nairobi. (Unpublished MBA project). University of Nairobi, Nairobi.
- Davidescu, A.A., Apostu, S.A., Paul, A., & Casuneanu, I. (2020). Work flexibility, job satisfaction, and job performance among Romanian employees-Implications for sustainable human resource management. *Sustainability* 12 (15) (2020).
- De Leon, V. (2020). *Human Resource Management during the COVID-19 Pandemic*. California State University, Northridge, 2020.
- De vries, D., Blair G., & Kiarie M. (2009). Evaluation of the capacity projects: HRIS strengthening process in Swaziland, Uganda and Rwanda. GTRI News and Publications. Retrieved from www.gtri.gatech.edu/.../computerizing-cr.
- Dennerlein, J.T., Burke, L., Sabbath, E.L., Williams, J.A.R., Peters, S.E., Wallace, L. (2020). An integrative total worker health framework for keeping workers safe and healthy during the COVID-19 pandemic. *Hum. Factors*, 62 (5), 689–696.
- Dery, K., Grant, D., & Wilben, S. (2009). Human Resource Information Systems: Replacing or enhancing HRM. http://www.ileradirectory.org/15thworldcongress/files/papers/Track3_DERBY. Retrieved on 12th March 2015.
- Dess, G.G., Lumpkin G.T., Eisner, A.B. (2010). *Strategic management: creating competitive advantages (5th edition)*. McGraw-Hill Higher Education, New York.
- Dessler, G. (2005). *Human Resource Management, 10.edution*. USA: Prentice Hall.
- DeVaro, J. (2008). The labor market effects of employer recruitment choice. *European Economic Review*, 52 (2), 283–314.
- Gamage, A. S. (2014). Recruitment and selection practices in manufacturing SMEs in Japan: An analysis of the link with business performance. *Ruhuna Journal of Management and Finance*, 1(1), 37-52.

- Gatewood, R. D., Field, H. S. & Barrick, M. (2008). *Human resource selection (6th ed.)*. Thomson business press, South Western
- Gürol, Y., Wolff, A. & Ertemsir, Berkin, E. (2010). E-HRM in Turkey: A case study. Encyclopedia of E-Business Development and Management in the Global Economy. Retrieved from www.investopedia.com/terms.
- Hagood, W., & Friedman, L. (2002). Using the balanced score card to measure performance of your HR information system. *Public Personnel Management*, 9 (31), 543 -57.
- Harris, D. M., & Desimone, R. L., (2005). *Human resource development*. Forth Worth, TX: Dryden Press,
- Harris, R.E., Pargett, M., Sutcliffe, C., Umulis, D., Ashe, H.L. (2011). Brat Promotes Stem Cell Differentiation via Control of a Bistable Switch that Restricts BMP Signaling. *Dev. Cell*, 20(1), 72-83.
- Hays, S., & Kearney, R.C. (2001). Anticipated changes in human resource management: View from the Field. *Public Administration Review*, 61(5), 585-597.
- Huselid, A. M. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, 38(3), 635-672.
- Huselid, M. A., Becker, B. E., & Beatty, R. W. (2005). *The workforce scorecard: Managing human capital to execute strategy*. Boston: Harvard Business School Press.
- Jahan, S. (2014). *Human Resource Information Systems: A Theoretical Perspective*. New Delhi: Scientific Research Publishing Inc
- Kar, A. & Bhattacharya, S. (2009). E-Recruitment and Customer Satisfaction: An Empirical Study in and Around Kolkata. *ICFAI Journal of Management Research*, 8(2), 34-54.
- Kovach, K. A. & Cathcart, C. E. Jr. (1999). Human resource information systems (HRIS): Providing business with rapid data access, information exchange and strategic advantage. *Public Personnel Management*, 28 (2), 275-282.
- Lengnick-Hall, M. L., Gaunt, P. M., & Kulkarni, M. (2008). Overlooked and underutilized: People with disabilities are an untapped human resource. *Human Resource Management*, 47, 255-273
- Lin, H. F. & Lee, G. G. (2006). Determinants of Success for online communities: An Empirical study. *Behavior & Information Technology*, 25 (6), 479 -488.

- Lin, Y. Y. (1997). The future of human resource management in Taiwan, Proceedings of the Conference of Two Straits Human Resource Development and Management, China Labor Association, Beijing. (in Chinese)
- Lippers, S. K. & Swiercz, P. M. (2005). Human resource information systems & Technology trust. *Journal of Information Science*, 31(5), 17-21.
- Luthans, F. & Stajkovic, A.D. (1999). Reinforce for performance: The need to go beyond pay and even rewards. *Academy of Management Executive*, 13(2), 49-57.
- Madero Gomez, S., Ortiz Mendoza, O.E., Ramírez, J., Olivas-Lujan, M.R. (2020). Stress and myths related to the COVID-19 pandemic's effects on remote work. *Management Research*, 18 (4) 401–420.
- Midiwo, J. (2015). Influence of human resource information systems on the performance of Kenya public Universities. UN published doctoral dissertation. NAIROBI: Jomo Kenyatta University of Agriculture and Technology.
- Muriithi, G. J., Gachunga, H. & Mburugu, C. L. (2014). Effects of Human resource information systems on Human resource management practices and firm performance in listed commercial banks at Nairobi securities exchange. *European Journal of Business and Management* 6 (29).
- Nagendra, A., & Deshpande, M. (2014). Human Resource Information Systems (HRIS) in HR planning and development in mid to large sized organizations. *Procedia - Social and Behavioral Sciences*, 133, 61-67.
- Nangia, M., & Mohsin, F. (2020). Revisiting talent management practices in a pandemic driven VUCA environment - a qualitative investigation in the Indian IT industry. *Journal of Critical Review*, 7 (7), 937–942.
- Ngai, E. W. T. & Wat, F. K. T. (2006). Human resource information systems: A review and empirical analysis. *Personnel Review*, 35(3), 297-314.
- Opiyo, A. P. (2015). Effects of human resource information system on performance of commercial banks In Kenya: A Case of Kenya Commercial Bank. *Journal of Business Management*, 1 (1) Paper 2.
- Palmer, I., Dunford, R., & Buchanan, D.A. (2017). *Managing Organizational Change: a Multiple Perspectives Approach, 3rd Edition, International ed.* New York: McGraw-Hill Education.
- Parry, E., & Strohmeier, S. (2014). HRM in the digital age-digital changes and challenges of the HR profession. *Employee Relations*, 36(4).

- Rangriz H., Mehrabi J. & Azadegan A. (2011). The impact of human resource information system on strategic decisions in Iran. *Computer and Information Science*, 4(2), 81-87.
- Rawash, H. N. & Seydan, S. D. (2012). The Impact of e-HRM on Organizational Market Share in Jordan. *International Journal of Business and Social Sciences*, 3 (24), 113-120.
- Rietsema, D. (2015). HRIS Payroll Software. www.hrispayrollsoftware.com/blog/ Retrieved on 26th July 2015.
- Risley, C. (2020). Maintaining performance and employee engagement during the COVID19 pandemic. *Journal of Library Administration*, 60 (6) (2020) 653–659.
- Roggeveen, S., Chen, S.W., River Harmony, C., Ma, Z. & Qiao, P. (2020). The adaption of post COVID-19 in IHRM to mitigate changes in employee welfare affecting cross-cultural employment, IETI Transact. *Econom. Manag.* 1 (1), 1–18.
- Ruel, H., Bondarouk, T., & Looise, J. (2004). E-HRM: Innovation or irritation. An explorative empirical study in five large companies on web-based HRM. *Management Review*, 15 (3), 364-381.
- Shirbly, A. H. (2011). Human resource information systems success assessment. An investigative model. *Australian Journal of basic and applied sciences* 5(5), 157-169.
- Shiri, S. (2012). Effectiveness of HRIS on HR Functions of the Organization. *US – China Education Review*, 4 (9), 830-839.
- Troshani, I., Jerram, C., & Rao, S., (2011). Exploring the public sector adoption of HRIS. *Industrial Management & Data Systems*, 111 (3), 470-488.
- Westerman, G., & Bonnet, D. (2015). Revamping your business through digital transformation. *MIT Sloan Management Review* 56(3), 10-13.
- Yoosefi Lebni, J., Ziapour, A., Mehedi, N., & Irandoost, S.F. (2021). The role of clerics in confronting the COVID-19 crisis in Iran. *J. Relig. Health*, 1–8.
- Yoosefi Lebni, J., Irandoost, S., Mehedi, N., Sedighi, S., & Ziapour, (2021). The role of celebrities during the COVID-19 pandemic in Iran: opportunity or threat? *Disaster Med. Public Health Prep.* 1–2.

Assessing Compensation Policy on Staff Attraction and Retention in Deposit Money Banks in Nigeria

Ejike, Ifeyinwa Justina¹, Ajike, Ada Kalu² and Chukwujama, Ngozi Comfort³

¹Department of Management, Faculty of Business Administration, University of Nigeria, Enugu Campus | E-Mail: ifeyinwa.ejike@unn.edu.ng

^{2,3}Department of Business Administration, Management, Faculty of Management Sciences, Nnamdi Azikiwe University Awka, Anambra State | E-Mail: mmandeodo@yahoo.com; ngo4real1190@yahoo.com

Abstract: This work is focused on the effect of compensation policy on employee retention in Deposit Money Banks in Nigeria with particular reference to Fidelity Bank Plc Nigeria, Onitsha Branch, Anambra State, Nigeria. The study sought to evaluate the extent to which financial compensation as provided by any organisation as well as non-financial compensation in terms of work environment affected employee retention as a means to achieving high productivity in Nigeria's Deposit Money Banks. The research design adopted was a survey method. Data were collected from both primary and secondary sources. The study population was 71 and sample size was determined through Taro Yamani as 60. Out of 60 copies of questionnaire distributed to the respondents, only 49 copies were correctly filed and retrieved. Therefore, the analyses for the study were based on 49 respondents. Based on the analyses of the data collected, the findings of the study showed that total pay package has significant effect on employee retention; that there is a significant positive relationship between work environment and employee's attraction in DMB in Nigeria. The study concluded that organizations that want to continue to attract and retain valuable and talented workforce need to develop policies that allow their employees to be successfully built into the work processes and procedures. The study then recommends that management of Deposit Money Banks should constantly review employee's compensation plan content and possibly re-design them to meet the changing needs of the time considering the tedious and demanding nature of the banking jobs. Also that management should create a more inclusive work environment where employees will enjoy a cordial relationship with the work processes which will lead to job satisfaction through psychological attachment to their work.

Keywords: compensation policy, deposit money banks, retention, staff attraction,

INTRODUCTION

1.1 Background of the Study

The role of Human resources professionals in hiring and retaining the right employees is becoming more and more important to an organization's overall strategy. Employees are organizations' key resources and the success or failure of organizations center on the ability of the employers to attract, retain, and reward appropriately talented and

competent employees (Armstrong, 2003). Most times, when organizations make enormous efforts to attract handfuls of employees and sustain them in the organization, compensation plays a significant role especially those who give outstanding performance or unique skill which is indispensable to the organization (Lawler, 1990). Hence, compensation is considered the most important factor for attracting and retaining the talent employees (Willis, 2000).

Hope and Mackin (2007) posit that employees of large establishments stay in their jobs longer than employees of small establishments. When a firm offers benefits, it decreases the probability of an employee's leaving in a given year by 26.2 percent and increases the probability of staying an additional year by 13.9 percent reducing labour turnover. Labour turnover is the movement of employees in and out of an organization. It is commonly used to refer to the number of employees leaving an organization. It is also defined as the ratio between the numbers of employees that leave to the total number employees over a given period usually a calendar year. According to a study by Mercer (2003), employees will stay if they are rewarded.

An organization's ability to attract and retain staff is the two essential components of talent sustainability even though it has become increasingly more difficult for organizations to hire and retain qualified talent (Cotton & Tuttle, 1986). Total compensation includes a total rewards approach because monetary compensation is not always the only factor (or even the most important factor) that employees consider when evaluating a job.

Companies today routinely provide a compensation package that includes both cash benefits (salary, paid leave, paid holidays and bonuses) and non-cash or deferred cash benefits (insurance and retirement plans). Small businesses are expected to be at a competitive disadvantage to larger firms in terms of their ability to match the high salaries and availability of fringe benefits. (Hope & Mackin, 2007). Employees need to be given opportunities to participate and to influence actions and decisions.

There had been a constant mobility of skilled and unskilled staff from one bank to another. The skilled persons critically hardly stay for long in one bank before moving to another bank and this mobility has been tagged as "Brain Drain". This will amount to high cost of Recruitment and Training to the banks which in short run will affect the productivity of the banks. This study therefore attempts to examine compensation policy on employee attraction and retention of Fidelity Bank Plc, Onitsha, Anambra State.

1.2 Statement of the Problem

One of the biggest challenges for any organization is its ability to hire and retain staff. Both private and public sector organizations are experiencing this problem. Identifying factors that influence staff attraction and retention and then developing strategies to attract quality talent and to increase employee retention is essential. It has been observed that competing for top talent on price alone through compensation and benefits is a no-

win proposition, and in the next section we will provide several employee retention strategies beyond compensation and benefits. Some people do quit because they are unhappy with their pay. Also true is that people often quit to take higher paying jobs elsewhere. The costs associated with losing employees and recruiting, selecting and training new employees often exceed 100% of the annual compensation for the position. In addition to these direct financial costs, losing employees can also lead to work disruptions, loss of organizational memory along with tacit or strategic knowledge, losses in productivity or customer service, loss of mentors, diminished diversity and even turnover contagion where other valued employees follow the leavers out the door. Even when tough labor markets prevent many employees from moving, there is the possibility of “pent-up” turnover. When job markets improve, many employees may start looking for new alternatives. Thus the study focuses on compensation Policy as a means of attracting and retaining employees in the Banking Industry with specific interest in Fidelity Bank Plc, Onitsha, Anambra State, Nigeria.

1.3 Objective of the Study

The broad objective of this study is to assess compensation policy on staff attraction and retention in Nigeria’s Deposit Money Banks. The specific objectives of the study are to:

- i. determine the extent to which employees’ total pay package affects retention in Deposit Money Banks in Nigeria.
- ii. examine the relationship between employees work environment and retention in Deposit Money Banks in Nigeria

2.0 REVIEW OF RELATED LITERATURE

2.1 Conceptual Framework

2.1.1 Compensation

Compensation is the total reward that employees receive in exchange for a service performed in an organization. It can include direct pay (salaries and wages) and indirect pay (benefit programs). The types of compensation are base pay, commissions, overtime pay, bonuses, profit sharing, merit pay, stock options, travel/meal/house allowance, and benefits including dental, insurance, medical, vacations, retirement and taxes. Compensation is the most crucial issue in attracting and keeping talent. Inadequate reward, lack of recognition from managers, peers and customers enhances labour turnover. A compensation system is a system that is designed to determine amount of pay given to an employee in return for their contribution to production. Compensation plays an important role in determining the commitment levels of employees and their retention even if it is one of the crucial issues as far as attracting and keeping talent in organizations is concerned (Willis,2000). Competitive compensation packages are imperative. Employers must know how the compensation they offer for critical positions are compared with compensation for similar positions at other organizations in the sieved market (Gering & Conner, 2002). Thus, organization that offered high compensation package is compared to others with a large numbers of candidates applying for induction

and have lower turnover rate. Moreover, with high compensation package organizations also create culture of excellence (Lawler, 1990).

Compensation is a crucial instrument for the attraction and retention of talented employees that are dedicated to their responsibilities within the firm. Compensation management aims to promote the achievement of business goals through attracting, motivating and retaining hardworking employees. Compensation management is a crucial component of the overall management of an organisation. It refers to the process by which employees are remunerated for their input at the workplace (Khan 2011).

Compensation management requires accuracy and precision as, if not adequately and objectively dealt with, it may hamper organisation's operations. Compensation is not only in the form of money, but also in non-cash form. Benefits, such as pension, life and health insurance, and retirement plans, and allowances that include company cars or subsidized transportation, represent a significant pay element in many large firms. In addition, for tax advantages and economies of scale of purchasing that make it economically advantageous for the firm to provide those element, the compensation are always viewed benefits as a tools for attracting and retaining desired employees. Maslow brought in the need hierarchy for the rights of the employees. He stated that employees do not work only for money but there are other needs too which they want to satisfy from their job, i.e. social needs, psychological needs, safety needs, self-actualization, etc. (Octavious, 2015). Lawler (2003) argues that when remuneration is linked to effort, both individual and organisational performance is enhanced. Furthermore, tying remuneration to performance improves employee motivation, as workers become more results-oriented. Employees will make more effort to achieve results when they are aware that their remuneration package is determined by their contribution to the firm's performance.

Compensation as a strategy for attracting and retaining employees

To put compensation in that larger picture, our discussion begins with a brief overview of retention strategy development. As with most strategic initiatives, it starts with an assessment of the organization, including an assessment of the values, vision and principles that drive behavior in the organization. This should drive whom to hire, whom to keep and whom to reward. The people who share the organization's values are likely to be the right choice for the business in the long-run. By developing a retention strategy around the right employees, the organization will be much more effective in retaining its employees during any economic period. Implementing compensation and benefits programs that reward the right behavior and performance will help attract the right people to the organization, and it will also help the best people become more productive. In addition to a retention strategy, a communications plan built on a strong foundation of trust enables effective implementation of the new retention and compensation strategies. As this paper illustrates, a combination of these different activities allow organizations to become more productive.

Just as the retention strategy must support the company's values and vision, so must the compensation and benefits package. Both must also focus on and support the employees' needs within the context of serving the business strategy. Researching key areas that are important to the organization's employees in terms of a compensation and benefits package is key. Mapping this information into the overall plan and budget of the organization ensures that the salary and benefits program adds value to employees and the organization.

Categorization of Compensation

- a. **Intrinsic and Extrinsic Rewards:** Intrinsic rewards are self-generated rewards which are anchored on self-contentment arising from the job itself and this often referred to as intangible rewards such as being part of a team, ego as a result of achieving a goal and self-importance and satisfaction arising from one's own work/effort. While extrinsic rewards are emoluments provided by the superiors such as salary increment, bonus, sales commission etc. and this is also referred to as the tangible rewards.
- b. **Financial and Non-financial Rewards:** Financial rewards are the rewards received by employees in monetary forms and this assists the employees to boost the financial and social status. But non-financial rewards is made up of inexpensive rewards to heighten the employees morale like long service award, best employee of the year etc.
- c. **Performance-based and membership-based Rewards:** Firms equally offer rewards to its employees based on their membership in that organisation or on the basis of accomplishing high performance.

Financial Compensation

Financial compensation is one of the basic types of extrinsic monetary rewards which cover the basic needs of income to survive, a feeling of stability and consistency, and recognition. Fair wages are the foundation element of the implied and contractual bond between employers and employees, the underlying supposition being that money can persuade behavior (Parker & Wright, 2001).

Organizations often offer high pay packages i.e. stock options, special pay, retention pay, gain share pay, performance base pay and bonus etc. for attraction and retention of talented employees of the market.

In today's economic times, financial reward such as money is still the primary incentive that causes employee to do better work. Therefore, wages influence the attraction and retention of the workforce.

(a) Wages and Salary: Wages are what is paid to employees who are not permanently employed and typically pertains to hourly rates of pay (the more hours worked, the greater the pay), while salary is what is paid to people that are permanently employed and this is at a fixed weekly, monthly, or annual rate of pay. Salary is a huge motivator for many employees. Making the connection between money and performance motivates employees to be more productive and to go the extra mile (Zingheim and Schuster, 2007). It is an agreed payment given at regular intervals in exchange for work done. Caring

about employees on a personal level is important as well. Those employees who do work well to support the company may not receive much salary for their efforts so employers that choose to under-pay their employee know that these employees will work hard for minimal pay, and these employers will pay them accordingly. At the same time, the same employers will pay more to other employees who are not willing to work for minimal compensation. This salary disparity leads to dissatisfaction because eventually the hard worker will notice that he or she is not being paid fairly for the amount of work they are doing, and will begin searching for another company that will appreciate his or her labour.

(b) Incentive Plans: This is an additional compensation which is above and beyond the employees wage or salary provided. It may be long term or short term in nature.

Productivity Linked Wage Incentives:

Sometimes wage incentive plans are linked with payment of wages to increase productivity at individual or group level. Their quantum is based on actual output against targets.

Bonus:

It is the incentive which is given over and above the salary or wages of the employees. Many companies offer the bonus during the festivals Easter, New Year etc. Bonuses occur one time per year or at a certain number of predetermined times each year. This extra cash is by no means guaranteed and can range from as much as several thousand naira (or more, depending on the job) to nothing at all.

Co-partnership/Stock Option:

Under this incentive scheme, employees are offered shares at a price which is lower than the market price. This practice helps in creating a feeling of ownership among employees and motivates them to give their maximum contribution towards organisational growth. For example, in Infosys this scheme has been successfully implemented. When you grant your employees stock options, you give them the right to purchase company stock at a fixed price (usually below market value) over a certain amount of time. Stock options encourage staff members to operate more as business partners, tying personal reward to the company's financial success.

Profit sharing: It refers to providing a share to employees in the profits of the organisation. This helps in motivating the employees to improve their performance and to contribute their maximum effort for increasing the profits. Companies that have profit-sharing programs set aside a percentage of their profits for employees. The better the company does, the higher the profits and the more money the employees receive. When employees have a financial stake in the company, they tend to work harder and smarter. Profit sharing plans can be a good alternative for small companies who do not have enough employees or assets to find a good plan provider.

Raises: In most companies, raises are a once-a-year event greatly anticipated by employees. The amount generally varies depending on the individual's performance and the philosophy of the company.

Retirement Benefits:

Various retirement benefits such as provident fund, pension and gratuity, act as an incentive to an employee when they are in service in the organisation.

Perquisites:

Various perquisites and fringe benefits, such as car allowance, housing, medical aid, education to the children etc. provided by the companies over and above the salary, also help in motivating the employees.

(c) Employee Benefit Programmes: Time off with pay, pension scheme, tuition reimbursement, recreation activities, cafeteria services are all examples of employee benefit programmes. However, most experts agree that money is not the long-term answer for hiring, especially for keeping high skilled employees (Leinfuss, 1998).

Non-financial Compensation

Non-financial compensation is also known as non-profits rewards. Nowadays, a lot of employees do not seek for financial compensation alone. They also prefer non-financial compensation for example, training opportunities, job challenges, opportunity to be promoted, recognition and conducive working environment (Son, 2015). Non-monetary types of compensation can be very meaningful to employees and very motivating for performance improvement and creative use of personalized non-monetary rewards reinforces positive behaviors and improves employee retention and performance.

Companies must consider the non-financial benefits that can be rewarded to their employees. Employees will therefore continuously serve the company if the company pays attention to their needs and welfare. Hence, providing compensation which includes financial and non-financial rewards is one way to retain employees in the organization.

Employee Satisfaction

Employee satisfaction is defined by Batol, 1992 as the result of a psychological comparison process of the extent to which various aspects of their pay (e.g. salaries, benefits and incentives) measure upto what they desire. Thus, the larger the gap between what employees have and what they want from their jobs, the less satisfied they are; (employees tend to be most satisfied with their jobs when what they are expecting matches with what they actually collect. An employee's overall satisfaction is the cumulative result of comparisons that she makes between what her job provides and what she desires in various areas. The fact that perceived importance makes such a big difference in how employees feel also has implications for management. There are factors that contribute to employee satisfaction as; adequate salary, good working conditions, job security, regular promotion, recognition, etc.

Job Enrichment: Job enrichment simply means adding the contents to a job leading to increased responsibility, scope and challenge in its performance. Particularly, the executives working at the higher levels often prefer to job enrichment because it makes job more challenging.

They derive higher satisfaction by performing more and more challenging jobs. Thus, job enrichment as an incentive motivates the executives to exert for accomplishment of their goals. Job enrichment is a by-product of job design which is discussed subsequently.

Participation: Subordinate staff should be associated with the decision-making process. Employees should be encouraged to participate in the decision making process. Workers should have a hand in setting their goals so that they have a personal responsibility for achieving the task. Inviting workers to participate in management gives worker's a psychological satisfaction that their voices are also heard. This imbibes a sense of importance among the workers. They should be given more latitude in deciding about certain routine matters. An effort should be made to create a pride in the job among staff members.

2.1.2 Employee Attraction

The attraction of applicants is an important component to an organization's overall success. As such, recruitment is extremely important because, through it, applicants learn about organization, which ultimately influences their job choice decisions. Applicants' attraction to the organization is influenced by job and organizational related characteristics during recruitment process. Thus, information presented to applicants during recruitment including rewards is critical because applicants make inference about specific job aspects based on larger scale facts that they are given (Rynes & Cable, 2003). At specific vacancy characteristics, pay level is one that stands out as being important to most applicants. Pay is considered one of the most effective and important job attributes in determining applicants' attraction to the organization. In examining specific pay preferences, it is found that students preferred organizations with high pay rather than low pay, flexible rather than fixed benefits, individual rather than team based pay, and fixed rather than variable pay. Thus, attracting employees is likely to be most effective if strategic methods are used to manipulate those characteristics of the job and the organization in order to make them the most appealing to applicants (Rynes & Cable, 2003).

Employee benefits also influence applicants' attraction. As a form of noncash compensation, by offering a large amount of benefits a company can compensate for moderate salaries. In supporting this, Browne (1997) showed that potential employees, including men and women from different cultures, were willing to accept lower salaries if benefits of importance to individual also were offered.

2.1.3 Employee Retention

Retention is a complex concept and there is no single recipe for keeping employees with a company. In literature, retention has been viewed as an obligation to continue to do business or exchange with a particular company on an ongoing basis (Zineldin, 2000). Retention is driven by several key factors which ought to be managed congruently: organizational culture, communication, strategy, pay and benefits, flexible work schedule and career development systems (Logan, 2000).

It is found that human resource management practices in compensation and rewards, job security, training and developments, supervisor support culture, work environment and organization justice can help to reduce absenteeism, improved employee retention and better quality work (Ichniowski, Shaw &Prennushi, 1997).

2.2 Theoretical Framework

Equity Theory

Equity theory propounded by Stacey J. Adams suggests that employee perceptions of what they contribute to the organisation, what they get in return, and how their return-contribution ratio compares to others inside and outside the organisation,' determine how fair they perceive their employment relationship to be (Adams, 1963). Perceptions of inequity are expected to cause employees to take actions to restore equity. According to this theory, employees who see themselves as being under-rewarded will experience distress. The theory, primarily, focuses on ensuring that the distribution of compensation and benefits is fair to all members.

The theory is related to this study in the sense that Pay inequality affects employee satisfaction because pay is positively associated with the job satisfaction of the employees. Employees feel satisfied or dissatisfied with their pay – not so much by the total amount received, but by comparing their benefits with those enjoyed by others in the same field.

2.3 Empirical Review

Chikezie, Emejulu and Aniekwe (2017) studied Compensation Management And Employee Retention of Selected Commercial Banks In Anambra State, Nigeria. This study was necessitated due to rate of employee turnover, which is increasing in Nigeria banking system; a situation whereby employee continuously move from onebank to another in a short period of time. The study examines the relationship between Salary and Employee satisfaction in selected Commercial banks in Awka. The study employed descriptive research design. Primary source of data was the major instrument used for this study. 60 copies of questionnaire were administered to employees of selected commercial banks (First bank, Fidelity and Sterling bank); 56 were retrieved. Pearson's Product Moment Correlation was used for the analyses. The findings revealed that there was a positive weak relationship between salary and employee satisfaction. This shows that employees were not satisfied despite their seemingly attractive salary. The study concluded that if management fail to formulate, administer and implement a good

compensation policies that would allow them retain their talented employee; these employee might leave their job if they find a better offer elsewhere. The study recommended among others that compensation structure should include new and enticing ways to motivate and retain employee with wide range of benefits other than salary.

Uwimpuhwe, Mushabe and Kajugiro (2018) did a Work on the influence of compensation system on employee attraction and retention on the employees of the Higher Education Council, National Commission for Fight against Genocide and COGE Bank located in Kigali City. The study emphasized on the perception of respondents on compensation system, employee attraction and retention to come up on the influence of compensation system on employee attraction and retention. The research adopted a survey method. A random sampling technique was used to find the sample size of 32 employees of the cited institutions. Statistical evidence revealed that there is a significant positive correlation of .582 showing that Compensation system has a moderate influence on employee attraction and retention. The study showed a strong positive relationship between compensation system and employee attraction and retention. The study then recommended managers of organization should draw comprehensive compensation plan to enhance staff retention in the organization as this will boost productivity.

3.0 Methodology

This study was conducted in Fidelity Bank Plc Onitsha, Anambra State, Nigeria. A descriptive survey design was used because of its relevance in the quantitative nature of this study. In trying to determine the nature of the relationship between compensation policy of DMBs and staff attraction and retention, self-administered questionnaire was used to collect data from the employees of the selected Deposit Money Bank (Fidelity Bank Plc, Onitsha Branch). Pearson Product Moment Correlation Coefficient was used for data analysis to illustrate the degree of the relationship between the variables of compensation and staff attraction and retention.

4.0 Analysis of field data collected

The table below shows that 70% of the responses received strongly agree that there is a positive relationship between compensation plan in forms of good pay, provision of conducive work environment, etc and employee attraction and retention; 35% agreed; 2.80% of the responses showed Strong disagreement to the assertion, 0.78% disagreed while 0.62% responses was indifferent to the assertion. Since the calculated mean is 4.38 which is more than our cut-off point of 3.00; we therefore accept that there is a significant positive relationship between compensation packages and employee attraction and retention in Nigeria Deposit Money Banks. The hypotheses is therefore tested thus;

Test of Hypothesis

S/No	X	Y	XY	X ²	Y ²
1.	123	152.73	18785.79	15129	23326.45
2.	98	114.55	11225.90	9604	13121.70
3.	20	17.45	349	400	304.50
4.	0	2.73	0	0	7.45
5.	4	6.55	26.2	16	42.90
6.	157	152.73	23978.61	24649	23326.45
7.	112	114.55	12829.6	12544	13121.70
8.	12	17.45	209.4	144	304.50
9.	5	2.73	13.65	25	7.45
10.	8	6.55	52.4	64	42.90
	539	588.02	67479.55	62575	73606

$$\begin{aligned}
 r &= \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - \{(\sum x)^2\}} \sqrt{n\sum y^2 - \{(\sum y)^2\}}} \\
 &= \frac{49(667479.55) - (539 \times 588.02)}{\sqrt{49(62575 - 290521)} \times \sqrt{49(73606 - 345767.52)}} \\
 &= \frac{3306056.95 - 316942.78}{\sqrt{(3066175 - 290521)} \times \sqrt{(3606694 - 345767.52)}} \\
 &= \frac{2989114.17}{\sqrt{(2775654)(3260926.48)}} \\
 &= \frac{2989114.17}{\sqrt{9051203627917.9}} \\
 &= \frac{2989114.17}{3008521.83}
 \end{aligned}$$

$$r = 0.993$$

$$r = 1.00$$

The hypothesis was tested using Pearson Product Moment Correlation Coefficient and it gave a correlation of 1.00 which shows a strong positive relationship at 0.05 significance level at 10 (11 – 1) df. This indicates that there is a positive significant relationship between the variables. This means that there is a strong positive relationship between compensation policy and employee attraction and retention in Nigeria's Deposit Money Banks as identified in the research.

Decision Rule

To accept a strong correlation when r is equal to 0.7 and above, and moderate, between 0.5 and 0.69 and weak from 0.1 to 0.49. We accept that there is a strong correlation between Compensation Policy and employee attraction and retention in Nigeria's Deposit Money Banks.

5.1 Summary of Findings

From the analyses of the data collected in line with the objectives of this study, the summary of findings are as follows;

1. That employee retention is significantly affected by total pay package as provided in Fidelity Bank Plc, Onitsha;
2. That there is a significant positive relationship between employee retention and work environment in Fidelity Bank Plc, Onitsha, Anambra State, Nigeria.

5.2 Conclusion

Planning, administrative system, employee work condition, rules and regulation follow up, resource management among other factors are the parameters for organizational evaluation for success and growth. Every organization that seek progress, growth and sustenance must align itself with these tips. However, there are other components of interest for effective human resource management and which an organization must keep in mind; and that is the part of the human resource available to such organisation. Human resources are everything for any organization, even though a company may need other resources for its growth, sustenance and success but without human resources they are useless.

Organization management should understand that every person has his own wants and desires, for that purpose he/she works to get them fulfilled. It is not enough for an employee to be satisfied financially but also non financial aspects are as essential as the financial aspects. An employee needs both to be fulfilled in order to give his best to the organization for the achievement of its goals and objectives. Any Organization that needs high performance from its employees to meet their goals and achieve competitive advantage must also do all that is necessary to retain and maintain such staff. When employees are retained and maintained, it reduces the cost of constant recruitment and training on the organization as well as increases organizational productivity arising from specialization of staff.

5.3 Recommendations

1. That management of Fidelity Bank Group and infact other Financial and non financial groups should constantly review employee's compensation plan content and possibly re-design them to meet the changing needs of the time considering the tedious and demanding nature of the banking jobs. This will boost employees' performance and reduce the rate of turnover among banking employees.
2. That Fidelity Bank Plc should create a more inclusive work environment where employees will enjoy a cordial relationship with the work processes which will lead to job satisfaction through psychological attachment to their work.

REFERENCES

- Adams, J. S. (1966). Inequity in social exchange; *Advances in Experimental Social Psychology*, 2, 267-299.
- Armstrong, M.(2003). *Strategic human resources management: A guide to action*. UK: Kogan-Page.
- Browne, B.A. (1997). *Gender and Preferences for job attributes: A cross cultural comparison. Sex Roles*, 37, 61- 71.
- Cotton, J.L., & Tuttle, J.M. (1986). Employee turnover: A meta-analysis and review with implications for research. *Academy of Management Review*, 11, 55–70.
- Gering , J . &Conner , J .(2002) .A strategic approach to employee retention. *Healthcare Financial Management*, 56(11): 40 – 44.
- Ichniowski, C., Shaw, K. and Prennushi, G. (1997). The effect of human resource management practices on productivity. *In American Economic Review*, 87:291-313.
- Lawler, E. (1990). *Compensation management; Strategic planning; Pay-for-knowledge systems*. San Francisco:Jossey-Bass Publishers.
- Logan, J. K. (2000). *Retention tangibles and intangibles: More meaning in work is essential, but good chair massages won't hurt. Training & Development*, 54 (4):48-50.
- Hope J.B. and Mackin C.P (2007), the Relationship between Employee Turnover and Employee Compensation in Small Business, Advocacy; the voice of small business in government, SAG Corporation,
- Mercer Human Resource Consulting LLC and Mercer Investing, Inl.,(2003). HR Strategy and transformation development.
- Octavious (ND) “Complete details on Payroll, Salary and Compensation – Organizational Effectiveness” www.citehr.com/99840.
- Parker, O. &Wright, L. (2001). Pay and employee commitment: the missing link. *In Ivey Business Journal*.65 (3): 70-79.
- Rynes, S.L. & Cable, D.M. (2003). *Recruitment Research in twenty- first century. Handbook of Psychology: Industrial and Organizational Psychology*. Hoboken, NJ: John Wiley & Son.

- Sons, J. W. (2015). *The WorldatWork Handbook of Compensation, Benefits, and Total Rewards: A Comprehensive Guide for HR Professionals*. WorldatWork.
- Willis, C. (2000). *Go for your goals*. Working woman, 6-7.
- Zineldin, M. (2000). TRM Total Relationship Management .*Student litterateur*. Lund.
- Zingheim, P. & Schuster, J. (2007).The next decade for pay and rewards. *Compensation and Benefits Review*, 37(1), 26-32.

Government Expenditure and Inflation Rate in Nigeria

K.C. Akobi, Prof. C.E. Umeora, & Dr. C.L. Atueyi

*Department of Banking and Finance Chukwuemeka Odumegwu Ojukwu University, Igbariam,
Anambra State Nigeria*

Abstract: *This study examined the effect of government expenditure on inflation rate in Nigeria within a period of 39 years spanning (1981-2019). The study specifically sought to ascertain the extent to which government expenditure on agriculture, government expenditure on education, government expenditure on health and government expenditure on telecommunications affected inflation rate in Nigeria. Four research questions were raised and four hypotheses formulated in line with the objectives of the study. Data were collected from the Central Bank of Nigeria (CBN) Statistical Bulletin. Government expenditure is broken into Government Expenditure on Agriculture (GOA), Government Expenditure on Education (GOE), Government Expenditure on Health (GOH) and Government Expenditure on Telecommunication (GOT) as the independent variables while inflation rate (INF) is the dependent variable. Multivariate regression based on Johanson Cointegration and Error Correction Model (ECM) were used to analyze the data. Our findings indicate that government expenditure on education has a positive and insignificant effect on the inflation rate. It was also discovered that government expenditure on agriculture and government expenditure on education have positive but insignificant effect on the inflation rate, while government expenditure on health and government expenditure on telecommunications have positive and significant effect on inflation rate. This study recommends that government should increase the allocation to the health and education sectors to increase the skill and health of economic operators which will enhance productivity. Government should also provide adequate infrastructure which will facilitate economic growth and reduce high inflation rate.*

Keywords: *government expenditure, inflation, Government Expenditure on Agriculture Government Expenditure on Education, Government Expenditure on Health, and Government Expenditure on Telecommunication*

1.1 Introduction

Inflation has been issue of Nigerian economy for over three decades. Statistics indicate that inflation in Nigeria has always been high, since inflation has significant effect on the life of individuals and other economic variables (Mohsen, Mohsen & Sadeq, 2016). In this context, understanding the roots of inflation can assist authorities in designing proper policies. On the other hand, government needs to spend in order to ensure stability of the economy, stimulate or enhance productivity or investment through direct public spending and investment according to the Keynesian view. Government also spends in order to redistribute income between the rich and the poor. Several theories have been advanced to explain this problem in different countries. Using a variety of instruments such as government spending, although in both theoretical and

practical experiences of countries have been proven that increases in government spending causes inflation, it's one of the significant issues in the possibility of achieving economic growth, Mohsen, Mohsen and Sadeq (2016).

Inflation is an inevitable circumstance of any economy in the world. It influences every country, negatively as well as positively, whether it is developed or developing country as well. Anyanwu (2011) stated that inflation is an important factor leading to social and economic instability and disorder. It is one of the most largely observed and tested economic variables both theoretically and empirically, its causes, impacts on other economic variables. Nigeria, being a developing country, could not overcome the continuously year to year climbing up inflation, and also its causes and consequences (Luis & Marco, 2015).

One of the challenges facing economy-managers especially in the Third World is inflation. It is so worrisome that it has contributed to the fall of governments. Inflation becomes dreadful when it subsists with high unemployment and the erosion of the monetary value of domestic currency. According to the neoclassical economists, inflation is a fundamentally monetary phenomenon by which there is a galloping rise in prices as a result of excessive increase in the quantity of money (Sanjeev, Benedict, Emanuele, & Carlos & Mulas-Granados 2005). To these economists, inflation results from the lack of monetary control (or monetary irresponsibility and indiscipline) with the concomitant effect of undermining the rule of business and the creation of confusion in markets, and financial ruins (Jhingan, 1997). The Nigerian economy has experienced this later aspect but most times there seems to be a separation of inflation from government monetary indiscipline. Hence, several reasons have been advanced as the causes of inflation in Nigeria. The Nigerian economy presently is characterized by stagflation, a situation of high level of unemployment and inflation existing at the same time.

1.2 Statement of the Problem

As far as Nigeria is concerned regarding inflationary effects it has experienced worst consequences reflected by poverty, food crises, price hike etc. over the last decades, inflation and government spending have attracted significant attention from finance, economics and development experts, though with mixed findings, the state of inflation rate in Nigeria has been in constant changes and this always affect the government spending. However in 1981 inflation was at 20.9%, in 1985 it stood at 17.8%, it increase to 54% in the year 1990 and reduce drastically to the tune of 5.70% in 1990, in 1996 it increase a bit to 6.6%, between 2005 and 2010 it was at 14.0 and 12.5 respectively. In 2015 inflation rate was 8.0 and 9.0 in 2016, between the period of 2017 and 2018 it was at 16.5%, sources (CBN 2018). However, records show that as government spending increased annually, inflation rate increases, more so when the economy has been under the management of the government for the greater period of time.

Also, empirical studies on the effect of government expenditure or public spending on inflation have provided mixed results, Dikeogu, (2018) maintained that government capital spending impacts negatively on inflation; government recurrent spending has a negative and an

insignificant impact on inflation. Amuka, Ezeoke, and Asogwa, (2016) Result reveals government capital expenditure on economic services is the major cause of inflation in Nigeria. Olayungbo (2013) The asymmetry causality test shows that a uni-directional causality exists from negative government expenditure changes (low or contractionary government spending) to positive inflation changes (high inflation) in the Vector Auto regression (VAR) model.

The persistence of these problems in Nigeria in spite of various policy measures to stabilize the economy, reduce inflation and the inconclusive debate regarding the actual effect of government spending on inflation motivated this study. Given the above statement the study examine the effect of government expenditure on inflation rate in Nigeria.

1.3 Objectives of the Study

The main objective of the study is to examine the effect of government expenditure on inflation rate in Nigeria. The specific objectives are to:

- i. assess the degree to which government expenditure on agriculture affects inflation rate in Nigeria.
- ii. examine the extent to which government expenditure on education affects inflation rate in Nigeria.
- iii. find out the extent government expenditure on health has affected the effect on inflation rate in Nigeria.
- iv. determine the extent government expenditure on telecommunication has inflation rate in Nigeria.

1.4 Scope of the Study

This study covers the period of 39 years (1981-2019). The choice of the scope was chosen based on the first time austerity measures were introduced leading to Structural Adjustment Program (SAP) of 1986 accompanied by steady increase in government spending. Geographically the study will be based in Nigeria. The included variables were on government expenditure on education, government expenditure on manufacturing sector government expenditure on health, government expenditure on agriculture, government expenditure on telecommunication sector output as well as inflation rate.

REVIEW OF RELATED LITERATURE

2.1 Conceptual Review

2.1.1 Government Expenditure

Government expenditure is the total in cash terms of the federal, state and the local government spending including transfers to the parastatals and the three levels of the government (Anyato,

2016). The allocation of function becomes necessary to provide both private and in particular social goods in appropriate mix with available resources. The provision of social and physical infrastructure through public investment and expenditure on some goods and services theoretical can directly improve productivity in the private sector through more efficient allocation of resources due to the special characteristics of social goods (spill over and externalities, non excludability) they will be provided at all or where they are produced the output will be inadequate and outrageously expensive if left in the hand of private individuals.

2.1.2 Inflation

In economics, inflation is a continuous rise in the general level of prices of goods and services in an economy over a period of time. When the general price level rises, each unit of currency buys fewer goods and services (Aminu & Zubairu 2012). Consequently, inflation also reflects an erosion in the purchasing power of money – a loss of real value in the internal medium of exchange and unit of account within the economy. A chief measure of price inflation is the inflation rate, the annualized percentage change in a general price index (normally the Consumer Price Index) over time. Inflation's effects on an economy are various and can be simultaneously positive and negative. Negative effects of inflation include an increase in the opportunity cost of holding money, uncertainty over future inflation which may discourage investment and savings, and if inflation is rapid enough, shortages of goods as consumers begin hoarding goods which will escalate the price in the future. Positive effects include ensuring that central banks can adjust real interest rates (intended to mitigate recessions), and encouraging investment in non-monetary capital projects.

2.2 Theoretical Framework

The Keynesian Perspective on Government Expenditure

In this study, demand pull theory was used to justify the Keynesian approach to inflation. The demand pull theory, which is the traditional and the most common type of inflation results, form the aggregate demand exceeding the supply of goods and services in an economy. The shortage in the supply could result from underutilization of resources due to inadequate spare parts resulting from high interest and exchange rates or the inability of the production to be increased rapidly. The demand-pull theory is sub-divided in to the monetarists and Keynesian views (Jhingan, 2002) but the Keynesian view is utilized for this study.

According to John Keynes and his followers (the Keynesian view), demand-pull inflation occurs when aggregate demand exceeds aggregate supply at full employment level of output that is attributing inflation to the relationship between the aggregate expenditure (C+I+G) and full employment level of output (Agba, 1994). This implies that only an increase in price above the full employment can be called inflation. Therefore, as long as an economy has not reached the level of full employment, any increase in money supply or the price would exhaust itself in raising the level of employment and output and not the general price level in the economy

(Bakare, 2000). They (Keynesians) emphasized non monetary influences such as government process (CBN, 1991), Keynes then explained inflation through the inflationary gap, which exists when the aggregate demand exceeds the level of output at full employment level (Vaish, 1978). This implies that once an economy has reached the point of full employment, any slight increase in aggregate demand over the available output will obviously lead to a rise in price.

Government spending is a tool that brings stability in the short run but need to be done cautiously as too much of public expenditure would lead to inflationary situation while too little of it would lead to unemployment. From the Keynesian thought, public expenditure can contribute positively to economic growth. Hence, an increase in the government consumption is likely to lead to an increase in employment, profitability and investment through multiplier effects on aggregate demand. As a result, government expenditure augments the aggregate demand, which provokes an increased output depending on expenditure multiplier. The Keynesian analysis of government expenditure formed the bases for this research.

Relevance of the Theory to the Study

Of all economists who discussed the relation between public expenditures and economic growth, Keynes was among the most noted with his apparently contrasting viewpoint on this relation. Keynes regards public expenditures as an exogenous factor which can be utilized as a policy instrument to promote economic growth. From the Keynesian thought, public expenditure contributes positively to economic growth. Hence, an increase in government consumption is likely to lead to an increase in employment, profitability and investment through multiplier effects on aggregate demand. As a result, government expenditure augments the aggregate demand, which provokes an increased output depending on expenditure multipliers.

2.3 Empirical Review

Edeme, Emecheta, and Omeje (2017) investigated the effect of public health expenditure on inflation rate in Nigeria from 1986-2015, as captured by life expectancy at birth and infant mortality rates. The result shows that public health expenditure and health outcomes have long-run equilibrium relationship on inflation rate. Furthermore, the results showed that an sustained increase in public health expenditure triggered inflation rate. In addition, urban population and HIV prevalence rate significantly affects health outcomes, while per capita income exhibits no effect on health outcomes in Nigeria. The findings suggest that public health expenditure remains a necessary component in improving health outcomes in Nigeria.

Kairo, Mang, Okeke and Aondo (2017) studied the relationship between human capital development and government expenditure. Data were collected over the period 1990-2014. Autoregression Distributed Lag (ARDL) and impulse response function were adopted for the estimation. The Bound Test was used to determine that a long run relationship exists between HDI and GOVEXP. The results demonstrated that both in the long and short run, government spending has remained positive but to a very large extent insignificant to human capital development in Nigeria. This is why Nigeria's per capita income has remained low for a long

time in the world ranking. This study therefore strongly recommends that government spending should largely be focused on human development through specialized high technology-driven schools and efficient and effective health facilities.

Omitogun (2014) examines the determinants of public health expenditure in Nigeria between 1990 and 2012.. Econometric model was formulated where total government health expenditure was regressed on real gross domestic product; population; health expenditure share in total government expenditure (proxy for government developmental policy on health sector); unemployment rate; consumer price index (proxy for health care prices); and political instability.. Regression analysis shows that real gross domestic product and health expenditure share in total government expenditure are positively related to total health expenditure and are significant at 1% and 5% level of significance respectively. Unemployment and political instability have a negative relationship on gross total health expenditure of the government though not statistically significant. It was recommended, among others, that Government Budgetary allocation to health sector should be increased to the WHO prescribed level of 15% of government annual budgetary allocation. This will make government health expenditure to have a robust effect on Nigerian health status and meet WHO recommended budgetary allocation to the sector.

Bakare and Olubokun (2011) investigated the relationship between health care expenditures and inflation rate in Nigeria from 1990-2009. The ordinary least square multiple regression analytical method was used to examine the relationship between health care expenditures and inflation rate. The variables were on Gross Domestic Product, Gross Capital Formation, Health Care Expenditure and Secondary School Enrolment. The data analysis showed a significant and positive relationship between health care expenditures and inflation rate. The study thus recommended that Nigerian policy makers should pay closer attention to the health sector by increasing its yearly budgetary allocation to the sector. Nevertheless the key to good results lies not in ordinarily increasing particular budgetary allocation but rather in implementing a public finance system that, to the extent possible, links specific expenditure and revenue decisions and ensure the usage of the allocated fund as transparently as possible.

Obasikene (2017) examined government expenditure on health and its impact on the inflation rate, 1986 -2014. Multiple regression techniques of the ordinary least squares (OLS) where inflation rate is the dependent variable, responsive to capital expenditure, recurrent expenditure and money supply.. The results revealed that government expenditure (capital and recurrent) and broad money supply have negative relationship with inflation rate in Nigeria. Particularly, government capital expenditure has significant positive effect on the growth of Nigerian economy. The government recurrent expenditure has a non-significant positive effect on economic growth in Nigeria. The study recommended that the Independent Corrupt Practices and other Related Offences Commission and the Economic and Financial Crimes Commission should be reformed and strengthened in order to promote transparency in the conduct of government spending. The Nigerian government should also adopt a public medium term

expenditure framework to ensure predictable and sustainable public expenditure at all levels of government.

Boussalem, Boussalem, and Abdelaziz (2014) investigated the causality and co-integration relationships between public spending on health and inflation rate in Algeria during 1974-2014 using annual data. This study concentrated on time series co-integration and causality in ECM framework. The findings revealed that there is a long-run causality from public spending on health to inflation rate while it is not observed any short-run causality from public spending on health to inflation rate. The lack of strong link from public spending on health to inflation rate is not necessarily a reason to reallocate health investment away from the health sector. The improvements in health status will be, worth the effort even if they turn out to have little effect on growth.

Chinedu, Daniel and Ezekwe (2018) ascertain impact of sectoral spreads of government expenditure on inflation rate in Nigeria from 1980 to 2017. The data were subjected to Unit Root, Johansen Cointegration, and Error Correction test and Durbin-watson test. The study concluded that there was positive impact of sectoral spreads of government expenditure on inflation rate in Nigeria. Three variables on sectoral Government expenditure among five sectoral Government expenditure variables have long-run relationship with real GDP. This study's conclusion confirmed Wagner's law that increase in economic growth was achieved as a result of increase in Government expenditure. The study verified that Government expenditure on Agriculture and Defence have statistical significant effect on economic performance in Nigeria while Government expenditure in transportation and communication, health and education were not statistical significant. Based on above stated findings, the study made the following recommendations: Nigeria government should promulgate more anti-corruption agencies to speed-up prosecution and execution of judgment on public fund looters.

Oluwatoyin Folasade and Fagbeminiyi (2015) public health spending on inflation rate in Nigeria between 1979 & 2012. This study made use of the Johansen Co-integration and the Vector Error Correction Model (VECM) econometric technique to determine the long-run relationship between public spending on health and health outcomes in Nigeria. The study found out that public spending on health has a negative significant relationship with inflation rate in Nigeria. It was also discovered that environmental factors such as carbon dioxide emissions which was used in this study affects individuals' health. Therefore, based on the findings of this study, it recommends that the government should introduce programmes that will cause awareness concerning the effect of carbon dioxide emissions on individual's health and should advice people and industries on how to deal with it. It should also separate residential and industrial areas to avoid any hazard caused from carbon dioxide emissions. Also, the government should increase and restructure the public expenditure allocation to the health sector.

2.4 Summary of the Empirical Findings

The reviewed scholarly works investigated the link between government expenditures on inflation rate while employing related variables which include government expenditure on

agriculture, health, education and telecommunication. The empirical results were mixed and thus divergent. Towards a consensus, the studies recommended an increase in budgetary allocation/funding among others. However, it is pertinent to state that expenditures by rule of thumb should be immediately felt through its contribution to own sectoral output. Thus, from the above summary, some key questions that comes to mind, remains fundamental pathway which the previous studies did not consider. Therefore, answering questions as to whether these expenditures translate to growth of the immediate education sectoral output, health, agriculture and telecommunication or not, before regressing it (expenditure) on inflation rate becomes imperative. By implication, inferences from these findings may constitute policy issues if used without caution. As an improvement on previous studies, the present study seeks to contribute to existing literature by examining the link between these forms of educational expenditures while incorporating educational sectoral output, government on agriculture, government expenditure on health, and government expenditure on telecommunication as a new variable, as well as reexamining its effect on inflation rate.

2.5 Gap in Literature

In brief, the relationship between government expenditure on inflation rate of Nigeria has been explained based on literature from previous researchers. However, it is noted that the researchers obtained different result for the relationship between the government expenditure on inflation rate. The reason for inconsistency in result may be due to the fact that researchers conducted their studies in different countries and thus, the data and policies are different. Therefore, examine the significant relationship for government expenditure and the independent variables to get the accurate result as compared to the previous findings by other researchers. From the discussion above, the findings revealed that there is correlation between the government expenditure on agriculture, government expenditure on education, government expenditure on education and the inflation rate. This chapter also reviewed the theoretical framework between government expenditure on inflation rate.. However as the first of its kind the study analyzed detailed effect of government expenditure on inflation rate. in Nigeria between the period of 1981-2019 For the next chapter, this study will discuss the methodology and technique that will be use for the estimation of the relationship of government expenditure on inflation rate for the study in Nigeria.

METHODOLOGY

3.1 Research Design

The type of research design adopted on this study is Ex-post facto research. Ex-post facto design usually involves the study of independent and dependent variables. Therefore, it gives no room for manipulation of any of the variables. The data for the variables already exist in various reliable sources such as CBN Statistical bulletin

3.2 Nature and Sources of Data

Data for the study are from secondary sources and are sourced from publications of the Central Bank of Nigeria (CBN), Statistical Bulletin, between 1981 and 2019. The following data are sourced: total government expenditure on agriculture, government expenditure on Education, government on expenditure Health, Government expenditure on telecommunication and real gross domestic product.

3.3 Model Specification

The fundamental and linear equation which forms the model is drawn from the theoretical literature and empirical literature reviewed in the previous chapter. It is observed that there is a causal link between government expenditure and the Nigerian economy. In this section, we pursue the same objective further by specifying our model. The model is then used to verify the government expenditure determinants on the Nigerian economy. The Study modified the work of (Mohsen, Mohsen & , Sadeq 2016) which examined the short and long run relationship between government expenditure on agriculture, adopted this as their model

$$Inf= f (GOVT, GR, LQ)$$

Where

INF = Inflation rate

GOVT = Government expenditure

GR = Growth rate

LQ = Liquidity rate

Our present study modified the above model to suit our objectives as follows

$$INF=F (GOA, GOE, GOH, GOT).$$

Where

INF = Inflation rate

GOA = Government expenditure on Agriculture

GOE = Government expenditure on Education

GOH = Government expenditure on Health

GOT = Government expenditure on Telecommunication

f = Functional notation

The econometric equation of the model can be expressed as;

$$INF = \beta_0 + \beta_1 GOA + \beta_2 GOE + \beta_3 GOH + \beta_4 GOT + \mu$$

Where;

β_0 is the constant intercept which shows the level of INF

β_1 =coefficient of parameter GOA

β_2 = coefficient of parameter GOE

β_3 =coefficient of parameter GOH

β_4 =coefficient of parameter GOT

μ_1 = the stochastic error term or disturbance variable.

The model can be re-write in an logged form

$$INF = \beta_0 + \log \beta_1 GOA + \log \beta_2 GOE + \log \beta_3 GOH + \log \beta_4 GOT + \mu$$

Where

Log=logged values of the variables

3.4 Method of Data Analysis

The study employed ordinary least square (OLS) method of estimation to establish the importance of the independent variables on the dependent variables. The (OLS) is the most efficient method because of the "Best Linear Unbiased Estimator" (BLUE) properties. The result is always satisfactory and simple to comprehend. The model equation will be estimated using a variety of analytical tools, including the unit root test and co-integration test.

3.5. A'priori Expectation

This is based on the principle of economic theory. There, our results can be checked for their reliability with both the size and sign of economic a'priori expectation.

$a_1, a_2, a_3, a_4 > 0$

PRESENTATION AND ANALYSIS OF DATA

4.0 Preamble

This chapter presents the empirical results and discussion of findings, Ordinary Least Square was used as techniques for the analysis, the result was subjected to different statistical and econometrics test. We begin by discussing the order of integration of the interest variables, after presenting the data for analysis.

4.1 Unit Root Test

The first stage of co-integration and Error Correction Model is to test for unit root. The whole analysis then proceed from it. Konya (2004) maintains that there exists unit root in most time series. Therefore, it is necessary to analyze whether the series are stationary or not whenever time series data are involved. The presence of unit root implies that the time series under

investigation is non-stationary, the absence of a unit roots shows that stochastic process is stationary. The Augmented Dickey-Fuller (ADF) test is employed in this test

Table 4.1 Unit Root Test

variable	ADF	Integration	Significant
INF	-5.818753	1(1)	1%
GOA	-6.932570	1(1)	1%
GOE	-4.907351	1(1)	1%
GOH	-6.382154	1(1)	1%
GOT	-4.917703	1(1)	1%

Source: Author's computation using E-view 9.1

Finally, the ADF test was conducted on government spending and Inflation rate and the results presented in table 4.2 show that null hypothesis of unit roots was rejected after differencing once. Hence, the variable is clearly integrated of order one and at 1% level of significant respectively.

4.2 Co-Integration test

Given that all the variables are integrated of order one, co-integration test was carried out to establish whether the variable though individually non-stationary could be co-integrated as a group and also to establish the existence of a long-run relationship among them. The Johansen procedure is used to achieve this. The results of this test are presented in Appendix. Both trace statistic and maximum eigenvalue test are used to determine the number of co-integrating vectors. The test statistic rejects the null hypothesis in favour of three co-integrating relationship at 5% significant level. But the maximum eigenvalue test indicates also two co-integrating relation at the 5% level. The long run coefficients emanating from the co-integration relationship normalization on the economy is presented in Table 4.3. The table 4.3 below shows the summary of Mackinnon Haug-Michelis co-integration result.

Table 4.2: Johansen Co-integration Test

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	Critical Value 0.05	Prob.**
None *	0.975660	227.1972	69.81889	0.0000
At most 1 *	0.846241	100.8656	47.85613	0.0000
At most 2 *	0.501828	37.20515	29.79707	0.0058
At most 3	0.233392	13.51359	15.49471	0.0973
At most 4 *	0.123377	4.477079	3.841466	0.0343
Trace test indicates 3 cointegrating eqn(s) at the 0.05 level				
*denotes rejection of the hypothesis at the 0.05 level				
**Mackinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
None *	0.975660	126.3316	33.87687	0.0000
At most 1 *	0.846241	63.66047	27.58434	0.0000
At most 2 *	0.501828	23.69156	21.13162	0.0213
At most 3	0.233392	9.036513	14.26460	0.2831
At most 4 *	0.123377	4.477079	3.841466	0.0343
Max-eigenvalue test indicates 3 cointegrating eqn(s) at the 0.05 level				
*denotes rejection of the hypothesis at the 0.05 level				
**Mackinnon-Haug-Michelis (1999) p-values				

Source: Author's Compilation Using E-views 9 Output

The result of Johansen co-integration test is shown in Table 4.2 above. The result shows that there exist three (3) co-integrating equations at 5% level of significance. This is because the trace statistic is greater than critical values at 5%. This shows that there exists a long run relationship between government spending and all the explanatory variables. The result indicates that in the long run, the dependent variables can be efficiently anticipated using the specified independent variables and, thus, we proceeded to estimate the Error Correction Model (ECM) so as to reconcile the short-run dynamics with long-run disequilibrium of the variables. The Error Correction Model results are presented in table 4.3 below.

4.3 Regression Result

The full part of our regression result for this analysis is attached as an appendix to this study. However, the diagnostic tests or some key statistics or the variable that needs to be interpreted is shown below.

Table 4.3 Error Correction Model Result

Variable	Coefficient	Std.error	T-test	Prob
C	6.721934	0.070548	95.28185	0.0000
LGOA	0.006009	0.005202	1.155143	0.2569
LGOE	0.002390	0.001467	1.629492	0.1133
LGOH	0.015711	0.002177	7.216736	0.0000
LGOT	0.015759	0.003708	4.250395	0.0002
ECM(-1)	-0.945965	0.047217	-2.003427	0.0000
R-Squared: 0.784338; Adjusted R-squared: 0.771812 ;F-statistic: 389.6582; Prob(F-statistic): 0.000000; Durbin-Watson Stat: 1.624904				

Source: Author's Compilation Using E-views 9 Output

The results presented above will be analyzed using three criteria; economic a priori criteria, statistical criteria and econometric criteria.

The R^2 which is the coefficient of determination or the measure of goodness of fit shows the degree of variation in the dependent variables. The closer R^2 is to 100%, the better the fit of the model. From the regression result, R^2 is 0.78%. This implies that the independent variable can explain about 78% of the variations in the dependent variable, leaving the remaining 22% which would be accounted for by other variables outside the model as captured by the error term.

The adjusted R^2 is 77% meaning that even with an adjustment in the dependent variables, they can still explain about 77% of the change in the dependent variable. The F-statistics measures the overall significance of the explanatory parameter. From the result in table 4.3 above, our computed value F-statistics is 389.6582 while the probability is 0.0000, Since the probability of the F-statistics in the computed output is less than the desired 0.05 level of significance, we accept and state that there is a significant relationship between the variance of the estimate and that of the dependent variable.

The specific objectives are addressed using the coefficient of regression and its corresponding t-statistics were used to test the hypothesis of the study. The result is as shown on the equation below:

$$\text{INF} = 6.721934 + 0.006009 \text{ LGOA} + 0.002390 \text{ LGOE} + 0.015711 \text{ LGOH} + 0.015759 \text{ GOT}$$

Extent Government Expenditure on Agriculture Affects Inflation rate in Nigeria

From the estimated coefficient result of the regression in table 4.3 above, we find out that government expenditure on agriculture has a positive relationship with inflation rate given its value as 0.006009, this in conformity with a priori expectation because a unit increase in government expenditure on agriculture increases inflation rate by 6 unit. However, government expenditure on agriculture is 1.155143; this implies is statistically insignificant in affecting inflation rate. This further suggests that the government spending on agriculture has not affected inflation rate in Nigeria. This finding provides us opportunity to reject alternative hypothesis and accept null hypothesis which states that Government Expenditure on Agriculture has no significant effect on Economic Growth in Nigeria

Extent government expenditure on education affects Inflation rate in Nigeria.

The coefficient of regression (0.002390 LGOE) indicates that health (HE) has positive effect on the Inflation rate in Nigeria. Government expenditure on education has a positive impact given its value as 0.002390; this is in conformity with our a priori expectation, this further implies that increase in government expenditure on education increases the Inflation rate by 2%. Government expenditure on health is statistically insignificant on the Inflation rate, this was as a result of low t-statistics and high probability value. However this result laid credence of low government expenditure on education in Nigeria and as a result we reject alternative hypothesis and accept null hypothesis which states that government expenditure on education has no significant effects on Inflation rate in Nigeria

Extent government expenditure on health affected Inflation rate in Nigeria.

From the result of our regression in table 4.3 above, it is discovered that government expenditure on health has a positive impact on Inflation rate given its value as 0.015711 this is in conformity with theoretical expectation because increase in government expenditure on health increases the Inflation rate by 15%. From the t-statistics Column it was discovered that Government expenditure on health is statistically significant (7.216736) at 10% level of significant on the Inflation rate. The result from t-test compels us to reject null hypothesis and accept alternative hypothesis which implies that government expenditure on health has significant effect on Inflation rate in Nigeria.

Extent government expenditure on telecommunication affects Inflation rate growth

Government expenditure on telecommunication has a positive impact on the Inflation rate growth given its value as 0.015759; this is in conformity with theoretical expectation, however the increases on government spending on telecommunication, this will increase the performance of Inflation rate in Nigeria. From the t-statistics Colum it was discovered that Government expenditure on telecommunication is statistically significant (4.250395) at 10% level of significant on the Inflation rate.. As a result of this findings null hypothesis will be rejected while the alternative will be accepted which states that government expenditure on telecommunication has significant positive effects on Inflation rate in Nigeria

The Durbin-Watson statistics is used to test for the presence or otherwise of autocorrelation in our model. When the value of Dw is closer or a little above 2, it means the absence of autocorrelation amongst the explanatory parameters (Koutsoyiannis 1997). From table 4.3 above, it is discovered that the Durbin Watson is (1.6.), and this does satisfy the above stated condition. This means the absence of autocorrelation among the explanatory variables. Finally, the Error Correction Mechanism (ECM) which is used to correct for disequilibrium from of estimated result is ECM (-1) is significant with an appropriate negative sign. Its negative coefficient of (-0.745965) shows that there is a stable long-run equilibrium relationship between the variable. The ECM shows also that changes in the independent variables will cause the dependent variable to converge on its equilibrium path.

4.4 Discussion of findings

Government Expenditure on Agriculture: The study found that Government Expenditure on Agriculture has no significant effect on inflation rate in Nigeria. The nature of the effect on agriculture has no translated into a meaningful growth in Nigeria. For any country to experience economic growth, investment in agriculture and innovation is inevitable. That is why it's very important for both the public and private sector to motivate people to be innovative. However, diversifying an economy properly in other non-oil sector is likely to influence the economic growth via the following three ways; performance of the agricultural sector, manufacturing sector and solid mineral.

The implication of these findings is that, for agricultural sector to be functional, productive and to achieve their aim and purposes, the agricultural sector need to satisfy the expected needs of the individual, and earn much revenue for government. Agricultural output growth can increase growth in the non-agricultural sector of the economy via diverse means some of which are direct and indirect. This further disagreed with the findings of Idoko, and Jatto, (2018) who found a positive and significant relationship between government expenditure on agriculture and inflation rate in Nigeria. The findings also corroborate with the findings of Iganiga and Unemhilin (2011) that Agricultural output is a pertinent determinant to economic performance in Nigeria.

Government Expenditure on education: The study found that government expenditure on education has a insignificant positive effect on inflation rate in the Nigeria. The Government spending on education has not spur inflation rate from the finding. A nation with highly educated and skilled people would likely enjoy a better economic development. But the efficient use of labour and capital resources for greater productivity requires that the workers are well trained and skilful. The training and skills acquisition are mainly accumulated through education. Education is an economic good because it is not easily obtainable and therefore need to be apportioned or traded. The implication is that education is essentially the capacity to understand new information and adapt one's behavior accordingly; economies that have the greatest number of highly-skilled workers will more rapidly adopt and implement the most efficient technologies. The finding is not in line with the study of Mohd., Muhammad, and Razak, (2012) government expenditure on health has a positive effect on inflation rate of Nigeria.

Government Expenditure on Health: The study found that Government Expenditure on Health in Nigeria. Government spending on health spurs inflation rate in Nigeria. Further to this is that healthcare sector output is an endogenous variables and determinants of inflation rate in successive healthcare sector output in Nigeria. This explains that growth and quality of healthcare is an accumulative of efforts and success of previous years. Thus, continuous development in healthcare resources in forms of human capital (personnel) and equipment is apt to growing the inflation rate. Thus, the right form of manipulation for health sector will manifested to greater inflation rate. However, money supply rightly impacts growth positively but credit to private sector, though positive, had no significant effect in the model. Improved in government spending on health would translate to increased inflation rate. Edeme, Emecheta, and Omeje. (2017) corroborates this findings by stating that, public health expenditure and health outcomes have long-run equilibrium relationship. This means that, health system indicators and technological advances may also have impact on health expenditure as has been documented in previous literature.

Government Expenditure on Telecommunication: The study found that government expenditure on telecommunication has a significant positive effect in inflation rate. This implies that a reliable telecommunications networks can improve the productivity and efficiency of other sectors of the economy and enhance the quality of life in generally.

Furthermore, the endogenous influence of telecommunications sector itself ignites positive growth effects on the sector. The individual contributions of the telecommunications sector variables are quiet interesting and the efforts at optimising telecommunications sector output would require to spur inflation rate of the Nigerian economy. Ajiboye (2007) also argued that telephone spending has a positive impact on inflation rate because it provides a stimulant to economic growth and that as economies become more highly developed, they need more communications.. Nwakanma, Asiegbu, Eze, and Dibia (2015) found that Government Expenditure, Number of Telecom Subscribers and Private Investment collectively have significant impact on inflation rate in Nigeria.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of the Findings

The major tenet of this study is to critically examine the impact of government expenditure on inflation rate in Nigeria. The study period spanned from 1981-2019. This study specifically examined the nature of government expenditure on the inflation rate. Thus, it was hypothesized that government expenditure has a significant impact on the inflation rate.

A linear regression model was employed to analyze the data, The result of our estimated model revealed some important issues that need to be stressed.

a) It was discovered that government expenditure on agriculture has positive short run effect and insignificant impact on inflation rate. The findings also corroborate with the findings of Iganiga and Unemhilin (2011) that Agricultural output is a pertinent determinant to economic performance in Nigeria

b).It was also revealed from the result of our estimated model that government expenditure on education has a positive short run and insignificant impact on inflation rate. The finding is not in line with the study of Mohd., Muhammad, and Razak, (2012) government expenditure on health has a positive effect on inflation rate of Nigeria.

c.) It was also discovered that government expenditure on health has short run positive effect and significant impact on inflation rate. Edeme, Emecheta, and Omeje. (2017) corroborates this findings by stating that, public health expenditure and health outcomes have long-run equilibrium relationship.

d) It was also discovered that government expenditure on telecommunication has short run positive and significant impact on inflation rate. Nwakanma, Asiegbo, Eze, and Dibia (2015) found that Government Expenditure, Number of Telecom Subscribers and Private Investment collectively have significant impact on inflation rate in Nigeria.

e. Lastly, our variables when tested for cointegration using the Johansen co-integration test, were found to be co-integrated and as such the Error Correction Mechanism was employed to correct for the long-run equilibrium relationship between the variables.

5.2 Conclusion

The findings of this work show that government spending has contributed significantly to the inflation rate: From the findings of our study, the study has yielded dependable empirical evidence and thus concludes that government expenditure has significant determinants in Nigeria.

5.3 Recommendations

In the light of these research findings, the following recommendations are presented.

- i. CBN should do more to encourage borrowing by bringing the lending rate to single digit to boost agricultural production output.
- ii. There is also need for more visible involvement of the private sector in education investment; this can be achieved if the enabling environment and necessary incentives are provided
- iii. The Federal Government of Nigeria (FGN) should increase and restructure the public expenditure allocation to the health sector in order to provide more health facilities, drugs, laboratories, equipment, amongst other things). This can be achieved via the right channeling of funds to the productive arms, adequate management of funds and resources in order to prevent corruption and to aid the development of health services
- iv. It is also recommended that steady power supply be provided by the Nigerian government since that is the major problem facing telecom operators, which in turn will reduce operating cost for the telecom operators as well as reduce the cost of using the services offered by the telecom industry.

5.4 Contributions to Knowledge

This study contributed to knowledge by modifying the work of Mohsen, Mohsen &, Sadeq (2016) who have their model as $Inf F = (GOVT, GR, LQ)$

Where

INF = Inflation rate
GOVT = Government expenditure
GR = Growth rate
LQ = Liquidity rate

The model is modify as

$$INF = \beta_0 + \beta_1 GOA + \beta_2 GOE + \beta_3 GOH + \beta_4 GOT + \mu$$

Where

INF = Inflation rate
GOA = Government expenditure on Agriculture
GOE = Government expenditure on Education
GOH = Government expenditure on Health
GOT = Government expenditure on Telecommunication

References

- Aminu U, Modibbo A & Zubairu, A.A (2012). Effect of inflation on the growth and development of the Nigerian economy (An Empirical Analysis). *International Journal of Business and Social Science*. 6 (8) 35-56
- Anyanwu, J.C (2011). *Nigeria public finance*, Onitsha Nigeria: Joanee educational publishers limited.
- Anyato, O (2016). Government expenditure effect on economic growth; the case of Sweden, 1960-2001. Department of business administrate and social sciences, *Lulea university of technology Sweden*.

- Amuka, J.I, Ezeoke, M.O & Asogwa, F.O (2016). Government spending pattern and macroeconomic stability: A Vector Autoregressive Model. *International Journal of Economics and Financial Issues*, 6(4), 19-36.
- Bakare A.S and Olubokun S. (2011). Health care expenditure and economic growth in Nigeria:an empirical study. *Journal of Emerging Trends in Economics and Management Sciences*, 2 (2), 73-97
- Bakare, A. S. & Sanmi, G.T (2011). The determinants of urban unemployment crisis in Nigeria: An Econometric analysis. *Journals of Emerging Trends in Economics and Management Sciences*, 2(3), 64-84.
- Boussalem, F. Boussalem, Z & Abdelaziz, T.(2014). The relationship between public spending on health and economic growth in Algeria: Testing for Co-integration and Causality. *International Journal of Business and Management* 2 (3), 25-43
- Chinedu, U. A., Daniel, O. C., & Ezekwe, U. C. (2018). Sectoral spreads of government expenditures and economic growth in Nigeria (1980-2017): An approach of error correction model. *International Journal of Academic Research in Economics and Management Sciences*, 7(4), 180–19
- Dikeogu, C.C (2018). Public spending and inflation in Nigeria. *International Journal of Advanced Academic Research | Social and Management Sciences* 5 (12) 52-67
- Edeme, R.K, Emecheta, C & Omeje. M.O (2017). Public health expenditure and health outcomes in Nigeria. *American Journal of Biomedical and Life Sciences*. 5 (5), 96-102.
- Jin-Lung, L (1997). Institute of economics, academia sinica. *Department of Economics, National Chengchi University*
- Kairo C.I. Mang. N. J.Okeke, A. & Aondo, D, C.(2017). Government expenditure and human capital development in Nigeria: An auto-regressive distributed lagged model approach. *International journal of Advance Studies in Economics and Public Sector management*, 5 (1), 12-19
- Luis Catão & Marco, T. (2015). Fiscal deficits and inflation: A new look at the emerging market evidence. *IMF Working Papers 01/74, International Monetary Fund*
- Obasikene, A.C (2017). Government expenditure in Nigeria and its impact on the Nigerian economy. *Journal on Banking Financial Services & Insurance Research* 7 (11), 56-67
- Oluwatoyin A. M, Folasade B.A & Fagbeminiyi F. F (2015). Public health expenditure and health outcomes in Nigeria, *International Journal of Financial Economics*. 4 (1), 45-56
- Omitogun, O. (2014). Determinants of public expenditure on health in Nigeria: a factor analysis. *Ago-Iwoye Journal of Social and Behavioural Sciences* 3, (2), 56-76