INFLUENCE OF FEDERAL GOVERNMENT BUDGETARY ALLOCATION ON DEVELOPMENTAL PRIORITIES OF FEDERAL PUBLIC UNIVERSITIES IN NORTH-CENTRAL ZONE OF NIGERIA

AUGUSTINE SAMBO AZI

A Thesis submitted to the Department of Educational Administration and Planning School of Education in Fulfilment of the Requirements for the Award of the Degree of Doctor of Philosophy in Economics of Education

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DECLARATION

This thesis is my original work and has not been presented for award of a degree in this or any other university.

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AUGUSTINE SAMBO AZI
E80/96048/2014

This thesis has been presented for examination with our approval as the university supervisors

_____

DR. ANDREW RIECHI

Senior Lecturer

Department of Educational Administration and Planning

School of Education

University of Nairobi

_____

DR. IBRAHIM KHATETE

Senior Lecturer

Department of Educational Administration and Planning

School of Education

University of Nairobi

DEDICATION

I dedicate this thesis to my lovely wife Bridget Azi, our Children Ana'an, Divine, Aweng and Abi, my Father Peter Azi, as well as in memory of my late Mother Astira Abi Azi, who encouraged me to succeed academically.

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ACRONYMS

ADEFORMANCE	Adequate Performance
AGF	Accountant General of the Federation
ASUU	Academic Staff Union of Universities
CBN	Central Bank of Nigeria
CIMA	Chartered Institute of Management Accountants
ETF	Education Trust Fund
FGD	Focus Group Discussion
FGN	Federal Government of Nigeria
FME	Federal Ministry of Education
GDP	Gross Domestic Product
GER	Gross Enrolment Ratio
MOE	Ministry of Education
NBS	National Bureau for Statistics
NPC	National Population Commission
NPE	National Policy on Education
NUC	National Universities Commission
OECD	Organisation for Economic Cooperation and Development
RCM	Responsibility Centre Management
SAP	Structural Adjustment Programme
SFC	Scottish Funding Council
SPSS	Statistical Package for Social Sciences
TETFUND	Tertiary Trust Fund
UK	United Kingdom

UNESCO	United Nations Educational, Scientific and Cultural Organization
WAEMU	West Africa Economic and Monetary Union

ABSTRACT

Federal universities in Nigeria face challenges of pressure to accommodate increasing numbers of students amid unsustainable government funding. Whereas several studies have focused on funding of Nigerian university education, none of them demonstrate how budgetary allocation influences infrastructural and human capital development of these institutions. Consequently, there are limited data on funding patterns and use of funds in these institutions. The purpose of this study was to examine the influence of federal government budgetary allocation for development of federal public universities in North-Central Zone of Nigeria. The study specifically examined the adequacy of federal government budgetary allocation to universities and its influence on the provision of lecturers' offices, lecture halls for undergraduate students' enrolment, recruitment of teaching staff, ratios of teaching staff and support staff and alternative sources of funding universities in North-Central Zone of Nigeria. A descriptive research design was employed and data was collected from university Vice-Chancellors, bursary staff, lecturers and students from the five sampled federal universities. Both qualitative and quantitative research approaches were adopted in this study. The research instruments employed for data collection were questionnaires, interview guide document analysis and Focus Group Discussion Guide. Both descriptive and inferential statistics were employed to analyze the data. The findings from the field and documents showed that there is serious inadequate funding to universities. This affected the provision of academic staff offices, lecture halls for undergraduate students, recruitment of appropriate lecturers and adequate ratio of teaching to non-teaching staff. This impacted negatively on the performance and productivity of various groups at the universities. The universities mainly depended on the government budgetary allocations for their developmental priorities. The implication of these findings on the study is that Nigerian universities will not only be able to achieve their developmental priorities, they will also not be able to assist the government achieve the Sustainable Development Goals target by year 2030. The study recommended among others that the federal government should adopt the ADEFORMANCE (an acronym for "adequate performance" designed by the researcher) model of funding as a panacea for the underfunding of universities, in addition, budgetary allocations to universities should be increased by government, government should also facilitate policies that will develop universities infrastructure, and Vice-Chancellors should apart from investing in profitable ventures, mobilize Alumni and other stakeholders to be involved in the development of universities.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

University education is an instrument for promoting the socio-economic, political and cultural development of any nation. A nation's human resource determines its growth and development (World Bank, 2012). The core business of university education globally is to provide the needed manpower to accelerate growth and development of the economy (Ajayi & Ekundayo, 2008) as a core business of university education globally. Thus, universities should have developmental priorities in their budgetary allocations.

Countries have different government budgetary allocations globally. The available global picture painted on government spending on university education, as reported in 2006 for the United Kingdom, Germany, Spain and the United States of America stood at 1.1 percent, 0.9 percent, 0.9 percent and 1.0 percent of their GDP on universities education respectively (Heakal, 2009). These allocations were used for among others, building of office accommodation and lecture halls leading to the provision of office accommodation to academic staff. It also led to an increase in students lecture halls.

With 130 public universities in Canada, the Government spent $26.6 million representing 1.0 percent of its GDP on its universities between 2006 and 2007. With this expenditure, the universities developed in the areas of office

accommodation by 15 percent (Canadian Information Centre for International Credentials, 2011). Similarly, in 2012, Australia and Korea spent 0.7 percent and 2.6 percent of their GDP on their universities respectively. Funds allocated were reported to be adequate and were used to develop offices for lecturers and lecture halls in the respective universities during this period, consequently, increasing the number of office accommodation to academic staff and number of lecture halls (Schleicher, 2012).

The total expenditure on education can generally be divided into capital and recurrent expenditure. Capital expenditure is most often used for infrastructural development of offices for lecturers, students' hostels and lecture halls, while recurrent expenditure is used for Staff salaries, recruitment, welfare and other overhead costs. This makes recurrent expenditure to be always higher than capital expenditure, though each country has a different ratio. For instance, Slovakia and Czech Republic allocated 43.4 percent and 48.1 percent respectively of their educational budget for capital expenditure in 2009. This allocation for capital expenditure was used to improve educational infrastructure in the areas of lecturers' offices, students' hostels and lecture halls. The allocated balance of 56.6 percent and 51.9 percent respectively was used for recurrent expenditure (European Commission, 2013).

Development of academic staff in universities should be a priority because of their effect on the students and the society in general. In this regard,

universities worldwide strive to adequately recruit and develop their academic staff in all areas of the profession. Report on the number of British Professors indicate that by 2012, the United Kingdom had 14,385 professors in its universities accounting for over 55 percent of its academic staff (Shepherd, 2012).The high ratio of professors to lecturers has put the universities in that part of the world at an advantage in producing quality graduates compared to universities with less number of professors. In addition, public universities in the United Kingdom have a staff-student ratio of 1:15, increasing the learning capacity of the students (The Complete University Guide, 2014). These results have been attributed to adequate budgetary allocations to universities in that part of the world.

A study that examined school employees in the U.S.A revealed that, support staff accounted for 41 percent of all staff in their universities in 2010. They serve in a support capacity in the categories of administrative support, library support and other support services in universities generally. The study further asserted that by 2014, as a result of adequacy of budgetary allocations to their universities, the number of support staff in U.S.A grew by 130 percent. This constitutes more than half of the public university workforce in the U.S.A. Their salaries and other benefits absorb more than one-quarter of their recurrent expenditure (Richmond, 2014). This means that the ratio of support staff to lecturers is in favour of support staff in universities in United States of America. They complement academic staff in their responsibilities.

In a study conducted in the United Kingdom on University funding in 20 public universities, Arthur and Piatt (2010) established that government gives universities only 19 percent of their funding. They therefore, source for the remaining 81 percent through tuition fees, education contracts, charities, endowments, investments and other services rendered. The funds from government and alternative sources are used for construction of office accommodation, lecture halls, students' hostels and staff development of these universities (Arthur & Piatt). Similarly, University of California (a public university) in the United States of America receives only 26 percent of its funding from government. It generates the balance of 74 percent from other sources such as tuition fees, general funds, private support, medical centres, sales and services (University of California, 2013). Funds from government and alternative sources are used for both capital and recurrent expenditure in the university.

A study that assessed university funding in Africa revealed that, expenditure for each student reduced from US $6,800 in 1980 to US $ 1,200 in 2002. This implies an average of US$981 in 33 low income countries in sub-Saharan Africa (World Bank, 2011). Despite having other sources of funding to supplement government resources, this reduction in costs per unit have negatively influenced the standard of education programmes in Africa. Universities in Africa generally find it difficult in recruiting and retaining academic staff. Undergraduate lecture halls are overstretched by students, lecturers have no offices, and few post-graduate programmes exist. These

factors are associated with political and economic crisis that negatively affected Africa about 50 years ago. The implication of this is that most universities in Africa cannot keep pace with global developments in the management of universities. It has also affected them in the provision of office accommodation for academic staff, lecture halls, teaching, recruitment and ratios of teaching to support staff (World Bank, 2011).

In a report by the World Bank during the 2012 annual budgetary allocations for some African countries, Nigeria trail other African countries with percentage allocation to its education sector in 2012 put at 8.4 percent. For instance, countries like Ghana allocated 31.0 percent, South Africa 25.8 percent and Kenya 23.0 percent to their education sectors in year 2012 (World Bank, 2012). An analysis, of government funding of Nigeria's education sector from 2003 to 2012 shows that, the sector received an average of 9 percent within the period under review (Abayomi, 2012). This falls below the recommended 26 percent to the education sector by UNESCO implying that Nigerian federal universities are underfunded.

The federal government of Nigeria allocates funds to its federal Universities. This is due to the fact that, undergraduate students are not expected to pay fees in Nigerian universities. Funding of Nigerian universities in the past had been generally adequate. This is because universities were receiving their proposed budgets from the government. The Nigerian government abolished the payment of school fees because it discovered oil in commercial quantity in the

late 60's (Okebukola, 2008). This policy led to the demand and subsequent establishment of additional universities in Nigeria.

The end of the oil boom era in the 70's, negatively affected Government funding of Federal Universities in Nigeria. This led the government to introduce and subsequently increase the payment of school fees by students in Nigerian universities. This policy was resisted by the students union (Okebukola, 2010). Funding of Nigerian universities however nominally improved from 1999. However, inflation, currency depreciation and other political and economic variables negatively affected the funding of Nigerian universities. In addition, the increase in the number of universities from 24 in 1992 to 40 in 2013, also affected the funding of the Federal Universities (NUC, 2016).

The National Universities Commission, the Government body responsible for regulating and disbursing budgetary allocations to Universities in Nigeria. Disclosed the funding trends of universities which are controlled by the Federal Government of Nigeria between 1999 and 2015 as shown in Table 1.1:

Table 1.1 Trends of budgetary allocations to federal universities in Nigeria (1999-2015)

Year	Appropriation to To Fed. Universities	Received by Federal Universities	No. of universities	Average per university	Exch. Rate. N to$	$ Equivalent
1999	10,507,388,580	11,831,930,272	24	492,997,095	93	5,318,200
2000	33,788,940,312	30,143,004,498	24	1,255,958,521	102	12,301,259
2001	31,844,324,846	32,646,410,862	24	1,360,267,119	112	12,151,752
2002	33,778,450,500	30,351,483,193	26	1,167,364,738	121	9,650,035
2003	34,411,319,280	34,203,050,936	26	1,315,501,959	129	10,169,310
2004	53,024,557,483	53,466,287,486	26	2,056,395,673	134	15,403,713
2005	55,921,243,975	58,275,967,609	26	2,241,383,370	132	16,960,903
2006	78,066,798,858	82,376,684,290	26	3,168,334,011	129	24,627,548
2007	84,464,710,606	90,565,259,337	27	3,354,268,864	126	26,657,147
2008	103,858,443,524	106,633,620,745	27	3,949,393,361	119	33,308,538
2009	109,209,812,356	108,600,310,930	27	4,022,233,738	149	28,016,616
2010	127,465,208,169	168,955,649,920	27	6,257,616,664	150	41,634,176
2011	184,695,666,017	177,625,439,322	35	5,072,155,409	154	32,966,043
2012	209,498,125,598	200,768,495,246	36	5,576,902,646	158	35,408,906
2013	223,482,973,079	217,549,942,699	40	5,438,748,567	161	33,865,184
2014	236,479,430,016	229,301,818,107	40	5,732,545,453	167	34,326,619
2015	241,306,227,518	231,409,312,019	40	5,785,232,800	199	29,071,522

Source: National Universities Commission document on federal universities funding from 1999-2015 (2016).

Note: ₦3 = 1 Ksh

Data in Table 1.1 show that in the year 1999, ₦11, 831,930,272 was given to public federal universities in Nigeria, with each university receiving an average of ₦ 492, 997,095, with the Dollar equivalent being $5,318,200. Table 1.1 shows an increase in funding from the years 1999 to 2015. But universities function as global institutions. The implication of this is that, Universities in Nigeria access research and teaching inputs from within and outside the shores of Nigeria. These funds are expected to be used for the

provision of academic staff office accommodation, students' lecture halls and recruitment of staff in Nigerian federal universities.

The actual worth of these funds should therefore, be determined using US Dollars as a benchmark. In 1999, the exchange rate of one US Dollar to one Nigerian Naira was ₦93. This implies that, the allocations to all the federal universities were USD 5,318,200. In 2015, the exchange rate of one US Dollar to one Nigerian Naira was ₦199. This means that, allocations to federal universities in Nigeria dropped to USD 29,071,522. This shows that budgetary allocations to Nigerian universities were not adequate. This has consequences on the provision of lecturers' offices, students' hostels, lecture halls, recruitment of academic staff and ratios of teaching to support staff.

A recent report established that, in spite of the establishment of the Tertiary Education Trust Fund (TETFund) by the Nigerian government, which is an interventionist agency, aimed at assisting tertiary institutions in the areas of their infrastructural and human capital development (NUC, 2010). Paucity of funds has affected the quality of university education in Nigeria. Apart from the low worth of funds from 1999 to 2015, the increase in enrolment of undergraduate students pursuing degrees estimated at over 100 percent compounds the problem. The worth of government funding of university education reduced by 27 percent, although, enrolment increased by more than 100 percent (NUC, 2016).

The funding problem of Nigerian universities may also prevent them from achieving universities' mandate of providing teaching, community service, research and training. In addition, Nigeria may not be able to achieve the Sustainable Development Goal 4 which seeks to achieve quality and equitable education by the year 2030. The shortfall in funding may also hinder Nigeria from achieving its target of being among the 20 most developed countries by the year 2020. This target is encapsulated in Nigeria's government Vision 20:2020 development plan.

In a study on effect of federal government interventions in Nigeria's universities, Akindojutimi, Adewale and Omotayo (2010) revealed that, all federal universities in Nigeria depend on the government for at least 90 percent of their funds. The economic downturn of the 1980's however, affected university funding. The consequence was so terrible that the basic needs for infrastructure, staff recruitment, research and teaching became inadequate and affected the overall development of public universities in Nigeria. This also made public universities in Nigeria to source for funding from alternative sources outside government budgetary allocations. Poor funding also made some universities' management to mis-apply their funds to their various activities without due regard to budget submissions (Adefila, Kasum, & Olaniyi, 2005).

Furthermore, the Nigerian Government, through the Tertiary Trust Fund (TETFund) and the National Universities Commission (NUC) disburses

millions of naira for infrastructural and human capital development to universities annually. This is because funding of universities has been identified as a strategy for manpower development of the society (Ajayi & Ekundayo, 2008). These funds however seem to be inadequate in running federal universities in Nigeria (National Universities Commission, 2013). Hinchiffe (2002) had earlier disclosed that in 2002, budgetary allocation to the education sector by the Nigerian government showed that 35 percent was allocated to primary education, 29 percent to intermediary education, while universities, polytechnics and colleges of education received only 36 percent.

Information has not been concrete enough in addressing allocations for, infrastructural and human capital development. The available information lack appropriate recommendations to solve the problem of adequacy of budgetary allocations to universities. There is therefore a need for a study to address the adequacy of specific allocations of infrastructural and human capital development funding in the Nigerian public universities.

1.2 Statement of the problem

As already noted, there are shortfalls in budgetary allocations to Nigerian Federal universities, which apart from affecting their developmental priorities, affect universities funding generally. In spite of the efforts put in place by the federal government by establishing TETFund and providing funds to address the underfunding of Federal universities in Nigeria, it is however not clear

how these inadequacies are affecting universities to achieve their developmental priorities.

To exacerbate the high cost of managing universities, there are limited and unstructured data that show patterns and extend of use of university funds in North- Central Nigeria catering for developmental priorities. In addition, most studies about funding of public universities have not been concrete enough in addressing allocations for infrastructural and human capital development.

Furthermore, there is no evidence of how universities' budgetary allocations are used in line with their developmental priorities. There is also no evidence showing adequacy of allocated funds and practical solutions to achieve the priorities set by Federal universities in North- Central Nigeria.

This study therefore, analysed the influence of federal government budgetary allocation for funding infrastructural and human capital developmental priorities of Federal universities in North-Central zone of Nigeria. The developmental priorities were in the areas of provision of academic staff offices, lecture halls for undergraduate students enrolment, recruitment of teaching staff, provision of staff ratios between teaching staff and support staff and alternative sources of funding.

1.3 Purpose of the study

The purpose of this study was to examine the influence of federal government budgetary allocation on the development of federal public universities in North-Central zone of Nigeria.

1.4 Objectives of the study

The objectives of the study were:

1. To establish the influence of federal government budgetary allocation to universities on the provision of office accommodation to lecturers in federal universities in North-Central Nigeria.
2. To establish the influence of federal government budgetary allocation to universities on the provision of lecture halls for undergraduate students' enrolment in federal universities.
3. To establish the influence of federal government budgetary allocation to universities on the recruitment of teaching staff in federal universities.
4. To determine the influence of federal government budgetary allocation to universities on the provision of staff ratios between teaching and support staff in federal universities.
5. To determine how budgetary allocation to universities influence alternative sources of funding federal universities.

1.5 Research questions

To achieve these objectives, the study was guided by the following research questions:

1. To what extend does federal government budgetary allocation to universities influence the provision of lecturers' offices in federal universities in North-Central Nigeria?
2. To what extend does federal government budgetary allocation to universities influence the provision of lecture halls for undergraduate students' enrolment in federal universities?
3. How does federal government budgetary allocation to universities influence the recruitment of teaching staff in federal universities?
4. To what extend does federal government budgetary allocation to universities affect ratios of teaching and support staff in federal universities?
5. How does budgetary allocation to universities influence alternative sources of funding available to federal universities?

1.6 Significance of the study

Budgetary allocation by government to its agencies and parastatals is a channel of boosting economic activities, its contribution to the economy depends on what programs and projects the budget is meant for. The study findings may be used to demonstrate the role of government towards the fulfilment of its responsibilities of adequate budgeting to the education sector vis-à-vis federal universities. At the same time, these study findings may

inform government on the need to provide adequate funding to the education sector. In addition, the study may also enlighten the public on how public universities are funded in Nigeria.

Another significance of the study also lie on the fact that adequate attempts were made to assess budgetary allocations and university development in Nigeria. This may hopefully be used to establish or formulate policies by policy makers, and also enhance macroeconomic growth and development in Nigeria's university system.

University administrators may find the research findings useful, as it may create awareness of how university budgets are allocated and implemented and also ensure prudence and proper utilization of the funds available. The study may also benefit university lecturers and students on the development of the Nigerian university system in the areas of academic staff offices and students' enrolment

1.7 Limitations of the study

Limitations, according to Keith, (2009) are conditions that are outside of the control of the researcher and may hinder the findings of the study. Getting data on budgetary allocation from universities authorities was a challenge. This was solved by not only getting authorization from the National Universities Commission for the universities to release the required data, but also by explanations to them that the data was only for academic purposes.

1.8 Delimitations of the study

This study focused on the influence of federal government budgetary allocation on infrastructural and human capital development of academic staff of public universities in North-Central zone of Nigeria. The research explored how budgetary allocations influence the development of the seven federal universities in the North-Central zone. This is because the Nigerian federal government is expected to fully fund federal universities for their infrastructural and human capital development of academic staff.

In addition, Nigeria has six geo-political zones and the North-Central zone is one of them with seven federal universities, hence the study was confined to the North Central zone of Nigeria. This study therefore addressed only provision of office accommodation to academic staff, provision of lecture halls for undergraduate students' enrolments, recruitment of teaching staff, provision of staff ratios between teaching staff and support staff and alternative sources of funding federal universities in North central zone of Nigeria from 2011 to 2014.

1.9 Basic assumptions

The study was guided by the following assumptions:

i. That all the respondents answered the interview schedules and questionnaires truthfully.

ii. That the sample used in the study is a true representative of the population of the study.
iii. That the documents from the universities contain all the necessary data on government budgetary allocations to the universities.
iv. That the federal government fully funds all federal public universities in Nigeria.

1.10 Definition of significant terms

The following terminologies have been defined in accordance with their usage in this study;

Academic staff refers to teachers or lecturers teaching and carrying out research in federal universities in North Central zone of Nigeria.

Adequacy Refers to the difference between the allocated and the projected institutional budget for office accommodation, lecture halls, academic staff recruitment, support staff, enrolment rates, doctoral degree holders and alternative sources of funding in federal universities in North Central Zone of Nigeria.

Alternative sources of funding refer to other means of funding federal universities in North Central Nigeria apart from government funding.

Budgetary allocation refers to funds appropriated by government for the running of federal universities in North-Central Zone of Nigeria

Development refers to infrastructural and human capital provision of academic staff in federal universities in North-Central Zone of Nigeria.

Development priorities refers to academic staff offices, lecture halls, recruitment of teaching staff, ratios of teaching and support staff, and alternative sources of funding universities in North-Central zone of Nigeria.

Enrolment of first degree applicants refers to the ratio of applicants for first degree admissions and the actual admission in federal universities in North Central zone of Nigeria.

Human capital development refers to the building of capabilities of academic staff, support staff and students in federal universities to be more functional on their job.

Infrastructural development refers to the physical provision of facilities in federal universities in North Central Zone of Nigeria in the areas of lecturers' offices and lecture halls.

Public universities refers to federal universities in the North Central zone of Nigeria

Recruitment refers to hiring of academic staff in federal universities in North Central Nigeria.

Support staff refers to non-teaching or non-academic personnel in federal universities in North Central Nigeria.

University Management staff refers to federal university Vice Chancellors, Deans, Bursary staff and lecturers.

1.11 Organization of the study

This study was organized into five chapters. In chapter one, the study was introduced by way of giving the background to the study, statement of the problem, purpose of the study, the research objectives and research questions.

Other issues covered in chapter one were significance of the study, limitations of the study, basic assumptions of the study, delimitations of the study, definition of significant terms and organization of the study.

Chapter two contains a Review of Related Literature and theoretical/conceptual framework. The sub sections of the literature reviewed include: process and aims of budgetary allocations to universities, budgetary allocation and academic staff offices in universities, budgetary allocation and lecture halls in universities. Chapter two also covered budgetary allocation and recruitment of teaching staff in universities, budgetary allocation and provisions of ratios of teaching and support staff in universities, budgetary allocation and alternative sources of funding universities.

Chapter three contains the Research Methodology which stated the research design, method of data collection and analysis. Chapter four presented and analyzed the study data and also answered the research questions. Finally, chapter five summarized, concluded and made recommendations based on the findings.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

The review of related literature was divided into the following sections: process and aims of budgetary allocation to universities, budgetary allocation and academic staff offices in universities, budgetary allocation and lecture halls in universities, budgetary allocation and recruitment of teaching staff in universities, budgetary allocation and provisions of ratios of teaching and support staff in universities, budgetary allocation and alternative sources of funding universities. The review ends with presentation of theoretical framework, conceptual framework and summary of literature reviewed respectively.

2.2 Process and aims of budgetary allocation to universities

Budgetary allocation plays a significant role in the development of countries globally (Usman & Ijaiya, 2010). Budgetary allocation to government agencies are usually captured as recurrent and capital expenditure. The Central Bank of Nigeria (2003) revealed that expenditure is the transfer of funds from the government to its agencies. Capital expenditure are payments for tangible assets used in the production process exceeding one year, while recurrent expenditure are transactions within one year. Budgetary allocation is made to improve the citizens' standard of living in areas such as education, power, manufacturing and water services. Budgetary allocations are therefore made to

the university system in Nigeria by government through the education sector annually (Olaniyi & Adam, 2003).

A study that examined the models of centralized and decentralized budgeting in University of New Hampshire in the USA revealed that, the university completed a plan to re-organize and develop managerial services. The university achieved this through the process of redesigning the use of machinery. Part of their achievement involved the creation of 18 commerce Service Centres, which served as the avenue for the flow of the university's accounting and business transactions. The setting up of these centres provided a base from which the university implemented a budget model that gave more responsibility and weight (Wilson, 2002).

The Scottish Funding Council (SFC), which is an agency of the Scttish Government, funds Scottish universities. Teaching grants, which are the main source for funding Scottish universities, pay for everything ranging from libraries, post and undergraduate lecture halls, staff offices, to rates bills and teaching. The universities are at liberty to allocate the funds internally. The allocation is usually calculated based on a formula comprising of the number of students and the cost attached to different subject groups. Subjects are ordered into 13 pricing bands between approximately£4,000 and £15,000 per year (Universities Scotland, 2007).

In a study conducted on managing budgetary allocations in higher education in Scotland, Cornish (1994) established that the effectiveness of budgetary allocations in higher education involved a number of actions. Such actions include expenditures, means of funding and the utilization of existing resources in the University of Edinburgh in Scotland. It was concluded that the university had a shortfall in revenue which affected its operations in the areas of capital and recurrent expenditures. This led to a deficit in infrastructural development and academic staff in the University of Edinburgh. It however acknowledged the crucial role of budgetary allocations in enhancing the university system.

The South African ministry of education begins the process of budgetary allocations to its public universities by analyzing each university's authentic number of students' records across a four to five year time period. The agency also assesses each university's student graduation rate in line with its accepted national standards. After the universities have been notified of its findings, the ministry will then submit the findings to the National Treasury. The National Treasury will then approve a temporary three year funding plan for its universities. Thereafter, the South African minister of education will then approve the allocation of funds to universities for a specific funding year. (Ministry of Education, 2004).

A report on Government expenditure on education by the World Bank in Uganda (2010) revealed that, public universities are provided funds in three

categories. The categories are: one for monthly emoluments, another for capital costs and the other for overhead costs. The emoluments category is designed based on the number of staff available. Each university has a category of funding that is broken down into 30 different funding bits. Funds are then expected to be spent by universities within the approved bits.

In a study conducted in a West African country known as Mali, Brossard and Foko (2008) revealed that, budgetary allocation for university education depends on processes. These processes are directly controlled by the government. The approved funds are arrived at by multiplying the number of lecturers authorized for a university by a given variable. Salaries are directly paid by the Ministry of finance. These funds are not controlled by the universities.

Most of the expenditure in African university education is relatively low. This is due to the fact that budgetary allocation by government for university education is mostly not adequate. Political pressures affect the growth of university education. Government agencies also compete for the limited funds available. Finally, the quest for an increase in funding universities in Africa has not been helped by the low concern given to university education by many African governments. This is because African governments do not see university education as a catalyst for economic growth and broader social and sustainable development (Otieno & Levy, 2007).

The Nigerian government, through the National Universities Commission (NUC) carries out the process of budgetary allocations to Nigerian federal universities (The World Bank, 2010). A normative approach to input-based budgeting is used by the National Universities Commission for funding Nigeria's federal universities. This method entails that lecturers numbers are derived from the number of students using normative guidelines for student-staff ratios. Similarly, the number of non-teaching staff is determined from teaching staff numbers using similar guidelines. Total compensation comprising of salaries and allowances is thereafter computed and becomes the basis for calculating the figure for each university.

The National Universities Commission (2013) however reported that as a result of underfunding of university education in Nigeria, which affected the quality of staff and students, the Nigerian government in 1993 under Act No. 7 of 1993 established the Education Tax Fund in 1993. The name was later changed to Education Trust Fund (ETF). It was again renamed Tertiary Education Trust Fund (TETFund) in 2011,as an interventionist agency to engage in projects aimed at improving the quality of tertiary education in Nigeria. The Act imposed a 2 percent Education Tax on the assessable profit of all companies registered in Nigeria. Though faced with its own financial constraints and limitations, the fund has been to an extent, a source of financial intervention to public universities in Nigeria. Most especially, in the areas of infrastructural and human capital development of federal universities.

A study conducted by Usman and Ijaiya (2008) on how budgetary allocation contributes to economic development in Nigeria, adapted the vector auto regression model. This was to estimate budgetary allocation to Education, Agricultural, Health and Works sectors in the Nigerian economy from 1989 to 2001. It was discovered that within the period under review, Nigeria's education sector was poorly funded, with an average allocation of 8 percent compared to the other sampled sectors. It was concluded that budgetary allocations to Nigeria's education sector are inadequate. This has negative consequences on the infrastructural and human capital development of universities.

Federal universities in Nigeria do not have the financial strength to sustain educational quality. Funding of Nigerian universities was stable in the 1960's leading to the 1970's. The situation however changed from the late 1970's, leading to the 2000's when the funding trend became inadequate. This has affected the development of Nigerian universities in the areas of infrastructural and human capital development (Usman & Ijaiya, 2008).

A study that examined how Nigerian universities are funded revealed that, the costs of funding universities are increasing higher than the existing resources needed to fund them. (Ogbogu, 2011). These increases in the cost of funding universities have affected the development of Nigerian universities. The study did not consider the adequacy of budgetary allocations on infrastructural and human capital development of academic staff.

A study that assessed the Needs assessment of Nigeria public Universities established that, government do not release the annual approved amount to federal universities in Nigeria. In 2002 and 2005, 93 percent and 89 percent of funds requested were released respectively (Yakubu, 2012). This means that government withheld 7 percent and 11 percent of the requested funds respectively. This shows that government does not effectively release funds to federal universities in Nigeria. This has a negative implication on the development of Nigerian universities.

This means that subventions to universities from the federal government of Nigeria are often inadequate in meeting their financial demands. Similarly, the amount required to run the federal university system totalled US$210 million in 1999, with almost all the entire funding coming from the federal Government. As a result of increase in enrolment, and currency depreciation, recurrent allocation for each university student at the federal level fell from US$610 to US$360 from 1990 to 1999 (Federal Republic of Nigeria, 2001). This drop in allocations affected the development of the universities in the areas of human capital development. The studies limited their findings on only budgetary allocations without looking at their developmental priorities in the areas of infrastructural development and human capital development.

2.3 Budgetary allocation and academic staff offices in universities

McMaster University in Canada spent 42 percent of its budget on capital expenditure in 2013. This high capital expenditure led to an improvement in the provision of the university's infrastructure in the areas of academic staff offices in2013. This improvement in infrastructure was of immense benefit to both staff and students as they were provided with a conducive environment to teach and learn (McMaster University, 2013).

A study on Facilities in Australian universities found out that through budgetary allocations, Australian universities dedicate large percentages of space to academic offices (Australian Government, 2009). This has increased the number of academic staff offices in Australian Universities, thus improving their productivity.

A study that analysed Higher Education Institutions in the United Kingdom revealed that, Higher education institutions in the United Kingdom spent more than two billion UK Pounds on property from 2007 to 2008. The study revealed that this expenditure has increased the ratio of office space per staff in higher institutions in the United Kingdom within the period under review. It further reported that, though budgetary pressures on United Kingdom universities have affected space allocation per student negatively, the allocation for academic staff offices has not shifted as much (Pinder, 2009). This means that, academic staff offices are given priority in budgetary

allocations in UK universities leading to an increase in productivity by their academic staff.

Similarly, a study conducted by Loughborough University (2006) in the United Kingdom examined various staff offices in Loughborough University and discovered that, sixty percent of staff expressed overall satisfaction with their offices. They particularly expressed satisfaction with the level of natural light, privacy and noise levels. This policy motivates the staff for high productivity. This indicates that the university funds the construction of staff offices through appropriate budgetary allocations.

A study that examined offices on Campus in the United Kingdom established that, academic office accommodation in universities in the United Kingdom before 1992 were provided by the government. This was done on the assumption that the offices will be used by lecturers for micro teaching of not more than 4 students at a time. Lecturers' offices therefore comprised of a room for small staff meetings, private study spaces, complex work environments, semi-public teaching spaces, and a space for the reception of professional visitors. The study further disclosed that, the average total cost of provision for an average lecturer's office in UK universities is in the region of £2,000-£2,800 per year (Fink, 2005). Most academic staff in UK public universities are provided with offices as a result of improved funding which enhances their output.

Similarly, university of California in the United States of America spent 30 percent of its budget on capital expenditure in 2013. Out of the funds allocated for capital expenditure in university of California, 35 percent was for new construction of staff offices, implying that the university erected new structures in 2013 (University of California, 2013). This implies that the staff were allocated offices to enhance their output at work. This shows that the sampled universities effectively utilized their capital expenditure which is in line with this study in the areas of infrastructural development.

Stanford University spends $529 to $667 per square meter for building of new lecturers' offices (Stanford University, 2009). The amount is adequate because offices alone occupy 22 percent of all space allocations in the university, leaving laboratories with 14 percent, classrooms occupy 3 percent, and libraries occupy 9 percent. Health care facilities, operations and maintenance, housing and others share the remaining spaces. This makes offices adequate for lecturers in Stanford University, which is an indication that their productivity is also enhanced. These studies were conducted in developed countries where university funding is different from those in developing countries.

A study that examined how funds are allocated to public universities in Kenya posited that, as a result of poor budgetary allocations to many Kenyan public universities, a sizeable number of lecturers do not have offices (Owour, 2012). This has negative consequence on their output. Similarly, Underfunding of universities in developing economies, especially West African countries has

become a reoccurring problem. This often results in calamitous effect on dilapidated and inadequate buildings. These buildings are used for among others academic staff offices (Bongila, 2006). This has a negative influence on staff output. Poor budgetary allocations to public universities in Africa affect the provision of academic staff offices in most African universities negatively.

A study that examined the financial management in tertiary institutions in Africa revealed that, African universities are inadequately funded. Poor funding of African universities has led to poor and inadequate physical facilities which have affected the provision of academic staff offices in most African universities (Gathuthi, 2008). Since most academic staff share small offices, their productivity is affected. This has also impacted negatively on the quality of university education Africa. These studies though carried out in Africa, did not bring out empirical data of how much was spent on building academic staff offices.

Anijaobi-Idem and Archibong (2012) conducted a study on Challenges of new lecturers in Nigerian Universities, using University of Calabar as a case study. The study adopted the survey research design with a sample of 50 academic staff. Percentages were used to analyse the data. The findings revealed that there is a lack of expertise on the part of the university administrators, because there are no designed orientation/ training program for new teaching staff. In addition, office accommodation is not provided to newly employed lecturers.

This has negative effect on their productivity. The study concentrated only on new academic staff in the university.

A study that examined increasing access to university education in Nigeria established that, as a result of poor funding, 15-30 percent of infrastructural and library facilities in Nigerian universities are not functioning and out dated. Furthermore, staff offices of most universities in Nigeria are conducive for research and teaching (Oyaziwo, Philip & Justina, 2012). The implication of this is that dilapidated staff offices affect the productivity of lecturers. This report, apart from generalizing universities, sampled both teaching and support staff offices.

Folutile and Oketula (2014) in a similar study on budgets of Nigerian universities disclosed that, the Cross River University of Technology, which isa state owned and not a federal owned university in Nigeria, shared a budgetary allocation of N23billion with primary, secondary and other tertiary institutions in 2014. They observed that as a result of underfunding of the university, most lecturers in the university find it difficult to get office accommodation. Because most times, many lecturers in the university squat in one office space that are not worthy to be called offices, which affects the productivity of the lecturers negatively.

Office accommodation for lecturers in Nigerian universities is not assured, a small office accommodation is occupied by three or four lecturers, Professors

mostly occupy small “stores” referred to as offices. (Okunamiri, Okoli & Okunamiri, 2008), this is an impediment for the lecturers in carrying out their responsibilities. Similarly, Amini and Wordu (2015) in a study on underfunding and providing quality university education in Nigeria disclosed that, lack of funding university education in Nigeria has negatively influenced Nigerian universities. One of the ways according to Amini and Wordu include inadequate office space for lecturers, with negative consequence on their output. Even though the studies were conducted in Nigeria, their scope covered private, state and federal universities in Nigeria.

Yakubu (2012) in a similar study that assessed the needs of Nigerian universities reported that, in Nigeria, many lecturers, including some Professors share small offices. Academic staff offices are poorly ventilated, poorly illuminated, poorly furnished and ill-equipped, which is not conducive for the lecturers thus, affecting their output. This was attributed to poor funding of the university system. Meaning that, the funds required to construct befitting academic staff offices are not adequate. The report covered both state and federal universities in Nigeria.

2.4 Budgetary allocation and lecture halls in universities

The Cambridge University in the United Kingdom in 2011, on the advice of the school’s finance committee, earmarked a total amount of £350 million for a period of two years for its capital plan (Anderson, 2015). The funds were adequate and used for the construction of lecture theatres and other

infrastructure in the university. This made students to learn in a conducive environment. Similarly, Gould (2012) in a study on integrating technology in large lecture halls in the United States of America reported that, Kansas State University provided funds through budgetary allocations in 2011. These funds were used for the construction of basic technology classrooms over a two-year timeframe. Each classroom consisting of common core technology costs $11,000. That goal supported the university's initiative of enhancing facilities and infrastructure to meet evolving needs at a competitive level for conducive learning.

A study on space management in higher education in Newcastle University by Johnson, Adams and Cummins (2016) revealed that, funding for infrastructure is adequate to a certain level. This has led to over-provision of space, especially lecture halls in the university, which enhances learning in the university. The report showed that the average attendance level across all areas of teaching activity was less than 50 percent.

In a study conducted on EU Membership in Malta by Bartolo (2003), it was revealed that due to financial constraints, University of Malta had to operate a tight budget by slashing its budget by 26 percent in 2003. This reduction in funding affected the university's facilities, as they were not adequate to cater for its students' lecture halls. However, in a study on University facilities in Turkey, Altinosy (2011) revealed that, Turkish public universities are provided with extra funding so that they can construct new lecture halls and

create new infrastructure for enhanced learning. This is in line with Ali (2014) who in a study on how to reposition university education in Nigeria to global standard, disclosed that in 2013, South Korea and German universities invested 1.2 billion Pounds and 2 billion pounds respectively in their universities. More funds were allocated for capital allocation compared to recurrent expenditure. This implies that they invested more in their universities' infrastructural development in the areas of students' hostels, laboratories and lecture halls, which impacted positively on the performance of the students.

University education in Africa has been reduced to a level in which learning is not taking place. It also lacks lecture halls, libraries and laboratories among others. The standard of university education in most African countries has fallen mostly due lack of adequate funding (Achimugu, 2006). Shortage of funds has resulted to a high shortage of classrooms and laboratories in Rwandan universities (The National University of Rwanda, 2010). This has affected the provision of lecture halls in Rwandan universities.

A study that examined how poor budgets affect universities in South Africa revealed that, 25 South African public universities were underfunded in 2014. The study further noted with concern that the growth in university education was not commensurate with budgetary allocations (Nkosi, 2014). This meant that funding was not enough for infrastructural development such as lecture halls. This contributed to overcrowding in lecture halls in the sampled

universities in South Africa. In Moshi Co-operative University Tanzania, Buberwa (2015) reported that due to paucity of funds, as a result of poor budgetary allocations to the university from 2008-2012, out of a total requested development fund of TSh64 billion, only TSh6 billion was released. Buberwa further mentioned that the shortfall in funds meant that the university failed to maintain, remodel and construct more lecture halls with modern technology within the period under review. This affected the enrolment of students in the university.

A Report which reviewed the funding of universities in South Africa by Ramaphosa (2013) revealed that, universities in South Africa generally lack physical infrastructure like laboratories, lecture halls, student housing, libraries and computer resources. That the infrastructural decay is evidenced by, a poor maintenance culture and an astronomical growth in enrolments than the universities' carrying capacities. The report further showed that as a result of inadequate budgetary allocations to South African universities, lecture halls were inadequate.

A study on validation of the self-evaluation report of Copperbelt University Zambia by Kaijage (2003) observed that, the university has been operating under severe funding problems. The report further observed that underfunding has resulted into deficiencies in students' classrooms and lecture halls. The report classified classrooms and lecture halls in the university as being poorly adequate, leading to over- crowded lecture halls where students hardly learn.

In a study on Higher education in Uganda, Businge (2015) disclosed that, as result of poor budgetary allocations to Uganda's public universities, there are congested classrooms, inadequate students' hostels and lecture halls. This affects students' performance negatively.

Awuni (2015) in a similar study on the sad story of Legon in Ghana, argued that due to poor funding at the University of Legon Ghana, over 100 students are crammed into a lecture room that is meant to accommodate 100 students. This has negative consequence on their performance. Despite the injection of over US$35 million for the refurbishment of infrastructure in Kwame Nkrumah University of Science and Technology in Ghana, the school's facilities are still not adequate (Glassman, Hoppers & Destefano, 2008). This implies that students' performance is affected negatively. These studies though carried out in Africa, did not bring out empirical data of how much was spent on building lecture halls.

Wali and Ololube (2015) conducted a study on challenges and management of university education in Nigeria, and found out that lack of funding of university education in Nigeria has affected all aspects of university life generally. Nigeria's budgetary allocation for university education does not seem to show any attempt aimed at moving Nigerian universities forward. This situation has resulted in negative effect on a number of areas. Such areas, according to the study are the dearth of lecture halls in Nigerian universities. It is so high to the extent that in some faculties, who comes first uses the hall

irrespective of what is on the Time table. The study generalized Nigerian universities without taking cognizance of their peculiarities.

A study conducted by Ayeni and Adelabu (2012) on improving learning infrastructure and environment in Nigeria's educational system established that, there seem to be a big gap in funding between Nigerian and European universities. That this gap in funding Nigerian universities has not only resulted in dilapidated classrooms, but has also led to overcrowded classrooms, using inadequate and obsolete equipment. This view was corroborated by Odiaka (2012) who disclosed that Nigeria appropriated less than 10 percent of its annual budget to the education sector in 2012. That this has resulted to a prevalence of abandoned projects in the areas of lecture halls and furniture among others. In some cases, students do not have enough classrooms to learn, which affects their performance. These studies did not discuss provision of lecture halls for undergraduate students' enrolment.

A study that assessed the state of infrastructure in Nigerian higher institutions in 2012 revealed that, 23.3 percent of infrastructural projects were abandoned in universities in Nigeria, that universities can choose to abandon infrastructural projects such as lecture halls because the money for these projects may not be adequate (Adebayo, 2013). This means that if government does not release funds for a project, the project dies. Akume and Atser (2012) in a similar study on perceived needs for more enduring investment in university education in Benue State Nigeria revealed that, Nigerian

universities are under siege of decay as according to them, there are no facilities for effective teaching and research. Most of the infrastructure are not there, and if they are, they are inadequate or non-functional while money never comes forth to put them right. While these studies generalized all higher institutions including Polytechnics and Colleges of education in Nigeria, and limited its scope to only infrastructural development, this study will be limited to Federal universities only. This study will also consider the adequacy of budgetary allocations on developmental priorities of universities in the areas of provision of lecture halls and academic staff offices.

A study that examined the Problems of infrastructure in South-West Nigerian universities by Babatope (2010) established the problems of infrastructure in South west Nigerian universities. The study had a population of 500 staff randomly selected from ten universities in the region. It used a questionnaire and analyzed its data using frequencies and percentages. Findings of the study revealed that universities were not financially supported adequately. It also revealed thats universities were not provided with adequate infrastructural facilities. Even though, this study was conducted in Nigeria, its sample comprised of Federal, state and private universities in Nigeria. The study also sampled both academic and non-academic staff. It further generalized facilities without breaking them into different components.

A study on Quality of university education in Nigeria in the 21st Century by Asiyai (2013) revealed that, under-funding of university education in Nigeria

is a bane to the country's growth and development. The study sampled all higher institutions in Nigeria (inclusive of Polytechnics and Colleges of Education).

2.4.1 Budgetary allocation and undergraduate students enrolments

A study conducted by Okebukola (2008) on imperatives for achieving Vision 20:2020 in Nigeria showed that, universities in the USA, Spain and Italy admit 64 percent, 50 percent and 50 percent respectively from prospective students. This high absorption rate according to Okebukola could be as a result of high budgetary allocations to their universities' sub-sector. In the same vein, Australian universities have between 2000 and 2010, witnessed an increase in students' enrolments by 56 percent (Group of Eight Australia, 2011). While the studies were conducted in developed countries, implying that they have a high absorption rate of first degree applicants as a result of the adequacy of budgetary allocations to their universities, this study will be conducted in Nigeria which is a developing country.

A survey on funding of education in Europe using 31 European countries from 2000 to 2012, it was established that as a result of reduction in funding from government by 30 percent within the period under review, the quantity or number of students declined progressively because of restrictions in education funding. The study also revealed that the reductions also led to the closure or merger of some educational institutions in the countries under review. This

also provides a basis that a reduction in government budgetary allocations to universities reduces enrolment rates of students (The Eurydice Report, 2013).

A report by UNESCO revealed that the number of students enrolled in university education Africa is generally short of the required standards (UNESCO, 2004). The Gross Enrolment Ratio (GER) for universities in Egypt is 30 percent, South Africa has 15 percent, and Mauritius has 15.3 percent. This captures the highest of the top 23 countries (Otieno, 2005). From 2005 to 2009, the amount appropriated for university education reduced to 7 percent, as the focus shifted to primary education in the wake of the Jomtien World Education Conference in 2005 (Okwach & Nzomo, 2009). These reductions in university funding have affected university funding in Africa. The average of 5 percent gross university enrolmentindicates wide disparities between African countries. In many African countries, enrolment was 1 percent or less in 2008 (UNESCO, 2008).

A study conducted by Oketch (2004) on how of private universities emerged in Kenya established that, in Africa, public universities are controlled by government, while the control of private universities varies from country to country. The study confirmed that there are laws governing university education in most African countries. This reflects the challenge faced by many universities in Africa in terms of enrolment.

Using figures for some African countries from 1990-2002, Anyanwu and Erhijakpor (2007) investigated how government expenditure on education affects enrolment. The study used data from South Africa, Algeria, Nigeria and Egypt. Their findings showed that Government expenditure on education has a positive impact on education enrolment.

A study conducted by Tettey (2006) on problems of growing and maintaining lecturers in South Africa, established that between 2000 to 2006 students' enrolments at Stellenbosch University in South Africa rose by 15 percent. The study further revealed that as at 2005, Mauritius universities had the highest gross enrolment ratio of 17 percent, followed by South Africa. The study also established that from 2001 to 2005, student enrolment expanded by 55 percent in Kenya, while enrolment increased by 54 percent from 2000 to 2006. In Mozambique, enrolments increased by 64 percent from 2000 to 2004, while in Tanzania, they increased by 173 percent from 2002 to 2006. These universities find it difficult to provide quality education because of the pressure of enrolment growth. The problem is further compounded by a in adequate budgetary allocation to universities. This implies that more funding is needed in universities in order to enhance enrolment rates.

A study that examined crisis in African universities revealed that, from 2003 to 2008, enrolment of students in African universities increased from 2,342,358 to 4,139,797, a 43.4 percent increase over the period under review. Even with these increases, the Gross Enrolment Ratio (GER) of Africa is less

than 6 percent which is the lowest globally (Kanyip, 2013). The reason adduced for the low GER is the lack of capacity to enrol all qualified applicants in Africa. For instance in 2007, Ghana and Kenya were able to admit only 5 percent and 14 percent respectively of prospective students into their Universities. Thus 95 percent and 86 percent of applicants were not admitted. The lack of capacity to enrol all the applicants could be due to funding problems which most often, affect the developmental priorities in the areas of office accommodation, lecture halls and teaching staff recruitment. These studies though carried out in Africa, did not link enrolments to lecture halls and budgetary allocations.

Dauda (2011) conducted a study on public expenditure in education using Nigeria as a case study. It adopted the econometric methods of co-integration and error correction mechanism together with the vector auto regression methodology, the study found out that public educational spending impacted positively on schooling outcomes or the quality of teachers and students. The study generalized the education sector in Nigeria without looking at the peculiarities of university education as to the provision of space of lecture halls against enrolment rate of students per class.

There seem to be an increase in the number of applicants applying for admission into Nigerian universities annually. This was corroborated by Ukwu (2013), who in a study on the need for a rethink on Nigeria's school admission policy, revealed that, despite governments' budgetary allocation to

universities, only about 10 percent of applicants are enrolled annually into public universities. Enrolment rates have continued to increase in Nigerian universities as evidenced by the data released by the National Universities Commission (2004) which showed that, enrolment rose from 54 percent in 1989 to 59 percent in 2000 without an equivalent rise in the number infrastructure, which affects the quality of education negatively. These studies generalized all universities in Nigeria.

2.5 Budgetary allocation and recruitment of teaching staff in universities

Those who constitute the workforce of organization are referred to as Human resources of such an organization. Universities being educational institutions have academic staff who require certain skills to be able to function effectively. Ideally, all university academic staff are expected to have doctoral degrees. For this reason, universities are expected to constantly develop the human capital of their academic staff to enable them function effectively while discharging their duties (Abdulkareem, Fasasi & Akinnubi, 2011).

In a study by Ingersoll and May (2011) on recruitment, using a data of teachers between 2007 and 2008 in the United States of America, the study revealed that, due to an increase in budgetary allocations, the US teaching force increased by 48 percent during the period under review. Similarly, University of Virginia (2013) reported that as a result of increase in funding, the university increased its teaching staff strength by 0.6 percent from2012 to

2013.In the same vein, tertiary institutions in the US recruit teaching staff frequently because it increases institutions' ability to respond to changing student demand (Altbach, Berdahl & Gumport, 2005). These increase in teaching staff of the universities impacted positively on the development of their universities. These studies did not bring out the extent of adequacy of budgetary allocations in their staff recruitment.

A study by Norton (2013) on taking university teaching seriously in Australia posited that, academics in Australian universities are recruited for their expertise in their subject areas. Little consideration is given to their teaching capabilities. Most lecturers have no teaching skills. The study further revealed that Australian universities hire many contract lecturers. Twelve Australian universities hired 2,500 trained lecturers in 2012, which helped in developing the universities in the area of teaching. In the United Kingdom however, 40 percent of lecturers leave the teaching profession within the first three years of their employment (Cooper & Alvarado, 2006), this affects the recruitment of academic staff negatively. Norton, Sonnemann and Cherastidtham (2013) however revealed that, senior academic teaching staff in universities in the United Kingdom constitute 50 to 60 percent of their staff strength, thereby enhancing teaching in UK universities. These studies generalized teachers and concentrated on only senior academics. The studies did not also provide information on budgetary allocations required for funding these recruitments.

A strategic plan report by Cornell University (2010) revealed that, the Cornell University in 2010, in its bid to renew and increase the university's academic staff proactively, deliberately increased the size and quality of its academic staff. The university did this by recruiting new PhD's and prospective PhD holders. Furthermore, the university gave priority to retention of highly qualified teaching staff in valued positions in spite of budgetary constraints. The Catholic University Valencia in Spain, with adequate budgetary allocations, has a students' population of 10,000 with teaching staff strength of 600. This teaching staff strength has been rated as adequate and with high productivity (Kuzilwa, 2012).

A study conducted by Blair and Jordan (1994) on the resignation and employment of Staff at some selected African Universities revealed that, over the years, there has been a reduction in funding African universities as a result of economic stagnation on the continent. This decrease in funding according to Blair and Jordan, results to the emigration of 23,000 qualified teaching staff from Africa every year in search of improved working conditions in other places. University leaders in Africa therefore, regard the rate at lecturers change jobs as an issue that must be addressed, because it is affecting quality. UNESCO (2009) supported this view by disclosing that low budgetary allocation to university education in Africa has led to brain drain arising from the failure of universities to recruit quality academics.

A study by Maina and Waiganjo (2014) in Kenya, on how human resource affects the retention of employees using Kenyatta University, with a sample size of 99. The study adopted descriptive and qualitative statistics and established that there is a positive affiliation between employee recruitment and training in Kenyatta University. The study also established that staff recruitment and selection policies in Kenyatta University do not attract professional teaching staff. This is in line with Saint (1995) who posited that there is a reduced rigor in staff recruitment and promotion in African universities.

Nthiiri, Gachambi and Kathuni (2014) however, in a study on staff recruitment and student admission in Kenyan universities, using universities in Nithi, Tharaka and Meru counties as a case study, with a sample size of 27 top management staff in all the three universities. The study adopted the descriptive survey research design and established that there was a positive relationship between strategies implemented by the universities and student enrolment, recruitment and retention. The study further revealed that the universities were offering competitive packages to recruit as well as retain the most highly qualified academic and administrative members of staff. The study surveyed both academic and support staff recruitment in the sample universities.

Belal and Spriguel (2006) in a study on Egyptian universities disclosed that, in Egyptian universities, many of the highly experienced staff fled to better

endowed countries in search of jobs that have better salaries. This has a negative implication on academic staff recruitment as the best brains do not want to work in Egyptian universities. Similarly, in India, Andhra University placed a ban on recruitment and a severe 30 percent cut in budget allocations. This ban has prevented the university from filling any of its teaching vacancies between 2002 and 2005 (National Assessment and Accreditation Council, 2005). This influences the quality of the university negatively.

Samuel and Chipunza (2013) conducted a study in South Africa on how senior lecturers are retained in their universities. The study adopted the survey research method using quantitative research design, with a sample of 255 senior lecturers in 10 universities across South Africa. The study found out that there is a problem on the future of recruitments of lecturers in the sampled universities in South Africa due to better service attractions in the public and private sectors, and also due to funding challenges faced by the universities. The study sampled only senior academics. This present study however sampled both senior and junior lecturers. In the same vein, universities in Zimbabwe recruited more than 1000 professors in 2005, but by 2007, only 627 were remaining. This made some departments to be closed. The universities were unable to retain and recruit more professors because of paucity of funds by the universities (Kotecha, 2010). These studies though carried out in Africa, did not bring out empirical data of how much were spent on personnel expenditure.

A report by NUC (2004) on academic staff in Nigerian universities revealed that, from 1997 to 1999, the number of lecturers reduced by 12 percent, though the number of students enrolled increased by 13 percent. Emigration of lecturers, as well as lack of adequate postgraduate programs, has left Nigerian universities with only 48 percent of its approximated teaching needs filled. There is an estimated shortfall of 73 percent in engineering, 62 percent in medicine, 58 percent in administration, and 53 percent in sciences (NUC, 2002). The data only showed figures without discussing how budgetary allocations affect enrolments in individual universities.

A similar study conducted by Akindutire (2004) on administration of higher Education in Nigeria revealed that, poor salary structure and weak institutions in the past ten years have led to loss of lecturers in Nigerian universities. A lot of reasons have been adduced for these problems. One is the poor salary structure of university lecturers in the last ten years compared to what others earn in other sectors of the economy. (Saint, Harnett & Strassner, 2003). The studies did not link the recruitment problems to budgetary allocations.

2.5.1 Academic staff with doctoral degrees and those without doctoral degrees in universities

A study conducted on human resource strategy in University of York in the United Kingdom by Lofthouse (2010) established that the University of York had 3,250 academic staff in 2010 with more than 50 percent of them possessing doctoral degrees. The university has a policy of improving their

academic staff through constant training, this is sustained by a continuous increase in budgetary allocations for academic staff training. This impacts positively on the university lecturers productivity.

A study conducted by Nana, Stokes and Lynn (2010) in New Zealand on academic work force planning revealed that, in 2008, eight universities in New Zealand had 9,648 academic staff, with 18 percent as lecturers, 34 percent as senior lecturers, 9 percent as associate professors, 8 percent as professors and 31 percent as academic other (part-time lecturers). The study established that the universities had a flexible training policy that encouraged young academics to acquire doctoral degrees within three years. This policy has helped in developing the human capital of the sampled universities in New Zealand.

It is required that a minimum of 50 percent of permanent lecturers in South African public universities should have PhD's and a minimum of 40 percent should have a Master's degree. In 2010 however, only 34 percent of academic staff in public higher institutions in South Africa had doctoral degrees, with 66 percent of its academic staff teaching without doctoral degrees (Financial and Fiscal Commission, 2010). This affects the development of the university negatively. The study did not link these figures with budgetary allocations to the sampled universities.

A report by The National University of Rwanda (2010) on institutional audit of the National University of Rwanda disclosed that in National University of Rwanda, because of underfunding which affected the training of its academic staff, only 30 percent of its 525 academic staff members have doctoral degrees. That 70 percent of its academic staff do not have doctoral degrees. This affects the quality of teaching in the university. The report sampled only one university.

Nigerian universities in 2010 had 35, 000 academic staff and 21, 350 of them, representing about 61 percent did not have doctoral degrees (National Universities Commission, 2011). The reason for this according to the National Universities Commission could be traced to the 1980s and 1990s when the military junta in Nigeria deliberately underfunded universities and underpaid university lecturers. Nigerian Military juntas were opposed to the university system because they considered it to be the bastion of opposition against their undemocratic and iron fisted rule. The implication of this policy demotivated potential postgraduate students as they preferred to seek for jobs in other sectors. Nigeria is still grappling with this deficit as disclosed by Olukoju (2014) who asserted that there is a deficit of 26,000 PhD holders in Nigerian universities as at 2012. This affects the quality of teaching in Nigerian universities. These studies were generalized and did not specifically bring out the ratios of PhD holders to non PhD holders in Public Universities in Nigeria.

The NUC had prescribed that Nigerian universities should have 20 percent professors, 35 percent senior lecturers and 45 percent lecturer 1 and below (National Universities Commission, 2010). However, a study conducted by Satope (2014) on human resource planning in Nigerian Universities revealed that between 2000 and 2009, Nigerian universities had an average of 18.2 percent of Professors, 21.4 percent of senior lecturers and 57.6 percent of lecturer 1 and below. Thus, most universities in Nigeria have not been able to meet the prescribed NUC norm making Nigerian universities to be bottom heavy. This is in line with Odiegwu (2012) who revealed that many academic staff in Nigerian universities do not have PhD's, with negative effect on the quality of teaching. These studies did not however analyse the ratio of lecturers with doctoral degrees to the ones without, and they also did not assess whether or not adequacy of budgetary allocations to Nigerian universities affects academic staff recruitment and qualifications in Nigerian universities.

2.6 Budgetary allocation and provisions of ratios of teaching and support staff in universities

A study by the Higher Education Statistics Agency (2013) on staff in higher education in the United Kingdom disclosed that in the 2012/2013 academic session, higher education in the United Kingdom had 1,94,245 (49 percent) and 2,01,535 (51 percent) teaching and non teaching staff respectively. But in 2011/12 academic session, UK higher education institutions had 48.5 percent academic staff with support staff having 51.5 percent staff strength (Locke,

2014). Similarly, the ratio of academic to support staff in the University College Cork was 49 percent to 51 percent respectively in the 2009/2010 session (University College Cork, 2010). This shows that, non- academic staff are marginally more than academic staff in the sampled higher institutions, implying that the quality of the universities is high. In Hong Kong's publicly funded universities, Yau (2010) reported that the ratio of non-teaching to teaching staff is 6 to 4 which is not adequate for the development of the universities. These studies did not discuss the role of budgetary allocations in explaining the ratio differentials.

A study by Jump (2015) on academics in universities in the United Kingdom shows that, academic staff are not many in more than two-thirds of UK universities. The survey revealed that, in 2013/2014 academic session, support staff were the majority at 111 out of 157 higher institutions in the UK. They made up 60 percent or more of all staff in 27 higher institutions. For instance, universities of Bradford and Wolverhampton had 63 percent and 62 percent support staff respectively. This means that they had 37 percent and 38 percent teaching staff respectively complemented by the support staff for high productivity.

A study by Ginsberg (2011) on the rise of academic staff in the USA revealed that between 1998 and 2008, United States of America's private colleges and universities improved their expenditure on instruction by 22 percent, while increasing expenditure on administrators and support staff by 36 percent. Over the past four decades, the number of full time professors in America's colleges

and universities increased slightly by more than 50 percent. The percentage can be compared to an increase in the number of students enrolled within the same period. The number of administrators and support staff employed within the same period grew by an astonishing 85 percent and 240 percent respectively. Explanations often adduced for this increase in the number of university managers over the past 40 years according to the study is that apart from record keeping demands, there is an increase in demand for more support staff and administrators.

A study on the university of Minnesota in the USA salary and employment records according to Belkin and Thurm (2012) showed that, from 2001 to 2011, the university recruited more than 1,000 administrators, their ranks grew by 37 percent, which more than doubled the number of teaching staff and nearly twice as fast as the students body. This is in line with Marcus (2014) who posited that the number of non-teaching and support employees at U.S colleges and universities has more than doubled in the last 25 years, vastly outpacing the growth in the number of students or teaching staff, thus aiding in developing the universities.

A study conducted by Graves, Barnett & Clarke (2013) on reforming Australian universities established that, only 35 percent of university funding is usually allocated to academic staff in Australian universities, with support staff getting 65 percent of the funding, implying that teaching staff are overworked. It is however different in Spain as each Spanish university's budget range between 53 and 58 percent for academic staff. Support staff

allocation is lower, ranging between 42 and 47 percent (Caballero, Galache, Gomez, Molina & Torrico, 2003).This is done basically to meet teaching staff requirements. This implies that academic staff are given more priority for higher productivity in Spanish universities. In Western Washington University, the ratio between teaching and support staff is 2:1. This indicates that Western Washington University has about 21 percent more teaching staff than administrators (Zhang & Schmidtz, 2013). This enhances teaching in the university.

A study of faculty managers in Australian universities by Conway (2012) on the relationship between academic and support staff shows that 70 percent of the respondents were satisfied with their roles for higher productivity in their places of work. Similarly, McMaster (2003) examined how university deans and faculty officers work together. The study revealed different types of relationships that develop between the two roles in faculties. It was discovered that there is a higher degree of interdependence at this level, with more trust and understanding between them.

Romanian universities according to Miroiu and Aligica (2002) distribute funds to their universities according to the number of academic and support staff positions. Teaching staff constitute 39 percent of the staff strength, while support staff constitute 61 percent of the staff strength in Romanian universities. This means that in Romania, funds are allocated according to staff strength of the universities. In India, the ratio between teaching and support staff in Indian universities is 1:1.3 (National Assessment and

Accreditation Council, 2005). With this ratio, the number of teaching staff is slightly lower than that of support staff in Indian universities. The report, apart from including private universities in India, did not link the ratio with budgetary allocations.

A study conducted in South Africa by Hamilton (2013) on how tertiary institutions buckle under cash crunch revealed that between 2005 and 2010, tertiary institutions in South Africa, witnessed only a 15 percent increase in academic staff, but support staff witnessed a 50 percent increase within the same period. This increase in the number of support staff is more than student enrolment of 20 percent within the same period. What this means is that the number of support staff engaged in South African tertiary institutions is more than the number of academic staff and students enrolled, thereby putting pressure on the academic staff. The study lumped all tertiary institutions in South Africa, without separating universities from other tertiary institutions.

A study by Higher Education & Training (2013) on statistics and training in South Africa established that in 2011, Higher education institutions in South Africa employed close to 17,000 academic staff, and over 30,000 support staff. On the average therefore, there was one academic staff to about two support staff in higher education institutions in South Africa in 2011. Furthermore, in 2011, while university of South Africa had 1515 academic staff and 3,149 support staff, University of Pretoria had 1,281 academic staff and 1,908 support staff (Higher Education & Training). This shows that

support staff were more than academic staff in the sampled universities but the ratios differ. Few lecturers put pressure on the quality of teaching in those universities.

Tilak (2009) in a study on financing higher education in Sub-Saharan Africa, while comparing the ratios of teaching and support staff in terms of funding in some African countries universities, disclosed that in universities in Madagascar, support staff budget is as high as 51 percent, 47 percent in Ethiopian universities and 46 percent in Mauritanian universities. This leaves academic staff with 49 percent, 53 percent and 54 percent respectively, thus enhancing the quality of teaching. The study did not show the number of teaching and support staff in the sampled countries.

A study by Majoni (2014) on challenges facing university education in Zimbabwe, gathered data through open ended questionnaires from a sample of 20 academic staff in three universities in Zimbabwe, the data were qualitatively analyzed. The findings of the study revealed that universities were facing financial challenges, which has resulted to loss of qualified and experienced teaching and support staff in the system, thereby affecting the quality of teaching in the sampled universities.

Macuacua (2008) in a study on the funding challenges for universities in Mozambique established that, Eduardo Mondlane University Maputo in 2006 had 1,170 academic staff and 2,367 support staff with a budget of $39,125.

The number of support staff was more than twice the number of academic staff in the university, with a ratio of about 1:2, implying that academic staff do not have adequate support. The report did not breakdown the budget according to capital and recurrent allocations, making it difficult to know how much of the budget is for academic and support staff of the university.

A study conducted by Odebiyi and Aina (1999) on how higher education is financed in Nigeria revealed that, the ratio of teaching to non- teaching staff is found to be about 1:3 in Nigerian universities. The study generalized all universities in Nigeria. In Kano university of Technology, a university owned by the Kano state government in Nigeria, Bennell, Dandago and Sagagi (2007) reported that, between 2005 and 2006, the university had 143 academic staff and 198 support staff. The report only showed the number of staff without indicating their budgetary allocations. This implies that teaching staff are not adequate in Nigerian universities with a negative consequence on their productivity.

A study on education public expenditure review in Kaduna state Nigeria by Abubakar and Bennell (2007) revealed that the ratio between academic and support staff in 2004/2005 was 1:4 in Kaduna state university Nigeria, which is owned by the Kaduna state government in Nigeria. This means that for every academic staff, there are four support staff, putting pressure on academic staff. The study did not indicate how academic and support staff are funded in the university.

Okowa (2011) disclosed that a university provides three key services of teaching, research and community services. Universities are measured by the quality of their teaching and non-teaching staff. Okowa further revealed that apart from the quality, universities have to provide and maintain good ratios between their academic and non-academic staff. Without proper funding, the quality and ratio of teaching and support staff will be affected.

2.7 Budgetary allocation and alternative sources of funding universities

University education is a capital-intensive project requiring investments of at least 15 percent of the GDP or 40 percent of the total education budget (World Bank, 2010). This target is usually difficult to achieve by many universities, thus making it imperative for universities to seek for alternative sources of income. Universities therefore, generally strive towards augmenting their sources of income so as to meet their developmental needs. This is in line with a study on the pattern of higher education globally by Altbach, Reisberg and Rumbley (2009), which disclosed that universities globally, have alternative ways of generating revenues apart from school fees and funding from government. The study supported its argument by disclosing that in the U.S.A, universities are well supported by their alumni and other donors. For instance, 2,963 alumni of Harvard University contributed $621 billion. These funds are used for the development of the university in the areas of infrastructural and human capital development (Babalola, 2014).

A study conducted on funding higher education in Europe by Jongbloed (2008) revealed that, some European countries have been able to channel more than 2 percent of their GDP into their tertiary education. The study further disclosed that Portugal and Italy for instance, through alternative sources of funding, generated up to 31 percent and 30 percent respectively to fund their tertiary institutions. Similarly, Snowden (2013) revealed that between 2005-2006 and 2011-2012, there has been a steady rise in the level of income from alternative sources to higher education in England, showing an increase of 44 percent within the period under review. The universities utilized the funds for their infrastructural and human capital development. The studies did not specifically state the alternative sources of funding the tertiary institutions.

A study conducted by Walshe (2010) on how European Universities Diversify Income Stream, relied on European Universities Association online survey, reported that the study sampled 150 European universities in 27 countries as well as on site visits and workshops. The sample was diverse and included universities that were not allowed to charge students fees and other sundry charges as well as those that generated 25 percent of their income from fees. The survey discovered that European public universities generate between 27 percent to over 30 percent of their income through alternative sources of income, which they channel for their development. However, some of the public universities were deterred from exploring alternative sources of funding aggressively because of the excessive administrative complexity involved.

In a study conducted on communications and alumni relations, with a sample of 58 development directors in US universities, Levine (2008) revealed that in 2004/2005, on average, the four greatest revenue producers for non-profit universities were student tuition and fees (27.90 percent), investments (24.60 percent), hospitals, independent operations and others (15.00 percent) and private grants and gifts (12.40 percent), respectively. The report further showed that within the period under review, voluntary contributions to universities and colleges in the United States reached $25.6 billion, and that nearly half of this money came from individuals and were used to develop the universities.

A similar study conducted by Dimeglio (2008) on how colleges explore alternative revenue streams in the USA revealed that, Emmanuel College in Boston, USA leased an acre of land to pharmaceutical company in 2008, which subsequently utilized the land to erect a 12 story research facility. That the 75 year lease brought in US$50 million to the college. On its part, Lasell College also in the USA, built an apartment complex on its property intended for senior living where residents took 450 credit hours per year. In 2008, the college made a profit of US$1 million from the investment. In Canada, the Canadian government launched a major private funding campaign, where tuition fees had to rise by 50 percent, so that they comprise, on average about 25 percent of university revenues (Grier, 1995). These revenues complement the universities' funding needs for their development.

Not all efforts however by universities to raise funds through alternative sources of funding yield positive results. Meglio (2008) revealed that, though Indiana University which is a public university in the United States of America supplements its revenue through its hospital, dormitories and endowments. But its plan to construct and lease an 800-bed dorm with a private partner failed, raising worries about blurring the line between being educators and business people as they pursue alternative sources of incomes.

It is however different in Harvard university for instance, where Akpanuko (2012) in a study on tertiary education development and sustainability revealed that the university adopts a decentralized financial management strategy to permit accountability and efficiency as shown by their departmental operation expenditure for 2003. With a student population of over 19,000 in 2003, the university had a total income of $2,472,692,000 billion. The sources of income are Non-government grants 5 percent, Government grant 17 percent, students' income 21 percent, current use gift 6 percent, other receipts 20 percent, and endowment income distribution 31 percent. It is worthy to note that endowment income distribution provides 31 percent of income to the university while government contributes only 17 percent income to the university. This is an exhibition of a unique financial restructuring and an enhanced responsibility accounting system for the development of the university.

Chattopadhyay (2007) in a study on exploring alternative sources of financing higher education in India, revealed that the key to economic development lies in the provision of quality higher education. This can be achieved through adequate funding of the education system. In spite of increases in funding higher education in India, the relevance of exploring other sources of financing higher education remains a priority. The study found out that fee enhancement and education loans are used to augment income in India's higher education. The income is utilized for infrastructural and human capital development of higher education in India.

The key issue facing university education in Ghana was how to generate additional funds to cope with an increase in enrolments. Universities in Ghana, in order to seek ways of enhancing development, have resorted to consultancies as a means of generating alternative income (Daniel, 1995).

In a study on the funding challenges for African universities, Macuacua (2008) revealed that Eduardo Mondlane University Maputo in Mozambique generated as high as 43 percent from alternative sources to fund and develop the university. That the government only provided 57 percent of the university's funding. The study did not explicitly state the sources of the university's funding.

A study by Udoh (2008) on other means of generating funds for universities in Nigeria revealed, how parents, lecturers and university students viewed some

alternative sources of funding university education in Nigeria. The study used a sample of 676 parents, 678 students and 308 lecturers. The data was analyzed using percentages and analysis of variance. The findings of the study showed that Nigerian universities used alternative sources of funding their universities for developmental priorities. Such sources apart from government budgetary allocations according to the study include loans, commercializing activities on campuses and commercializing accommodation among others. The study, apart from generalizing all universities in Nigeria, did not suggest which alternative source is most appropriate for financing Nigerian universities. Similarly, Ahmed (2014) suggested individual support from parents/students and other stakeholders in financing Nigerian universities. The study was however not specific on the types of private support needed to finance university education in Nigeria.

A study by Malgwi (2014), while exploring, other sources of generating funds internally in Adamawa state university, Mubi in North Eastern Nigeria. Disclosed that the university's alternative sources of income used for the development of the university are a printing press, consultancy services, transport business, ADSU microfinance bank, foreign partnership and engineering and works. Furthermore, Famade, Omiyale and Adebola (2015) suggested that Nigerian universities should as a way of improving their internally generated revenue, engage private agencies, international partners and the private sector for support. These funds can be used by the universities for their infrastructural and human capital development.

A study on the role of alternative sources of funding universities in Nigeria by Onuoha (2013) revealed that, in order to gain utmost contribution from internally generated revenue sources, university administartors should seek equitable and better ways of developing their internally generated revenue initiatives. The study further recommended that universities should restructure to accommodate an internally generated revenue co-ordination office to ensure that imaginative revenue generating initiatives are not frustrated by bureaucracies. This will enhance development in universities.

In a study on the role of the various stakeholders in funding the Nigerian university education, Onuka (2004) revealed that government provides up to 91 percent of funds available to the Nigerian federal university system for their developmental priorities. The remaining 9 percent is expected to be generated through alternative sources through the efforts of the universities.

While the National Universities Commission (NUC) has some more or less clearly articulated guidelines and parameters for allocating resources to individual universities, only few universities have been able to develop any rational and clearly articulated basis for internal distribution of resources (Kwanashie, 2005). Because of this, scarce resources are often easily misapplied with critical functions starved of resources, while merely facilitating activities are generously supported (Ali, 2011). Adefila, Kasum and Olaniyi (2005) identified poor funding as one of the major problems of

funds misapplication as it often force university management to start allocating funds to its various activities without due regard to budget submissions. This affects the development of the universities in the areas of infrastructural and human capital development.

2.8 Theoretical Framework

The theoretical framework for this study was the Keynesian theory. This is because the theory captures the relationship between public budgetary allocations and developmental priorities. The Keynesian theory as postulated by Keynes (1936) states that, the government should always intervene through budgetary allocations in running the various sectors of an economy for the overall development of the nation's economy. The sector in this theory will represent the universities while developmental priorities will represent infrastructural development of universities and human capital development of university staff.

The Keynesian inspired expenditure-led growth of the 1970s brought about the prominence of budgetary allocations. According to Keynes (1936), supply does not create demand and as a result of that, goods remain unsold, production is cut and unemployment is created that cannot be solved by reducing wages. The only solution for the low economic activities as advocated by Keynes and corroborated by Arestis and Sawyer (2004) is for government to spend more in form of increase in budgetary allocations. Implying that, an increase in federal universities' budgetary allocations by

government can lead to human capital development of staff in the areas of recruitment of academic staff and ratios of support to teaching staff, and infrastructural development in the areas of lecturers' offices and lecture halls.

Similarly, Colclough (1996) disclosed that it is more efficient and desirable for government to provide funding for university education in the areas of staff offices, lecture halls and recruitment of teaching staff. This was corroborated by Blaug and Woodhall (1979) who revealed that it is necessary to provide free education at all levels and also to subsidize students' living expenses in universities so as to guarantee equality of educational opportunity for students in their hostels and lecture halls. Arrow (1993) observed that government intervention in funding human capital development of universities has a positive effect on academic staff quality.

The principles of Keynesian theory (1936) are applicable to this study because government intervenes in the education sector by funding public universities. These funds are expected to be used by the universities for personnel and capital expenditure. The level of funding should determine the developmental priorities of these public universities in the provision of academic staff offices, lecture halls, recruitment of academic staff, ratios of teaching to support staff and alternative sources of funding.

This theory is relevant to this study because it provides a justification for government expenditure through budgetary allocation on university education

which will ultimately lead to the achievement of the developmental priorities of public universities. Conceptual framework of budgetary allocations for the development of public universities is presented in Figure 2.1:

2.9 Conceptual Framework

Figure 2.1 shows the conceptual framework of the study . This comprise of budgetary allocation for developmental priorities of federal public universities:

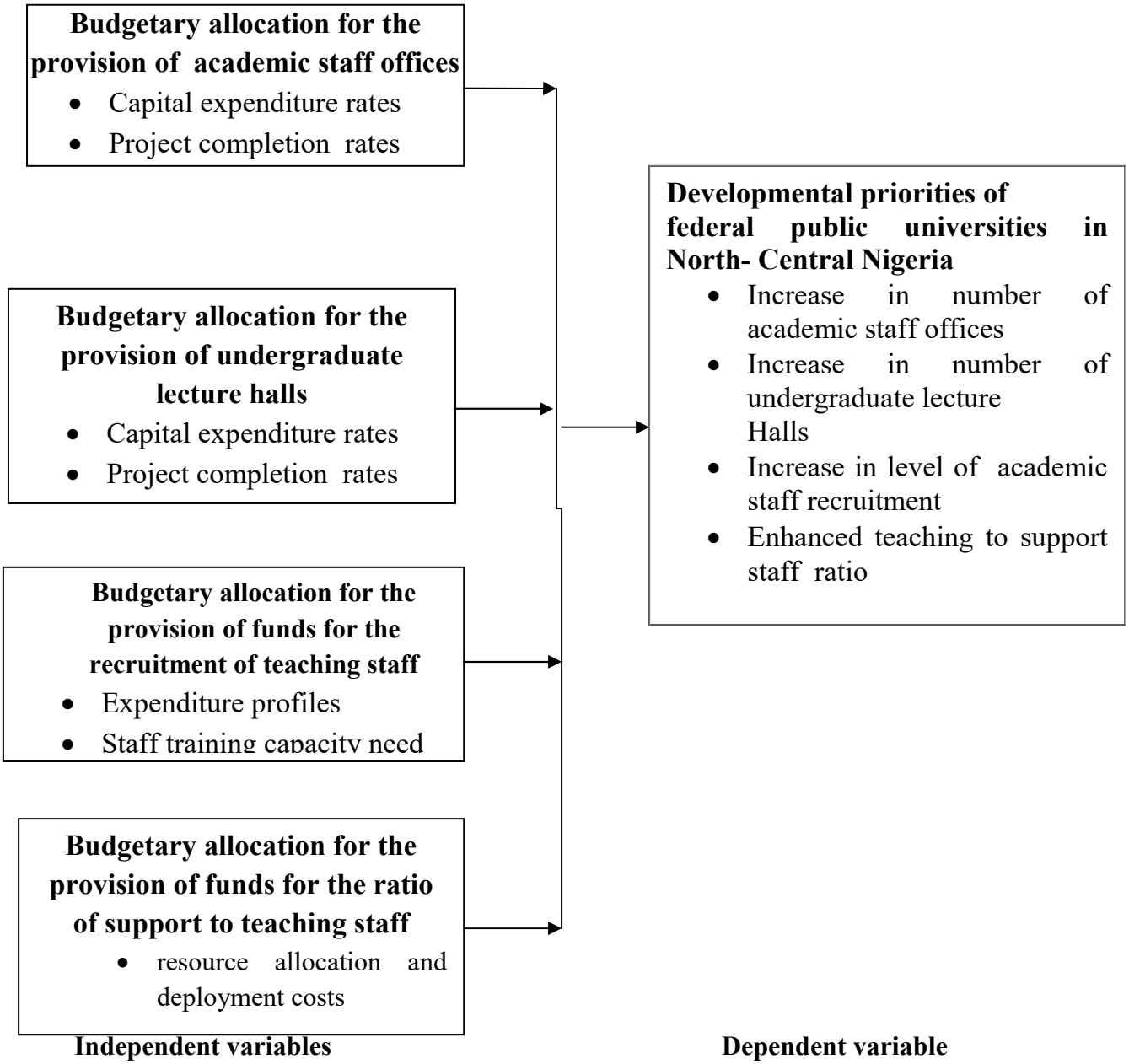


Figure 2.1: Conceptual framework of budgetary allocations for the development of public universities

Figure 2.1 shows the conceptual framework for this study. The study was conceptualized that the dependent variable is developmental priorities of federal public universities. Factors for the independent variables of the study are budgetary allocations for the provision of lecturers' offices, lecture halls, recruitment of academic staff, support staff to teaching staff ratio and alternative sources of funding universities also figured in the framework.

This implies that development of public universities will be measured in this study in terms of how adequacy of federal budgetary allocations will enhance the development of universities' lecturers' offices, lecture halls, recruitment of academic staff, sustainable support staff to teaching staff ratio and alternative sources of funding universities.

2.10 Summary of the review of related literature

From the literature reviewed, it was evident that budgetary allocations are done annually by governments to public universities globally. These allocations are expected to develop the universities in the areas of infrastructural development, and human capital development. Public universities in developed countries as reviewed have good infrastructure, qualified and adequate academic staff. They achieve this, through adequacy of budgetary allocations to their universities. The current study examined this notion in federal universities in North Central Nigeria.

The literature reviewed also revealed that in Africa and not excluding Nigeria, budgetary allocations to public universities by government are inadequate to take care of their developmental priorities in the areas of provision of academic staff office

accommodation, provision of lecture halls, recruitment of teaching staff, ratios of teaching to support staff and alternative sources of funding. The literature only revealed the amounts spent by the universities on their infrastructure and human capital development. The literature did not take the views of the universities' Vice-Chancellors, bursary staff, lecturers and students on the adequacy of budgetary allocations to their universities for developmental priorities. The studies also lacked concrete recommendations on how to improve budgetary allocations to universities.

In addition, the reviewed literature provided proof that most studies done on budgetary allocations for public universities development were done in developed countries, and were generalized combining private, state and federal universities. This study filled this gap by concentrating on only federal universities. Furthermore, no study has been done on how public universities budgetary allocations affect their developmental priorities in the sampled universities. In addition, all the previous studies have been generalized without clearly showing how budgetary allocations affect developmental priorities of universities. The literature did not also look at provision of office accommodation to academic staff, provision of lecture halls for undergraduate students' enrolment, recruitment of teaching staff, provision of staff ratios between teaching staff and support staff and alternative sources of funding.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section focuses on the methodology that was used in the study. It covers the research design, the study location and target population, sample size and sampling procedure, instruments for data collection, its validity and reliability, data collection procedures and data analysis techniques.

3.2 Research design

The study adopted a descriptive survey research design. The design ensures that data are gathered from relatively large number of issues. John and James (2003) affirmed that descriptive survey entails gathering data on current status of a population and inferring from a study of sample group carefully selected from the total population. This study examined the influence of federal government's budgetary allocations on infrastructural development in the areas of academic staff office accommodation and students lecture halls. The study also examined human capital development of academic staff in the areas of teaching staff recruitment, ratios of teaching to support staff in North-Central zone of Nigeria.

Descriptive survey research design was used by Ogbogu (2011), who examined the modes of funding Nigerian universities and its implications on performance. This is similar to this present study in the area of budgetary allocations to federal universities and how they are developed in the areas of infrastructural and human capital development. Furthermore, This design was chosen because in constructing meaning on

how key variables such as budgetary allocations, infrastructural and human capital development have influenced the developmental priorities of public universities, there is need to describe, explain and explore the adequacy of lecturers' offices, lecture halls, recruitment of teaching staff, provision of staff ratios between teaching and support staff. This design allowed the researcher to gather and correlate information on budgetary allocations between and within universities from 2011 to 2014 (Packard, 2006).

3.3 Location of the Study

Nigeria, a country situated in West Africa, gained her independence in 1960 from Britain. It is located between latitude 40N and 140N of the Equator and between longitude 30E and 150E of the Greenwich Meridian. Using figures of 2006 census, the country has a population of 140,003,542 million people (National Population Commission, 2006). Nigeria has thirty six states and six geopolitical zones. The North-Central geopolitical zone which is one of the six zones in Nigeria consists of six states and the Federal Capital Territory, Abuja. The North-Central zone has a population of 20,338,257 million people (National Population Commission).

This study was conducted in the North-Central zone of Nigeria which has seven federal universities, of which two were established in 2011. It is strategic because it is located in the middle of the country. Furthermore , the choice of the North-Central zone of Nigeria is imperative for this study because federal universities in the zone seem to be disadvantaged in terms of funding, structures, facilities and academics, hence the need for this study in the zone.

3.4 Target Population

The target population of the study was made up of all the 7 Vice-chancellors in the federal universities, 254 bursary staff, 2,912 lecturers and 84,304 students of these universities (Nigerian Federal university documents, 2015). This is in line with Kombo and Tromp (2006) who observed that population refers to entire group of persons or elements that have at least one thing in common.

3.5 Sample size and sampling techniques

The study sampled 5 federal universities using a simple random sampling strategy out of 7 located in the North-Central zone of Nigeria. This represents 71.4 percent of the study population. In addition, purposive sampling technique was employed for university Vice Chancellors, Bursary staff, lecturers and students. Purposive sampling, according to Kasomo (2006) allows the researcher to select respondents, who would give relevant information relating to the issues being studied. Furthermore, Purposive sampling, apart from ensuring adequate presentation of the targeted population, also intensifies study of selected items apart from increasing accuracy of results.

Simple random sampling technique was adopted in the selection of the universities and participants. In this regard, a sampling frame consisting of a list of federal universities in North-Central Nigeria was obtained and serial numbers were assigned to each one of them as an element on the sampling frame (Awotunde & Ugodulunwa, 2004).

Mugenda and Mugenda (2003) disclosed that in most research studies, a sample size of 30 percent of the population is a good representation. Therefore, the sample size for

Vice-Chancellors and Bursary staff were five and 101 representing 71.4 percent and 39.8 percent of their population respectively. According to Barbie (2005), the type of research is a main determinant of the minimum sample a researcher should use. For descriptive studies, Barbie gave a guide of 10-20 percent of the population. The sample size for lecturers in this study was based on the proposals for descriptive survey. The researcher purposively sampled 15 percent of lecturers from their population for the study. This is in line with Barbie who established that a 10-20 percent range is appropriate for a population of 1000 to 3000. Therefore, a sample of 593 participants constituted the sample for this study. This comprised of 5 vice chancellors, 437 lecturers, 50 students and 101 bursary staff from the universities (since 2 vice-chancellors, 111 lecturers, 20 students and 28 bursary staff were used for pilot testing).

Kamberelis and Dimitriadis (2008) stated that focus groups should have between 7 to 12 members. In this study, the researcher selected 10 students for the FGD from each of the universities. The sample therefore comprised of 50 students from the 5 sampled universities.

Table 3.1 provides information on the population and its corresponding sample size.

Table 3.1 Sample frame of the study:

Study Units	**Population**	**Sample size**	**% of population**
University Vice-chancellors	7	5	71.4
Bursary staff	254	101	39.8
Lecturers	2,912	437	15
Undergraduate students	84,304	500	
TOTAL	**87,475**	**593**	

3.6 Research instruments

The research instruments that were adopted in this study included, interview guide for university Vice-Chancellors, questionnaires for university bursary staff and lecturers, focus group discussion for undergraduate students, observation schedule and documents containing relevant data on budgetary allocations to universities. This study also comprised of documents related to budgetary allocations as they influence provisions of academic staff offices, lecture halls, recruitment of academic staff, ratio of support to teaching staff and alternative sources of funding federal universities in North Central Nigeria. The documents were extracted using a Pro forma which highlighted the funds released to the sampled universities. The budgetary allocations of the sampled universities were examined on the basis of each of the items listed above, with a view of analysing and making conclusions. The following is a brief description for each of the research data collection tools.

3.6.1 Questionnaire for bursary staff

A questionnaire is a research instrument that gathers data on a large sample (Best & Khan, 2003). The questionnaires were designed to be self-completed by the bursary staff. The major reason for the choice of questionnaires for collection of data from bursary staff is that they are able to complete it without help, and were cheaper and quicker than other methods of reaching out to the respondents. Furthermore, questionnaire for bursary staff provided basis for collecting in-depth data about the opinions, attitudes and perspectives of bursary staff about adequacy of federal government budgetary allocations to federal universities and how they influence developmental priorities of federal universities in North-Central zone of Nigeria.

The questionnaire for bursary staff was made up of six parts. The items measuring the extent of adequacy were condensed into a Likert format response type. Part one contained sets of items on extent of adequacy budgetary allocations to federal universities in North-Central Zone of Nigeria. Part one also has additional information on the distribution and implementation of budgetary allocations to federal universities. Part two of the bursary staff questionnaire sought to respond to how the extent of adequacy of budgetary allocations to universities influenced the provision of office accommodation to academic staff. Whereas part three had items related to how the extent of adequacy of budgetary allocations to universities influenced the provision of lecture halls for undergraduate students' enrolment, part four had structured items on how the extent of adequacy of budgetary allocations to universities influenced recruitment of teaching staff.

Part five had structured items on how the extent of adequacy of budgetary allocations to universities influenced the provision of staff ratios between teaching and support staff. Finally, part six had items on how alternative sources of funding available to federal universities influenced universities to carry out their developmental functions. Parts one to six of the bursary staff questionnaire had a Likert-scale type of measuring the extent of adequacy of budgetary allocations to federal universities.

3.6.2 Questionnaire for lecturers

Lecturers in federal universities like bursary staff were also able to provide information on how the variables of the study influence the extent of adequacy of budgetary

allocations to universities on developmental priorities in North-Central zone of Nigeria. Use of questionnaire made way for collecting data in an efficient and cost effective manner without having to distort the robustness of the mode of data collection.

The lecturers' questionnaire underscored clues that could possibly indicate the degree of influence that might occur. They may occur as a result of the extent of adequacy of budgetary allocations to universities on developmental priorities in North-Central Universities.

The lecturers' questionnaire was structured into four parts. The set of items measuring their opinions on extent of adequacy was abridged on a Likert scale. Part one contains set of items in response to the variables on provision of office accommodation to academic staff in federal universities in North-Central Nigeria. All the items have been subsumed into a scale. Part two contains set of items (that form a scale) in response to the provision of lecture halls for undergraduate students' enrolment. In part three, the set of items related to recruitment of teaching staff were explored. Finally, Part four had sets of items on staff ratios between teaching and support staff in federal universities.

3.6.3 Interview guide for University Vice-Chancellors

The interviews were conducted with the university Vice-Chancellors. The interviews were meant to further deepen and likely strengthen the gains made from the primary data collected from the other study participants through questionnaires. The interview data was used as a follow-up to certain responses to the questionnaires. It helped to further investigate their responses (McNamara, 1999). The interview guide was characterized by easily interpretable questions that lacked ambiguity that led to more accurate results.

Interviews are important tools used to depict the story behind the interviewees' experiences. The interview guide contains items that cumulatively address all the five objectives of the study. University Vice-Chancellors are the heads of universities. Their views are therefore crucial and the probes used in the interview guide are meant to reveal what could possibly be the extent of adequacy of federal government's budgetary allocations on developmental priorities of federal universities in North-Central zone of Nigeria.

3.6.4 Focus group discussion guide for university students

A focus group is a small discussion group that is usually guided by a trained leader (Krueger & Casey, 2009). It is used to learn more about opinions on a designated topic or issue. Focus Group Discussions help researchers to learn about group or community opinions, ambitions and needs in typically spoken, open-ended and relatively broad and qualitative responses (Johnson & Johnson, 1997). Focus Group Discussions are structured with the aim of building consensus on a matter. Kamberelis and Dimitriadis (2008) referred to such discussions as 'collective conversations' that may take place between a discussant and two or more participants. For instance, issues with regard to whether provision of lecture halls in universities could be tabled for discussion. Thus, it could be underscored that the basic aim of focus group discussion includes describing, explaining, underscoring meanings and providing interpretation of a specific issue based on the perspectives of the group participants (Liamputtong, 2009).

The views of university students were also taken. By means of a focus group discussion toward building a consensus on what students consider as adequate in terms of academic staff offices, lecture halls, recruitment of teaching staff and ratios of teaching to support staff in North-Central zone federal universities was conducted. The experience of the students was also needed to be explored in order to ascertain their thought on how the variables under study influenced developmental priorities of the universities. A focus group discussion guide targeted at the students was used for that purpose.

3.6.5 Observation checklist

The researcher also observed the infrastructural facilities in the areas of academic staff offices and lecture halls to help in assessing their levels of development. Observation makes the observer to detach himself from the social setting being investigated and allows him to gain a more objective view of the reality being investigated (Scott & Usher, 2004).

3.6.6 University documents

The required secondary data, consisting of relevant documents from the sampled federal universities were the records of budgetary allocations to the selected federal universities from 2011 to 2014. This was extracted using a pro forma. A pro forma is a tool prepared in advance to extract information from an existing document (Awotunde & Ugodulunwa, 2004).

3.7 Validity of research instruments

Validity of the instruments relates to the test of whether the instruments measure what they are intended to measure (Rubin & Bibbie, 2001). Content validity of the research instruments was initiated at the design stage. The questionnaires were subjected to the criterion, content and construct validity tests to identify whether they measured what they sought to measure. The interview guide was also likewise subjected to trustworthiness tests. Trustworthiness tests are the qualitative equivalent of internal validity. Observation schedule was also subjected to trustworthiness tests. To ensure content validity, the research instruments were developed based on the ideas of contingency theory of planning that are applied in education and schooling. Thus, the content validity was enhanced by expert opinion from the researcher's thesis supervisors as well as views of academics in university of Jos, Nigeria. The documents were obtained from the National Universities Commission and record offices of the sampled universities. The researcher perused these documents in order to ascertain the budgetary allocations and developmental priorities of universities. The documents were considered valid because they are statutory documents approved by the federal government of Nigeria and universities' managements.

3.8 Reliability of research instruments

Reliability seeks to establish the stability or consistency with which something is measured (Robson, 2007). The Cronbach Alpha reliability coefficient was computed at 0.5 alpha levels for the pre-tested items using SPSS, this enabled the researcher take the decision to refine, remove or maintain specific items or group of items (Yardley, 2000).George and Mallery (2003) disclosed that Cronbach Alpha reliability coefficient

normally ranges between 0 and 1. The closer the Cronbach's Alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale. Transferability of qualitative instruments, which is the measure of reliability, was conducted by giving the instruments to more than one expert at different times to look at and their views on the appropriateness of the instruments.

In this study, the researcher made effort to boost the reliability of the qualitative data by requesting the respondents to cross validate the transcribed output that emerged from the interviews and discussions with study participants. The process of cross-validation thus, promoted the effort towards an enhanced reliability regime for this study and its findings. According to Ogola (2010), studying only a subject or a particular kind of subjects may lead to biases in terms of interpretation. Hence to control interpretive biases, research data was gathered from University Vice-Chancellors, bursary staff, lecturers and students. Besides controlling the study participants, the study also used different data collection tools including questionnaires, interview guides, observation schedules and focus group discussion guides to enhance reliability.

The following formula was used to calculate the reliability coefficients for the various subscales in SPSS:

$$\frac{N^2 Cov(average)}{\sum \sum s^2 + Cov_{item}}$$

Interviews, Questionnaires, focus group discussions and observation schedules were piloted in two federal universities in North Central zone of Nigeria. This was done to

determine whether there were ambiguities in any item, if the instruments could elicit the type of data anticipated. The piloting ensured clarity and sustainability of the languages used. According to Orodho (2009), pilot study is a mini experiment which is designed to test logistics and also to gather data before the larger study. This is to improve the latter's quality and efficiency. The purpose of this piloting assisted to find out any weaknesses that were contained in the instruments. The piloting also determined whether the instruments were reliable and valid. For the purpose of piloting, 2 Vice Chancellors, 23 bursary staff, 21 students (FGD) and 111 lecturers were selected through purposive sampling in North-Central Zone of Nigeria. This gave a total sample of 157.

Table 3.2 provides the established reliability coefficients for the various levels of measures for the bursary staff questionnaire.

Table 3.2: Cronbach's Alpha Reliability Coefficient for Bursary staff questionnaire:

Variable	Reliability Coefficient
Extent of adequacy of budgetary allocations to universities	0.91
Adequacy of budgetary allocations on the provision of office accommodation to academic staff	0.82
Adequacy of budgetary allocations on the provision of lecture halls for undergraduate students' enrolment	0.75
Adequacy of budgetary allocations on the recruitment of teaching staff	0.77

Adequacy of budgetary allocations on ratios between teaching and support staff	0.72
Adequacy of budgetary allocations on alternative sources of funding universities	0.78

Table 3.2 provides the Cronbach alpha values that were calculated for the set of items that come under each subscale and the results appeared to have good internal consistency. The coefficient of reliability proved that there were alpha values ranging from α =.72 to .91.Almost all the items within the subscales appeared worthy of retention, just a few items had to be changed to improve upon their reliability.

Table 3.3 shows the distribution of Cronbach alpha reliability for the university lecturers' questionnaire.

Table 3.3: Cronbach's Alpha Reliability Coefficient for University Lecturers' questionnaire:

Variable	**Reliability Coefficient**
Adequacy of budgetary allocations on the provision of office accommodation to academic staff	0.81
Adequacy of budgetary allocations on the provision of lecture halls for undergraduate students' enrolment	0.78
Adequacy of budgetary allocations on recruitment of teaching staff	0.84
Adequacy of budgetary allocations on ratios between teaching and	

support staff	0.76

From Table 3.3, the Cronbach alpha values were calculated for the set of items that come under each subscale in the university lecturers' questionnaire and the results appeared to have good internal consistency. The coefficient of reliability proved that there were alpha values ranging from α = .76 to .84. Although most items appeared worthy of retention, some items within the various subscales had to be reworked to improve their reliability. The calculated reliability was found to be appropriate to be used for the conduction of data collection.

3.9 Data collection procedure

Approval was granted by the University of Nairobi in the form of full registration that enabled the researcher to approach the appropriate agency in Nigeria to seek permission to collect data. Upon arrival in Nigeria, the researcher wrote a permission letter to the National Universities Commission in Nigeria requesting for permission to obtain data from federal universities in North Central Nigeria as shown in Appendix Y. The permission received from the National Universities Commission to go to the field has been attached as in Appendix Z.

After permission was sought by the researcher through an introductory letter, interviews were used to collect data from University Vice Chancellors, while questionnaires were used to collect data from bursary staff and Lecturers. The questionnaires were structured to elicit opinions of its targets. The questionnaires were mainly hand delivered by the

researcher and five research assistants who were trained before assigned responsibilities. There was also a synthesis of documents on budgetary allocations by means of documentary analysis guide at two stages. First, officers in charge were contacted in order to track available documents. Secondly, relevant data that help answer the research questions were sampled purposively for documentary analysis. Also, lecturers' offices and lecture halls were observed by the researcher and appropriate conclusions made.

During the focus group discussions, all the respondents consented to be tape-recorded. The researcher tried to transcribe the focus group discussions data as soon as the sessions with the group members ended in order not to distort the meaning and understanding that respondent(s) gave (Bell, 2010).

3.10 Data analysis techniques

In this present study, both quantitative and qualitative data were gathered. The universities' Bursary staff and lecturers questionnaires were analyzed with Statistical Package for the Social Sciences (SPSS version 21) software. According to Pallant (2007), three basic steps are required to input raw data into SPSS. Step one involved checking and modifying, the options that SPSS uses to display the data and the output that is produced. In step two, 'defining' the variables set up the structures of the data file. The third step involved the entry of the data. In addition, a fourth step of data cleaning was also carried out. All data entered onto the SPSS software was crosschecked after running descriptive statistics to identify wrongly entered data as well as missing data.

Quantitative data was directly coded into SPSS programme for analysis. For the

quantitative data, descriptive statistics such as frequency counts and percentages were used to analyze and summarize the data that was collected. Presentation of data was done through tables and figures. In order to demonstrate the adequacy of federal government's budgetary allocations to universities and its influence on the provision of office accommodation to academic staff, provision of lecture halls for undergraduate students' enrolment and recruitment of teaching staff, a simple linear regression was conducted at 95 percent confidence level.

All significant differences and relationships were tested at .05 alpha levels. The regression equation used for predicting the dependent variable and independent variable has been defined. The simple linear regression produces an equation like,

$Yi = \beta_0 + \beta_1 Xi + E$.....equation 1

Where the following notations define Yi,

Y1=Developmental priorities of federal public universities

Y2=Developmental priorities of federal public universities

Y3= Developmental priorities of federal public universities

Also where the following notation defines Xi,

X1= Budgetary allocations for the Provision of office accommodation

X2= Budgetary allocations for the Provision of lecture halls for undergraduate enrolment

X3=Budgetary allocations for the Recruitment of teaching staff

E= Error term

Again, β_0 is given as constant and β_1, β_2 and β_3 are given as the gradients of independent axis.

The following simple linear regression equations were also computed ($\beta_0$varied from equations 2, 3, 4, 5, 6 and 7)

1. $Y1= \beta_0+ \beta_1X1$……equation 2
2. $Y2= \beta_0+ \beta_2X2$……equation 3
3. $Y3= \beta_0+ \beta_3X3$……equation 4

The qualitative data from interviews, focus group discussions and open ended questions from the questionnaires were also carefully read, thematized and coded. This was done by marking out ideas and concepts along categories in portions of the data that had similar or same data text with a code label. This process easily gave way to comparison and analysis with a well- distilled data (Flick, 2014).It was the codes that were given to the labels that aided easy data search and identification of identical patterns that emerged. The codes that the researcher used were based on themes, topics and keywords that were profiled from the data.

The researcher gave label of the same kind to all data that had been given the same or similar connotation of feedback. Those codes then gave way to empirical analysis (otherwise referred to as sense making or producing meaning) from similar categories. However, care was taken not to exclude data sets that form the minority in the response categories that emerged. The NVIVO software was used to manage all the processes explained by following through three simple stages: 1) line-by-line coding of primary studies; 2) organizing codes into themes; and 3) development of analytical themes.

3.11 Ethical consideration

In order to assure ethics in this research, the researcher obtained authorization from the relevant official in the National Universities Commission in Nigeria which enabled him access the study sites and study participants. Furthermore, since a number of human subjects were involved, effort was made to secure informed consent from human subjects as shown in Appendix X. It was not difficult doing this with the participants since it meant they had to read and append their signatures to agree or otherwise. The participants involved included bursary staff, lecturers and students. Doing this was easy by the respondents because they were lettered.

Vice-Chancellors and students took part in the interview sessions and focus group discussions respectively. Permission was sought from the respondents to voice record the interviews with an Ipad 4. The voice recording was done primarily to seek a second opinion aimed at validating the data collected.

Effort was made not to falsify, fabricate data, data sources, findings, claims and even credentials of others. This was done by making sure information sources were reported in acceptable fashion that takes cognizance of due procedure. Also, quotations and citations were properly referenced both inside and outside the text.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter focused on how data were analysed, interpreted and discussed in the light of the objectives of the study. The study examined the influence of federal government budgetary allocation on developmental priorities of federal public universities in North-Central zone of Nigeria. The findings of the study have been reported according to their corresponding research objectives. First, how federal government budgetary allocation to universities influences the provision of office accommodation to academic staff in federal universities in North-Central zone of Nigeria was established. Second, how federal government budgetary allocations to universities influence the provision of lecture halls for undergraduate students' enrolment was determined. Third, how federal government budgetary allocations to universities influence recruitment of teaching staff in federal universities was examined. Fourth, how federal government budgetary allocations to universities influence the provision of staff ratios between teaching and support staff in federal universities was established. Finally, the influence of alternative sources of funding available to federal universities to carry out their developmental functions was examined

4.2 Questionnaire return rate

The return rate for the questionnaires for bursary staff and lecturers in federal universities were compiled as shown in Table 4.1:

Table 4.1 Questionnaire return rate

Respondents	Sample Size	Usable returned questionnaire	Percent
Bursary Staff	119	101	84.87
Lecturers	522	437	83.72

As shown in Table 4.1, the return rates of questionnaires were above 80 percent for both bursary staff and lecturers questionnaires.

4.3 Demographic information

The analysis of the demographic data of the respondents was divided into two sections. First, the demographic data of federal universities' bursary staff in North-Central Zone of Nigeria were presented and secondly, the demographic data of federal universities' lecturers in North-Central zone of Nigeria were presented.

4.3.1 Demographic information on Universities' Bursary staff

Universities' bursary staff were asked to indicate their ages on the questionnaires. The results are as presented in Figure 4.1:

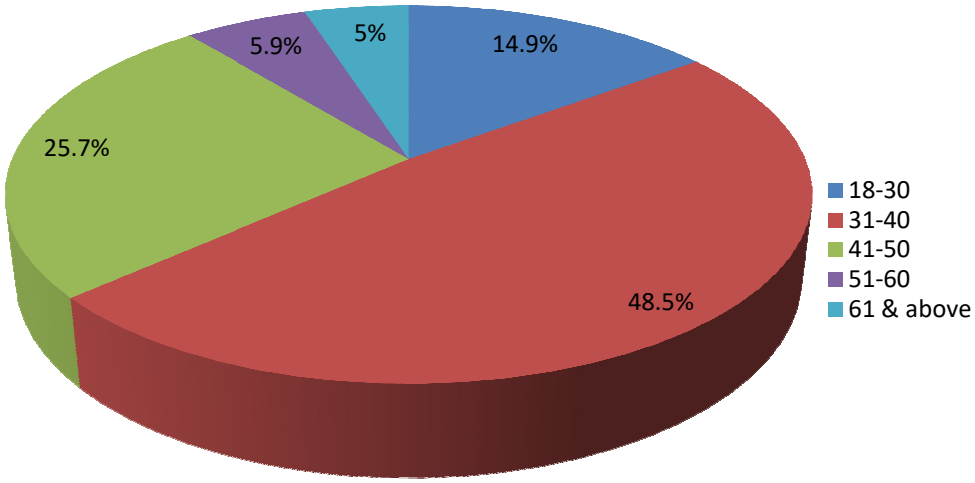


Figure 4.1 Age distribution of universities' bursary staff

Data in Figure 4.1 on the age distribution of universities' bursary staff indicated that most of the bursary staff were aged between 31 and 40 years (48.5 percent). This means that they were mature enough to give satisfactory responses in the questionnaires issued to them.

Bursary staff were asked to indicate their highest academic qualifications on the questionnaires. The results are as presented in Figure 4.2:

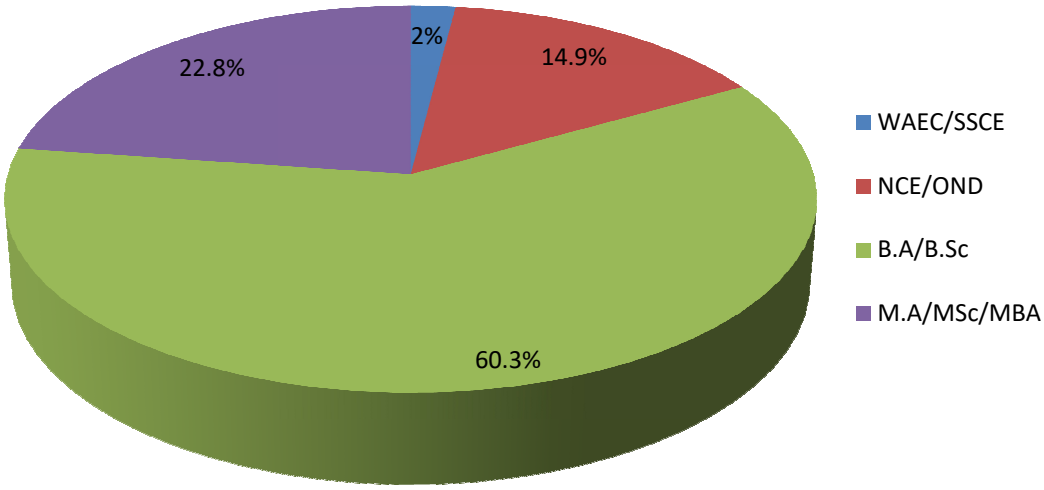


Figure 4.2 Universities' bursary staff highest academic qualifications

The data in Figure 4.2 show that majority of the universities bursary staff are holders of B.A/B.sc (60.3 percent). This is an indication that most of the universities' bursary staff have the required knowledge and skills in carrying out their duties in their places of work.

Bursary staff were asked to indicate their types of appointment on the questionnaires. The results are as presented in Figure 4.3 where universities' bursary staff disclosed their types of appointment:

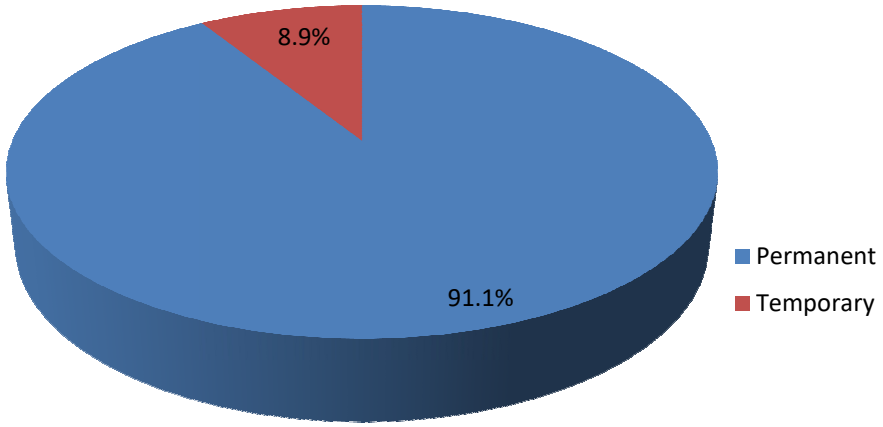


Figure 4.3 Type of appointment of universities' bursary staff

The results presented in Figure 4.3 reveal that majority (91.1 percent) of the universities bursary staff were on permanent appointment in their universities, implying that they have been employed for a minimum of two years in their places of work. This is an indication that they possess the requisite experience to have filled the questionnaires.

4.3.2 Demographic information on universities academic staff

Universities' academic staff were asked to indicate their ages on the questionnaires. The results are as presented in Figure 4.4:

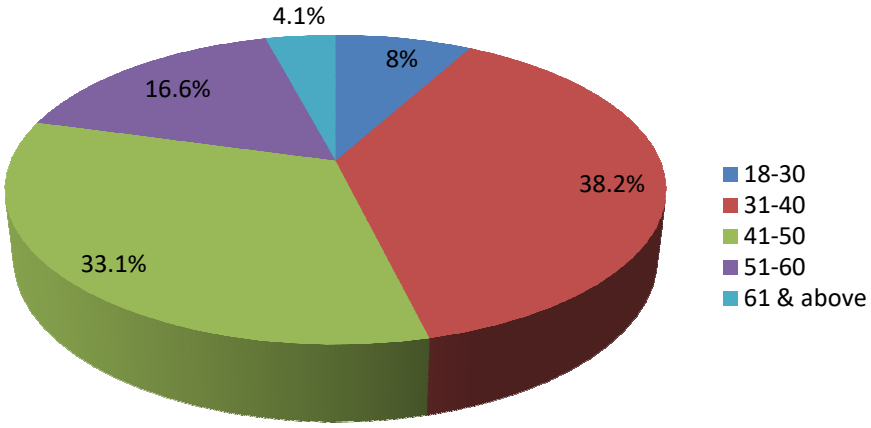


Figure 4.4 Age distribution of universities' academic staff

Data in Figure 4.4 on the age distribution of universities' academic staff indicated that most of the bursary staff were aged between 31 and 40 years (38.2 percent). This means that they were matured enough to give satisfactory responses in the questionnaires issued to them.

University academic staff were asked to indicate their types of appointment on the questionnaires. The results are as presented in Figure 4.5 where universities' academic staff disclosed their types of appointments:

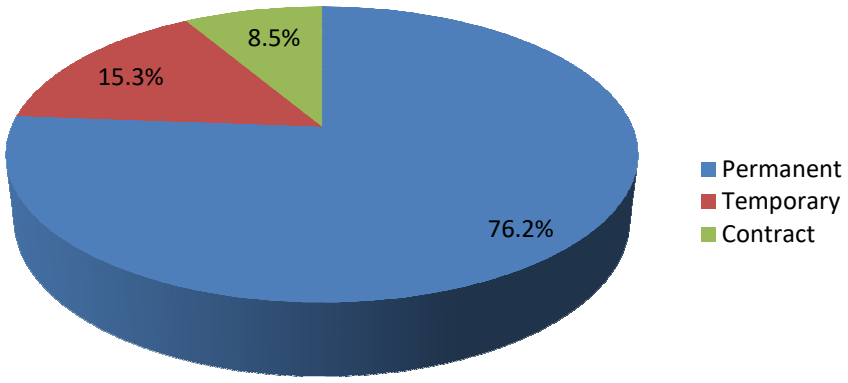
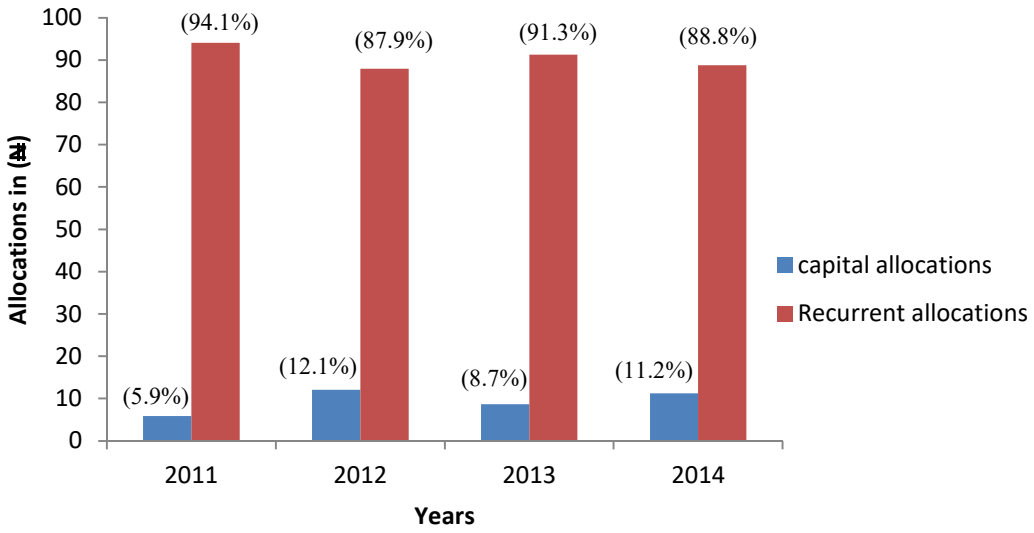


Fig 4.5 Type of appointment of universities' academic staff

The results presented in Figure 4.5 reveal that majority (76.2 percent) of the universities' academic staff were on permanent appointment in their universities, implying that they have been employed for a minimum of two years in their places of work. This is an indication that they possess the requisite experience to have filled the questionnaires.

4.4 Budgetary allocation to universities

Relevant data relating to universities budgetary allocation, capital allocation and recurrent allocation were extracted from the sampled universities documents. The data are presented in Figure 4.1:



Scale: Vertical axis 10cm=₦ 1,000,000,000

Fig 4.6 Universities budgetary allocations showing capital and recurrent allocations

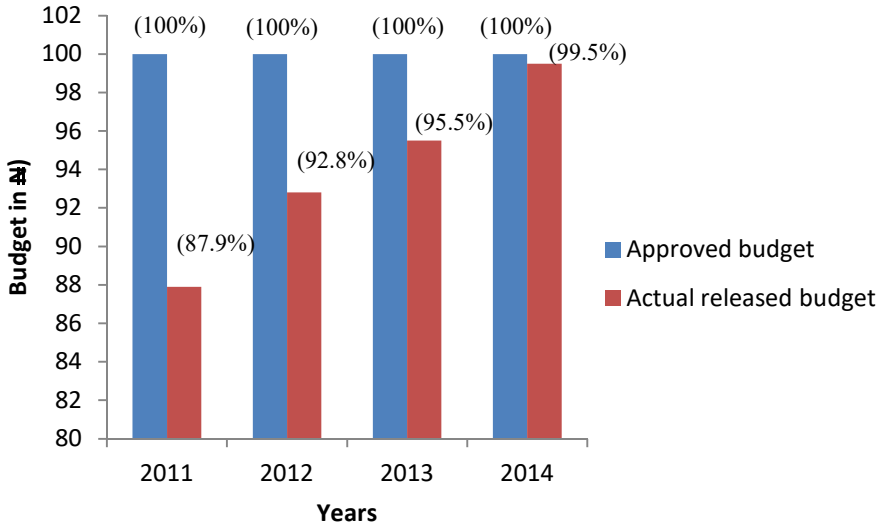
Source:University documents from the five sampled universities

Note: Capital allocations does not include TETFund interventions to the sampled universities

1Ksh= ₦3

Figure 4.6 shows that in 2011, recurrent allocations received₦11, 806,392,585.48 while capital allocations received ₦740, 456,623.40 representing 94.1 percent and 5.9 percent respectively. This means that capital allocations with an average budgetary allocation of only 9.5 percent from 2011 to 2014 are not adequate for the infrastructural development of universities in the areas of academic staff offices and lecture halls. Appendices G, H, I, J and K provided the documents from the sampled universities. This was confirmed by the university Vice-Chancellors and bursary staff who alluded that capital allocations to universities were inadequate. These documents concur with Obanya (2002) who observed that public universities funding problem have resulted to a deterioration of physical facilities such as academic staff offices and lecture halls in universities.

Similarly, data on approved and actual released budgets were extracted from universities documents. The data are as presented in Figure 4.7:



Scale: Vertical axis 10cm=₦ 2,000, 000,000

Fig 4.7 Universities budgetary allocations showing approved and actual released budgets (2011-2014)

Source: University documents from the five sampled universities
Note: 1Ksh =₦3

The data in Figure 4.7 show that between 2011 and 2014, none of the universities implemented its budget fully as there were variations between the approved budgets and the actual amount released. For instance, there was a variation in implementation of ₦1, 722,379,714.88 and ₦886,265,915.28 representing 12.1 percent and 4.5 percent in 2011 and 2013 respectively. Appendices G, H, I, J and K provided the documents from the sampled universities.

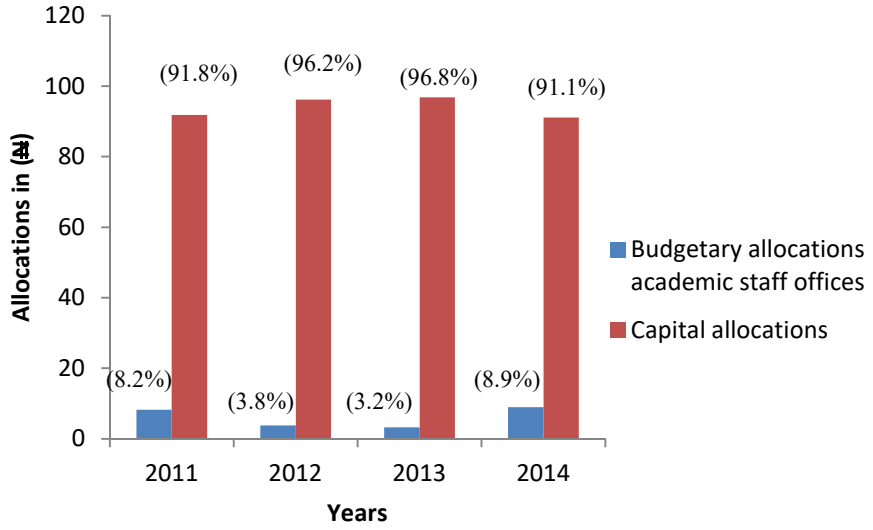
In responding to whether budgetary allocations to universities are approved and implemented as requested, the university Vice-Chancellors reported that budgetary

allocations to universities are not approved and implemented as requested. This shortfall in budgetary allocations, according to the university Vice-Chancellors, affects the running of the universities in the areas of human capital and infrastructural development. This is in line with Okojie (2010) who revealed that the gap between the perceived need of the universities and what is actually realized from all revenue sources explain the inadequacy in funding these institutions. Similarly, Akpanuko (2012) disclosed that data obtained for the Federal Government/Academic Staff Union of Universities (ASUU) renegotiations in 2002 on the universities own perceived budget requirement for three years showed that the federal universities would require ₦873,312,877,545.45 for the three years period. In contrast, the sum of 196 billion allocated to the federal universities in the period 2004 to 2006 (Okojie, 2010) is only 14.8 percent of the required ₦1.3249 trillion.

4.5 Influence of Budgetary Allocation on the Provision of Office Accommodation to Academic Staff

This section presents data on research question number one on: To what extend does federal government budgetary allocation to universities influence provision of lecturers' offices in federal universities in North-Central zone of Nigeria? The data collected from bursary staff questionnaires were regressed with provision of office accommodation to academic staff as the dependent variable and budgetary allocations as the independent variable. The data collected from bursary staff were further corroborated with data from lecturers, documents from the universities, qualitative data from university Vice-Chancellors and students.

Relevant data relating to universities budgetary allocations for capital allocations and academic staff offices were extracted from the sampled universities documents. The data are as presented in Figure 4.8:



Scale: Vertical axis 10cm=₦ 20,000,000

Fig 4.8 Universities capital budgetary allocations and allocations for academic staff offices (2011-2014)
Source: University documents from the five sampled universities
Note: Capital allocations include TETFund interventions to the sampled universities
Budgetary allocations for academic staff offices includes TETFund interventions
1Ksh =₦3

The data in Figure 4.8 shows that in 2012, budgetary allocations for the provision of academic staff offices were ₦184, 393,853.65 representing 3.8 percent of capital allocations. This is inadequate as established by university Vice-Chancellors and bursary staff who disclosed that budgetary allocations for academic staff offices were inadequate, with university Vice-Chancellors disclosing that an average of 28 percent of academic staff do not have offices. This means that universities budgetary allocations for the

provision of academic staff offices are inadequate. Appendices G, H, I, J and K provided the documents from the sampled universities. This is in agreement with what Nwachukwu and Okoli (2015) disclosed that, gross underfunding of universities among others has led to poor working environment caused by decadent infrastructure evidenced by the inadequacy of academic staff offices. Poor funding of capital expenditure in universities is also affecting the provision of academic staff offices (Oluwalola, 2011).

The responses of bursary staff were entered into a linear regression with provision of office accommodation to academic staff as the dependent variable and budgetary allocations as the independent variable. The raw data, which were coded from bursary staff questionnaires and used for the regression has been attached as in Appendix W. The following tables and their corresponding interpretations were consequently offered. For instance, Table 4.2 provides a summary on the model that emerged from the linear regression:

Table 4.2 Linear Regression Model Summary for adequacy of budgetary allocations on provision of office accommodation to academic staff

Regression statistics	
Model	1
R	.504[a]
R Square	.254
Adjusted R Square	.247
Std. Error of the estimate	3.49954
Durbin Watson	2.065

As shown in Table 4.2, the simple correlation between provision of office accommodation to academic staff and budgetary allocations to university staff in federal universities represented by R which is the extent of relationship between the two variables, has a value of .504. Furthermore, the value of R^2 is .254, indicating that budgetary allocation to universities could account for 25 percent of provision of office accommodation to academic staff in federal universities. This implies that the extent of adequacy of budgetary allocations to universities will predictably affect the provision of lecturers' offices in North-Central federal universities. In addition, the computed value of adjusted R square of .247 implies that 24.7 percent will correct the errors caused by variables omitted in the independent variables.

The findings further show that there could be other factors that explain the provision of lecturers' offices in federal universities in North-Central zone of Nigeria. Budgetary allocations to federal universities in North-Central Nigeria was the only variable entered that brought up 25 percent proportion of causality with the remaining 75 percent to

explained by other variables that might have an influence also. Furthermore, the Durbin-Watson test gave a value of 2.065, which is close to 2 signifying that there is no autocorrelation in the residual of the regressor.

Table 4.3 presents an analysis of the variance that occurred in the linear regression of budgetary allocations to universities for the provision of lecturers' offices in federal universities in North-Central zone of Nigeria:

Table 4.3 Factorial ANOVA for provision of lecturers' offices

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	413.352	1	413.352	33.752	.000[b]
	Residual	1212.43	99	12.247		
	Total	1625.782	100			

Table 4.3 presents the analysis of variance (ANOVA) on the regression and its residual. It shows the various sums of squares described and the degrees of freedom associated with them. The F-ratio is 33.752, which is significant at p=.000 as seen in Table 4.3, where sig. is equal to .000b. This result indicates that there is less than a 0.001 percent chance that an F-ratio this large would happen. Therefore, it can be concluded that this regression model results in a good prediction for the provision of lecturers' offices in federal universities in North-Central zone of Nigeria at 5 percent significance level. Budgetary allocation to universities to a fairly good extent contributes to the provision of lecturers' offices in universities.

Table 4.4 provides a basis for promoting a model in the relationship between budgetary allocations to universities and the provision of lecturers' offices in federal universities in North-Central zone of Nigeria.

Table 4.4 Coefficients of Linear Regression of budgetary allocations for the provision of lecturers' offices

		Unstandardized coefficients		Standardized coefficients		
Model		**B**	**Std. Error**	**Beta**	**t**	**Sig.**
	(Constant)	8.266	1.09		7.584	.000
	Federal government budgetary allocations	0.579	.1	.504	5.81	.000

As shown in Table 4.4, the dependent variable (represented by provision of lecturers' offices) and independent variable are budgetary allocations to universities. It is evident that the value $\beta_0$of the constant is 8.266 while the $\beta_1$value for budgetary allocations to universities is 0.579, which represents the gradient of the line. The implication of this is that a unit increase in budgetary allocations to public universities will result to a 0.579 increase in the provision of office accommodation of academic staff. Therefore, the model for the linear relationship between budgetary allocations to universities and the provision of lecturers' offices could be given as follows:

Provision of lecturers' offices in universities= β_0+ β_1 (budgetary allocations to universities)

But,

β_0= 8.266

β_1= .579

Therefore,

Provision of lecturers' offices = 8.266+.579 (budgetary allocations to universities)……..*equation 5*

Therefore, any predictions based on the adequacy of budgetary allocations to universities for the provision of lecturers' offices can be based on *equation 5*. Appendices Q and R provided a histogram and a P-P plot respectively of the regression residuals, however both figures do not provide any lead that the test of normality and linearity has been violated in this model.

The data collected from university lecturers also aided in furnishing a response for research question one. A simple frequency count of the percentage of respondents viewpoints were captured in a tabular form as shown in Table 4.5:

Table 4.5 Distribution of percentage of respondents' views on influence of budgetary allocations on provision of academic offices

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
There are adequate academic staff offices	29.4	35.6	2.1	19.3	13.6
Academic staff offices are adequately furnished	30.2	36.0	2.1	17.9	13.8
Academic staff offices are spacious	27.8	31.9	2.8	22.9	14.6
Each lecturer occupies an entire office alone	36.5	35.6	2.5	13.4	11.9

N=437

Table 4.5 indicates that there is a high degree of disagreement with the set of statements measuring whether budgetary allocations to universities are adequate for the provision of academic offices or not. For instance, of the 437 lecturers who responded to this questionnaire, 65 percent disagreed while 35 percent agreed that there are adequate academic staff offices in universities. Five University Vice-Chancellors agreed with this assertion by stating that inadequacy of academic staff offices is as a result of poor budgetary allocations to universities. This affects the performance of academic staff negatively. This collaborates with what was observed by the researcher in the universities where only an average of 72 percent of lecturers have offices.

In addition, 66.2 percent of the lecturers disagreed that academic staff offices are adequately furnished. It was evident that 37.5 percent agreed that academic staff offices are spacious. As to whether each lecturer occupies an entire office alone, the lecturers presented a 72.1 present depth of disagreement. On the whole, the direction for all the indicators for adequacy of budgetary allocations tilted towards disagreement as against agreement thus indicating that budgetary allocations for the provision of academic staff offices in universities are not adequate.

The university Vice-Chancellors further disclosed that the reason for the inadequacy is as a result of shortfall in the implementation of the budget, and that as a result of the shortfall, an average of 72 percent of academic staff have offices. It is significant that university Vice-Chancellors also reported that academic staff offices were inadequate. They further reported that available academic staff offices were inadequate, and that

many academic staff shared offices. This they attributed to inadequacy of government budgetary allocations to universities.

University students were asked in a focus group discussion on what they think of their lecturers' office accommodation and their furnishings. Most of them reported that their lecturers' offices were not befitting for them. This is how one university student puts it:

> *"Apart from the fact that most of our lecturers share offices, the furniture is dilapidated and the office space can hardly contain more than two students at a time. This makes it difficult for proper mentoring".*

This comment, together with other comments from the university students and Vice-Chancellors suggest that budgetary allocations to universities are not adequate for the provision of academic staff offices in universities. They however disclosed that not all lecturers are paired in offices, as according to the students and Vice-Chancellors, few lecturers particularly Professors, occupy single offices.

4.5.1 Discussion of findings

The thrust of research question one was to examine the influence of budgetary allocation on the provision of lecturers' offices in federal universities in North-Central zone of Nigeria. The key data issues under adequacy of budgetary allocations on the provision of lecturers' offices include the fact that budgetary allocations have a positive relationship with lecturers' offices. This means that, if budgetary allocations are increased for the provision of lecturers' offices, more lecturers' offices will be built, and vice-versa. This finding concurs with what Pinder (2009) and Ochuba (2001) confirmed in their studies that with more funding for the provision of lecturers' offices, more academic staff offices will be constructed in universities.

This study established that as a result of inadequate government budgetary allocations, there are inadequate academic staff offices in universities. Only 21 percent of academic staff occupy single offices, as79 percent of lecturers share offices with other colleagues. In some cases, you have as many as five lecturers occupying a small office space. The findings of this study point to what Okunamiri, Okoli and Okunamiri (2008) and Gathuthi (2008) reported in their studies that due to underfunding, office accommodation for university lecturers is not adequate as lecturers are packed three or four in a small office accommodation. When a lecturer is not provided with a good office accommodation, he/she is not satisfied with the job and thus cannot perform well as an academic staff.

The next issue from these data relates to the fact that academic staff offices are not adequately furnished. This is because from the observations of the offices made, it was observed that most of the academic staff offices lack basic facilities like chairs to accommodate visitors. Besides, some of the offices have dilapidated tables and chairs. In addition, some do not have cupboards and bookshelves thereby making lecturers to keep students scripts and theses on the bare floor. The finding concurs with what Oketula (2014) and Ahmed (n.d) disclosed in their studies that because of inadequacy of funding, most university academic staff office slack basic furniture.

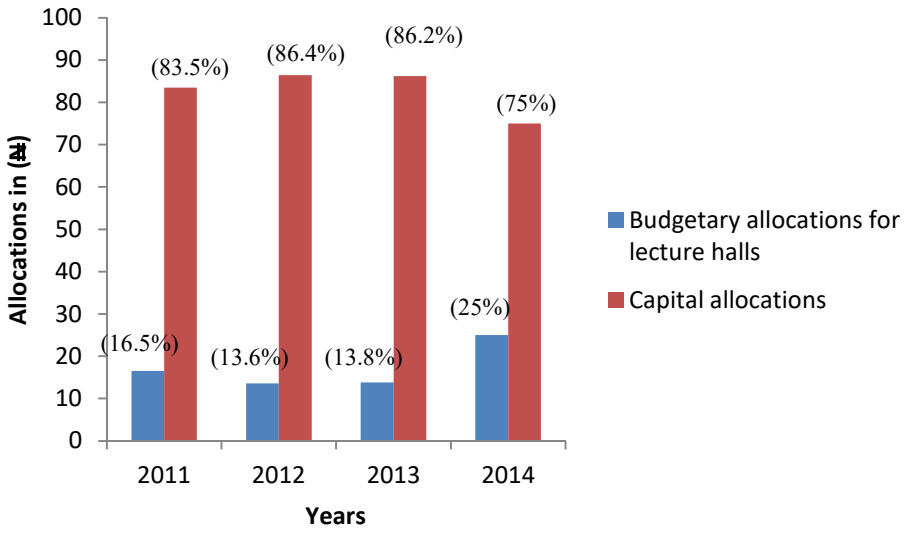
Moreover, the researcher also observed that in most of the universities visited, lecturers' offices had insufficient space, were not well ventilated, had poor lightening and were generally inadequate for the lecturers. This is in line with Anijaobi-Idem and Archibong, (2012) and Kakwagh (2013) who in their studies indicated that as a result of inadequate

budgetary allocations to universities, lecturers' offices are unsuitable and unattractive, making many lecturers keep away from office.

4.6 Influence of Budgetary Allocation on the Provision of Lecture halls for undergraduate students' enrolment

This session presents data on research question number two on: To what extend does federal government budgetary allocation to universities influence provision of lecture halls for undergraduate students' enrolment in federal universities in North-Central zone of Nigeria? The data collected from bursary staff questionnaires were regressed with provision of lecture halls for undergraduate students' enrolment as the dependent variable and budgetary allocations as the independent variable. The data collected from bursary staff was further corroborated with data from lecturers, documents from the universities, qualitative data from university Vice-Chancellors and students.

Relevant data relating to universities budgetary allocations for capital allocations and lecture halls were extracted from the sampled universities documents. The data are as presented in Figure 4.9:



Scale: Vertical axis 10cm=₦ 10,000,000,000

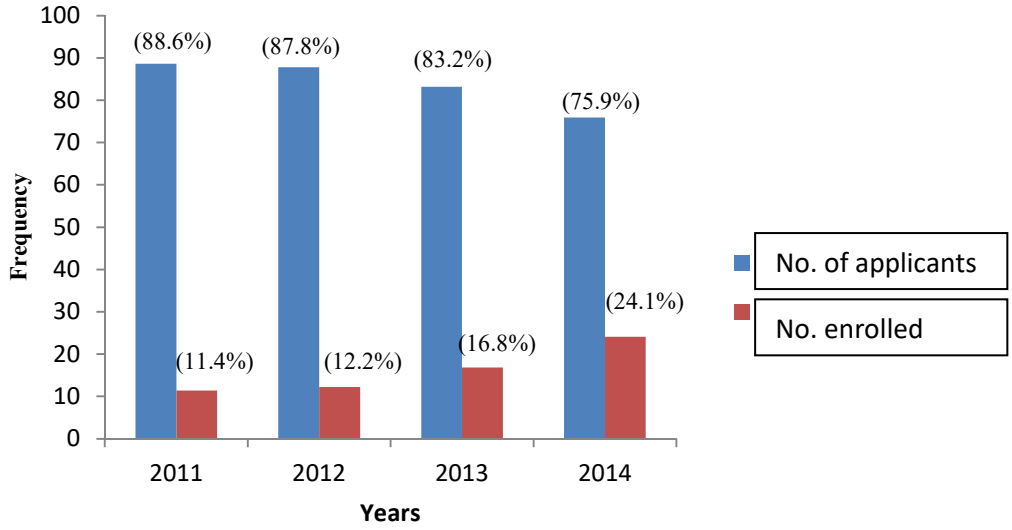
Figure 4.9 Universities capital budgetary and allocations for lecture halls including TETFund intervention (2011-2014)

Source: University documents from the five sampled universities

Note: Capital allocations include TETFund interventions to the sampled universities
1Ksh =₦3

The data in Figure 4.9 show that in 2013, budgetary allocations for the provision of lecture halls were ₦381,721,796.61 which represent 13.8 percent of the capital allocations. This was corroborated by university Vice-Chancellors and bursary staff who disclosed that budgetary allocations for lecture halls were inadequate, with university Vice-Chancellors disclosing that an average of 67 percent of the required lecture halls are available. This means that universities budgetary allocations for the provision of lecture halls are inadequate. Appendices G, H, I, J and K provided the documents from the sampled universities. This is in line with Akpanuko (2012) who revealed that due to poor funding, the capacities of universities existing structures comprising of lecture halls can barely accommodate 20 percent of qualified applicants.

Relevant data relating to the number applicants seeking admission in universities and those enrolled were extracted from the sampled universities documents. The data are as presented in Figure 4.10:



Scale: Vertical axis 10cm=10,000 applicants

Fig 4.10 Number of undergraduate applicants and those enrolled (2011-2014)

Figure 4.10 provides the distribution of applicants and those enrolled in the sampled universities. In 2012, 103,633 candidates applied for admission, while only 14,399 were admitted, representing 12.2 percent of the applicants. This was corroborated by university Vice-Chancellors and bursary staff who disclosed that more than 60 percent of candidates who apply for undergraduate admissions are not admitted, this they attributed to lack of infrastructure like lecture halls to accommodate the applicants. The university Vice-Chancellors attributed this lack of infrastructure to inadequate budgetary allocations by government to the universities. Appendices G, H, I, J and K provided the documents from the sampled universities. This concurs with Bollag (2002) who revealed that in spite of a decline in infrastructure such as lecture halls, the number of university students in Nigeria increased from fifty five thousand in 1980 to more than four hundred

thousand in 2002. That though less than 30 percent of the applicants are admitted, the number of candidates that apply for university admission into Nigerian universities (comprising of federal, state and private universities) has continued to increase. This implies that 70 percent of the applicants are not admitted.

The responses of bursary staff were entered into a linear regression with provision of lecture halls for undergraduate students' enrolment as the dependent variable and budgetary allocations as the independent variable. The raw data which was coded from bursary staff questionnaires and used for the regression has been attached as in Appendix W. The following tables and their corresponding interpretations were consequently offered. For instance, Table 4.6 provides a summary on the model that emerged from the linear regression.

Table 4.6 Linear Regression Model Summary for extent of adequacy of budgetary allocations on provision of lecture halls for undergraduate students' enrolment

Regression statistics	
Model	1
R	.446[a]
R Square	.199
Adjusted R Square	.191
Std. Error of the estimate	3.33761
Durbin Watson	1.668

As shown in Table 4.6, there is a simple correlation between provision of lecture halls for undergraduate students' enrolment and budgetary allocations to universities in federal universities represented by R which is the extent of relationship between the two

variables has a value of .446. Furthermore the value of R^2 is .199, indicating that budgetary allocations to universities could account for 20 percent of provision of lecture halls in federal universities. This implies that the extent of adequacy of budgetary allocations to universities will predictably affect the provision of lecture halls in North-Central federal universities. In addition, the computed value of Adjusted R square of .191 implies that 19.1 percent will correct the errors caused by variables omitted in the independent variables.

The findings further show that there could be other factors that explain the provision of lecture halls in federal universities in North-Central zone of Nigeria. Budgetary allocations to federal universities in North-Central Nigeria was the only variable entered that brought up 20 percent proportion of causality with the remaining 80 percent to be explained by other variables that might have an influence also. Furthermore, the Durbin-Watson test gave a value of 1.668, which is close to 2 signifying that there is no autocorrelation in the residual of the regressor.

Table 4.7 presents an analysis of the variance that occurred in the linear regression of budgetary allocations to universities for the provision of lecture halls in federal universities in North-Central zone of Nigeria:

Table 4.7 Factorial ANOVA for provision of lecture halls

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	273.871	1	273.871	24.586	.000[b]
	Residual	1102.822	99	11.14		
	Total	1376.693	100			

Table 4.7 presents the analysis of variance (ANOVA) on the regression and its residual. It shows the various sums of squares described and the degrees of freedom associated with them. The F-ratio is 24.586, which is significant at p=.000. This result indicates that there is less than a 0.001 percent chance that an F-ratio this large would happen. Therefore, it can be concluded that this regression model results in a good prediction for the provision of lecture halls in federal universities in North-Central zone of Nigeria at 5 percent significance level. Budgetary allocations to universities to a fairly good extent (account for 20 percent) contribute to the provision of lecture halls in universities.

Table 4.8 provides a basis for promoting a model in the relationship between budgetary allocations to universities and the provision of lecture halls in federal universities in North-Central zone of Nigeria:

Table 4.8 Coefficients of Linear Regression of budgetary allocations for the provision of lecture halls

		Unstandardized coefficients		**Standardized coefficients**		
Model		**B**	**Std. Error**	**Beta**	**t**	**Sig.**
	(Constant)	12.541	1.04		12.064	.000
	Federal government budgetary allocations	0.472	.095	.446	4.958	.000

As shown in Table 4.8, the dependent variable (represented by provision of lecture halls) and independent variable are budgetary allocations to universities. It is evident that the value $\beta_0$of the constant is 12.541 while the $\beta_1$value for budgetary allocations to universities is 0.472, which represents the gradient of the line. The implication of this is that a unit increase in budgetary allocations to public universities will result to a 0.472 increase in the provision of lecture halls for undergraduate students' enrolment. Therefore, the model for the linear relationship between budgetary allocations to universities and the provision of lecture halls could be given as follows:

Provision of lecture halls in universities= β_0+ β_1(budgetary allocations to universities)

But,

β_0= 12.541

β_1= .472

Therefore,

Provision of lecture halls = 12.541+.472 (budgetary allocations to universities)……..*equation 6*

Therefore, any predictions based on the adequacy of budgetary allocations to universities for the provision of lecture halls can be based on *equation 6*. Appendices S and T provided a histogram and a P-P plot respectively of the regression residuals, however both figures do not provide any lead that the test of normality and linearity has been violated in this model.

The data collected from university lecturers also aided in furnishing a response for research question two. A simple frequency count of the percentage of respondents viewpoints were captured in a tabular form. Table 4.9 shows the views of university

lecturers on how budgetary allocations influence the provision of lecture halls in universities:

Table 4.9 Distribution of percentage of respondents' views on influence of budgetary allocations on provision of lecture halls

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Budgetary allocations are adequate for the construction of students' lecture halls	36.1	32.6	3	16.6	11.7
Undergraduate students are enrolled without consideration to existing lecture halls	17.4	19.2	6.6	32.5	24.3
Budgetary allocations influence the provision of lecture halls for undergraduate students' enrolment	17.2	18.3	3.9	35.9	24.7
Existing lecture halls are adequate for students	30.7	37.2	2.8	14.9	14.4
Students learn comfortably in existing lecture halls	28.4	33.7	4.4	19.7	13.8

N=437

Table 4.9 indicates that there is high degree of disagreement with the set of statements measuring whether budgetary allocations to universities are adequate for the provision of lecture halls or not. For instance, of the 437 lecturers who responded to this questionnaire, 68.7 percent disagreed that budgetary allocations are adequate for the construction of students' lecture halls in universities. In responding on the adequacy of budgetary allocations for the provision of lecture halls for undergraduate students' enrolment to universities, the university Vice-Chancellors reported that budgetary allocations to universities are not adequate to provide lecture halls for all categories of

students in universities, which makes it difficult for students to learn comfortably thereby affecting their performance.

However, 56.8 percent agreed that undergraduate students are enrolled without consideration to existing lecture halls. It was evident that 60.6 percent agreed that budgetary allocations influence the provision of lecture halls for undergraduate students' enrolment. As to whether existing lecture halls are adequate for students or not, the lecturers presented a 67.9 percent depth of disagreement. Furthermore, 62.1 percent of the lecturers disagreed that students learn comfortably in existing lecture halls. On the whole, the direction for most of the indicators for adequacy of budgetary allocations tilted towards disagreement as against agreement thus indicating that budgetary allocations for the provision of lecture halls in universities are not adequate.

University students were asked in a focus group discussion on what they think of the availability and standard of their lecture halls. Most of them reported that their lecture halls were not befitting for them. This is how one university student puts it:

> *"Our lecture halls are nothing to write home about. This is because they are always overcrowded, in fact, in most cases, if you don't come to class early enough, you will end up listening to lectures by the window as if you are an intruder. In addition, the chairs and tables are not in good shape, making it difficult for us to take notes in class".*

On the enrolment of students in their universities, one student had this to say:

> *"From what I have observed in this university, it's like they (university management) keep on admitting more people every year (academic session) without bothering to improve the facilities in our lecture halls".*

This comment, together with other comments from the university students and Vice-Chancellors suggest that budgetary allocations to universities are not adequate for the

provision of lecture halls in universities. They however disclosed that some lecture halls are comfortable for learning but that generally, lecture halls are in bad condition.

4.6.1 Discussion of results

The thrust of research question two was to examine the influence of budgetary allocations on the provision of lecture halls for undergraduate students' enrolment in federal universities in North-Central zone of Nigeria. The key data issues under adequacy of budgetary allocations on the provision of lecture halls include the fact that budgetary allocations have a positive relationship with lecture halls. This means that, if budgetary allocations are increased for the provision of lecture halls, more lecture halls will be built, and vice-versa. This finding concurs with what Gould (2012) and Ekpenyong (2011) who both reported in their studies that, with more funding for the provision of lecture halls, more lecture halls will be constructed in universities. Similarly, Altinosy (2011) and Ali (2014) established in their studies that, provision of funds through budgetary allocations for the construction of classrooms enhances facilities and infrastructure to meet evolving needs of universities.

In this present study, it was established that as a result of inadequate government budgetary allocations, there are inadequate lecture halls in universities. Only few lecture halls are in good shape, as lecture halls are generally inadequate, with most of the existing ones in bad shape. The findings agree with what Akeusola, Viatonu and Asikhia (2012) and Bartolo (2003) indicated in their studies that, as a result of underfunding of the university system, most universities do not have functional lecture halls for teaching.

The next issue from these data relates to the fact that undergraduate students are enrolled without consideration to existing lecture halls. Since students are enrolled by universities management without considering existing lecture halls, it means that there is always pressure on the available lecture halls. This is because students and lecturers are made to learn and teach under unsuitable conditions, making it difficult for proper learning and teaching to take place. The finding concurs with what Yakubu (2012) and Achimugu, (2006) reported in their studies that most university lecture halls are inadequate and they lack basic furniture, as students sit on bare floor or peep through windows to attend lectures. The report further stated that in some cases, over 1000 students are packed in lecture halls that are meant for less than 150 students. The report attributed this anomaly to poor funding of the university system.

Another issue raised in the data is that budgetary allocations influence the provision of lecture halls for undergraduate students' enrolment. This means that if budgetary allocations for lecture halls are increased, more lecture halls will be constructed. And if budgetary allocations for lecture halls are not adequate, it means that few lecture halls will be constructed. In most cases, none is constructed. This is in line with what Asiyai (2006) revealed in a study that the adequacy of budgetary allocations for the construction of lecture halls in universities, results to the provision of more lecture halls in universities.

It was also established in this study that existing lecture halls are not adequate for students in universities. This is because in most cases, student population far outweighs existing lecture halls in universities. The finding agrees with what Okebukola (2005) and

The National University of Rwanda (2010) reported in their studies that inadequate funding makes universities lecture halls not to have the capacities to accommodate the number of students they have, revealing that only about 30 percent of students' population have access to lecture halls in most cases.

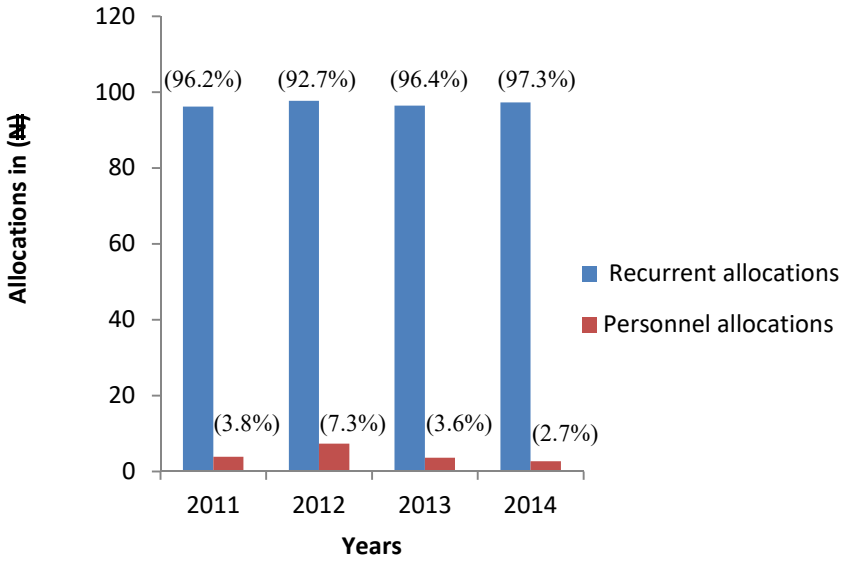
In the same vein, it was also established in this study that students do not learn comfortably in existing lecture halls in universities. This is because they are always cramped together in halls that do not have the capacities to carry them, thereby making it uncomfortable for them to learn in such lecture halls. This is in line with what Omoniyi (2013) and Buberwa (2015) disclosed in their studies that learning environment in universities is compromised by over-congested lecture halls, occasioned by inadequate budgetary allocations to universities.

Moreover, the researcher also observed that in most of the universities visited, apart from inadequate lecture halls, existing lecture halls were not spacious enough, walls and floors were dirty and had cracks, furniture were not well arranged and were generally not appropriate for use. This was attributed to paucity of funds to hire the relevant personnel needed to clean the lecture halls. The finding agree with Awuni (2015) and Odetunde (2004) who established in their studies that due to poor funding, most universities lecture halls are unsuitable for use, because they are poorly ventilated, illuminated, not well furnished and environmentally depressing.

4.7 Influence of Budgetary Allocation on recruitment of teaching staff

This session presents data on research question number three on: How does federal government budgetary allocation to universities influence recruitment of teaching staff in federal universities in North-Central zone of Nigeria? The data collected from bursary staff questionnaires were regressed with recruitment of teaching staff as the dependent variable and budgetary allocations as the independent variable. The data collected from bursary staff was further corroborated with data from lecturers, documents from the universities, qualitative data from university Vice-Chancellors and students.

Relevant data relating to universities budgetary allocations for personnel and recurrent allocations were extracted from the sampled universities documents. The data are as presented in Figure 4.11:



Scale: Vertical axis 10cm=₦ 20,000,000,000

Figure 4.11Universities budgetary allocations showing personnel (staff) and recurrent allocations (2011-2014)

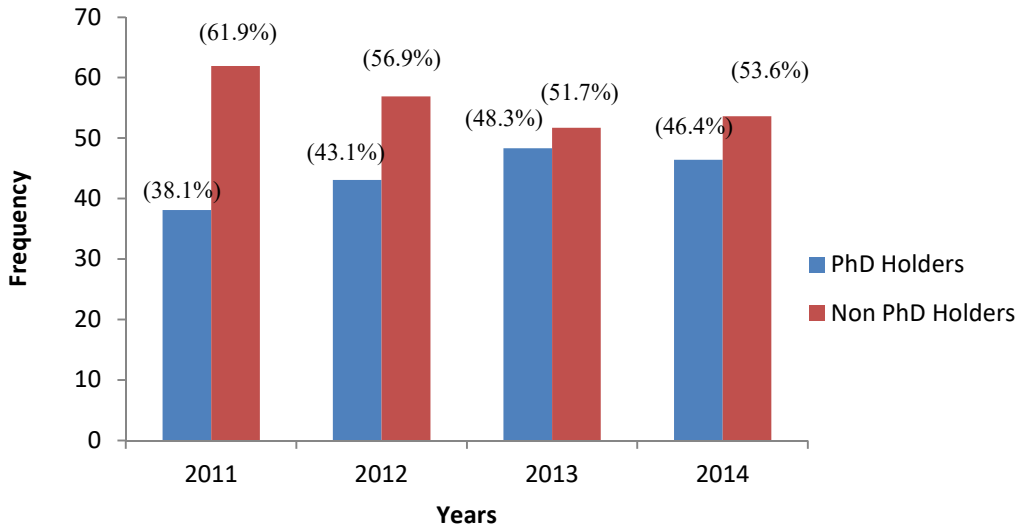
Source: University documents from the five sampled universities

Note: 1Ksh = ₦3

Personnel allocations are for both support and teaching staff as there is no provision for only teaching staff allocations

The data in Figure 4.11 shows that in 2012, budgetary allocations for recurrent expenditure were ₦11,806,392,585.48 while personnel expenditure got ₦11,361,102,175.72 from that year's recurrent allocations, representing 92.7 percent of recurrent expenditure. Though some new academic staff were employed during the period under review, findings from the study shows that they were not adequate, furthermore, the allocations were used for the payment of existing staff salaries and not for the recruitment of new academic staff. This was corroborated by university Vice-Chancellors and bursary staff who disclosed that budgetary allocations for the recruitment of academic staff were inadequate, with university Vice-Chancellors disclosing that personnel allocation to universities were not adequate to cater for the recruitment needs of universities as they are provided with less than 10 percent of what they require for recruitment of academic staff. This means that universities budgetary allocations for the recruitment of academic staff are inadequate. Appendices G, H, I, J and K provided the documents from the sampled universities. This is in line with Akinsaya (2007) who revealed that though personnel costs constitute the highest percentage of government grant to universities, they are mostly used for the payment of existing staff salaries and allowances as they are based on ranks, appointments, promotion and positions being held. Akinsaya further reported that acquisition of new qualifications and even new salary package and arrears of salaries of existing academic staff often affect the recruitment of new staff.

Similarly, relevant data relating to the number of lecturers with doctoral degrees and those without doctoral degrees were extracted from the sampled universities documents. The data are as presented in Figure 4.12:



Scale: Vertical axis 10cm= 1000 Lecturers

Figure 4.12 Number of lecturers with doctoral degrees and those without doctoral degrees

Source: University documents from the five sampled universities

The documents in Figure 4.12 show that in 2011, 2013 and 2014, only 959, 1,216 and 1349 lecturers had doctoral degrees respectively, representing 38.1 percent, 48.3 percent and 46.4 percent of lecturers respectively in the sampled universities had doctoral degrees. This was corroborated by university Vice-Chancellors and bursary staff who disclosed that the number of lecturers with doctoral degrees was less than those without doctoral degrees, with university Vice-Chancellors disclosing that less than 45 percent of lecturers in universities have doctoral degrees. This according to the Vice-Chancellors

affects the quality of universities in terms of teaching and research. Appendices G, H, I, J and K provided the documents from the sampled universities. This concurs with Akpanuko (2012) who revealed that more than 50 percent of lecturers in Nigerian universities do not have PhD's.

The responses of bursary staff were entered into a linear regression with recruitment of teaching staff as the dependent variable and budgetary allocations as the independent variable. The raw data which was coded from bursary staff questionnaires and used for the regression has been attached as in Appendix W. The following tables and their corresponding interpretations were consequently offered. For instance, Table 4.10 provides a summary on the model that emerged from the linear regression:

Table 4.10 Linear RegressionModel Summary for adequacy of budgetary allocations on recruitment of teaching staff

Regression statistics	
Model	1
R	.255[a]
R Square	.065
Adjusted R Square	.055
Std. Error of the estimate	2.8953
Durbin Watson	1.658

As shown in Table 4.10, there is a simple correlation between recruitment of teaching staff and budgetary allocations to universities in federal universities represented by R which is the extent of relationship between the two variables has a value of .255. Furthermore the value of R^2 is .065, indicating that budgetary allocations to universities could account for 7 percent of recruitment of teaching staff in federal universities. This

implies that the extent of adequacy of budgetary allocations to universities will predictably affect the recruitment of teaching staff in North-Central federal universities. In addition, the computed value of Adjusted R square of .055 implies that 5.5 percent will correct the errors caused by variables omitted in the independent variables.

The findings further show that there could be other factors that explain the recruitment of teaching staff in federal universities in North-Central zone of Nigeria. Budgetary allocations to federal universities in North-Central Nigeria was the only variable entered that brought up 7 percent proportion of causality with the remaining 93 percent to be explained by other variables that might have an influence also. Furthermore, the Durbin-Watson test gave a value of 1.658, which is close to 2 signifying that there is no autocorrelation in the residual of the regressor.

Table 4.11 presents an analysis of the variance that occurred in the linear regression of budgetary allocations to universities for the recruitment of teaching staff in federal universities in North-Central zone of Nigeria:

Table 4.11 Factorial ANOVA for recruitment of teaching staff

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	57.552	1	57.552	6.866	.010[b]
	Residual	829.894	99	8.383		
	Total	887.446	100			

Table 4.11 presents the analysis of variance (ANOVA) on the regression and its residual. It shows the various sums of squares described and the degrees of freedom associated with them. The F-ratio is 6.866, which is significant at p=.000. This result indicates that there is less than a 0.001 percent chance that an F-ratio this large would happen. Therefore, it can be concluded that this regression model results in a good prediction for the recruitment of teaching staff in federal universities in North-Central zone of Nigeria at 5 percent significance level. Budgetary allocations to universities to a fairly good extent (account for 7 percent) contribute to the recruitment of teaching staff in universities.

Table 4.11 provides a basis for promoting a model in the relationship between budgetary allocations to universities and recruitment of teaching staff in federal universities in North-Central zone of Nigeria:

Table 4.12Coefficients of Linear Regression of budgetary allocations for the recruitment of teaching staff

		Unstandardized coefficients		**Standardized coefficients**		
Model		**B**	**Std. Error**	**Beta**	**t**	**Sig.**
	(Constant)	12.605	.902		13.978	.000
	Federal government budgetary allocations	-.216	.083	-.255	-2.62	.010

From Table 4.12, the dependent variable (represented by recruitment of teaching staff) and independent variable are budgetary allocations to universities. It is evident that the value $\beta_0$of the constant is 12.605 while the $\beta_1$value for budgetary allocations to universities is -.216, which represents the gradient of the line. The implication of this is that a unit increase in budgetary allocations to public universities will result to a -0.216 increase in the recruitment of academic staff. Therefore, the model for the linear relationship between budgetary allocations to universities and the provision of lecture halls could be given as follows:

Provision of lecture halls in universities= β_0+ β_1(budgetary allocations to universities)

But,

β_0= 12.605

β_1= -.216

Therefore,

Provision of lecture halls = 12.605-.216 (budgetary allocations to universities)……..*equation 7*

Therefore, any predictions based on the adequacy of budgetary allocations to universities for the recruitment of teaching staff can be based on *equation 7*. Appendices U and V provided a histogram and a P-P plot respectively of the regression residuals, however both figures do not provide any lead that the test of normality and linearity has been violated in this model.

The data collected from university lecturers also aided in furnishing a response for research question three. A simple frequency count of the percentage of respondents viewpoints were captured in a tabular form. Table 4.13 shows the views of university

lecturers on how budgetary allocations influence the recruitment of teaching staff in universities:

Table 4.13 Distribution of percentage of respondents' views on influence of budgetary allocations on recruitment of teaching staff

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Teaching staff recruitment is a priority in this university	34.9	26.8	2.8	17.4	18.1
Budgetary allocations affect teaching staff recruitment	14.6	15.1	2.1	38.5	29.7
Teaching staff are not adequate to teach	15.4	22.8	3.4	33.3	25.1
Teaching staff are overworked	16.5	16.1	3.2	36.1	28.1
Most teaching staff have doctoral degrees	21.3	34.4	4.5	23.6	16.2

N=437

Table 4.13 indicates that of the 437 lecturers who responded to this questionnaire, 61.7 percent of the respondents disagreed that teaching staff recruitment is a priority in universities. However, 68.2 percent agreed that budgetary allocations affect teaching staff recruitment. In responding on the adequacy of budgetary allocations for the recruitment of teaching staff to universities, the university Vice-Chancellors reported that budgetary allocations to universities are not adequate to recruit the required teaching staff in universities.

It was evident that 58.4 percent agreed that teaching staff are not adequate to teach in universities. As to whether teaching staff are overworked or not, the lecturers presented a 64.2 percent depth of agreement that teaching staff are overworked. Furthermore, 55.7 percent of the lecturers disagreed that teaching staff are frequently recruited in

universities. On the whole, the direction for most of the indicators for adequacy of budgetary allocations shows that budgetary allocations for the recruitment of teaching staff in universities are not adequate.

The university Vice-Chancellors also reported that even though recruitment of teaching staff is a priority, inadequate budgetary allocations to universities affect their frequent recruitment. They therefore reported that teaching staff are not adequate to teach as a result of inadequacy of budgetary allocations to universities.

4.7.1 Discussion of results

The thrust of research question three was to examine the influence of budgetary allocation on the recruitment of teaching staff in federal universities in North-Central zone of Nigeria. The key data issues under adequacy of budgetary allocations on the recruitment of teaching staff include the fact that budgetary allocations have a positive relationship with recruitment of teaching staff. This implies that, if budgetary allocations are increased for the recruitment of teaching staff, more teaching staff will be recruited and vice-versa. This finding concurs with Adeyemi (2000) and Ingersoll and May (2011) who established in their studies that, if more funding is provided for the recruitment of teaching staff, more teaching staff will be recruited in universities.

In this present study, it was established that inadequate budgetary allocations affect the recruitment of academic staff in universities. Furthermore, the findings of this study point to what Ajayi and Ekundayo (2008) and UNESCO (2009) reported that low

budgetary allocations to university education in Africa have led to brain drain, arising from the failure of universities to recruit quality academics.

The next issue from these data relates to the fact that teaching staff are overworked in universities. Few lecturers are made to teach many courses to students in a semester. This puts undue pressure on the lecturers as they hardly have time for research and community service. This concurs with the finding of Yakubu (2012) and Belal and Spriguel (2006) who indicated in their studies that, most universities overwork their academic staff with a negative effect on the quality of teaching.

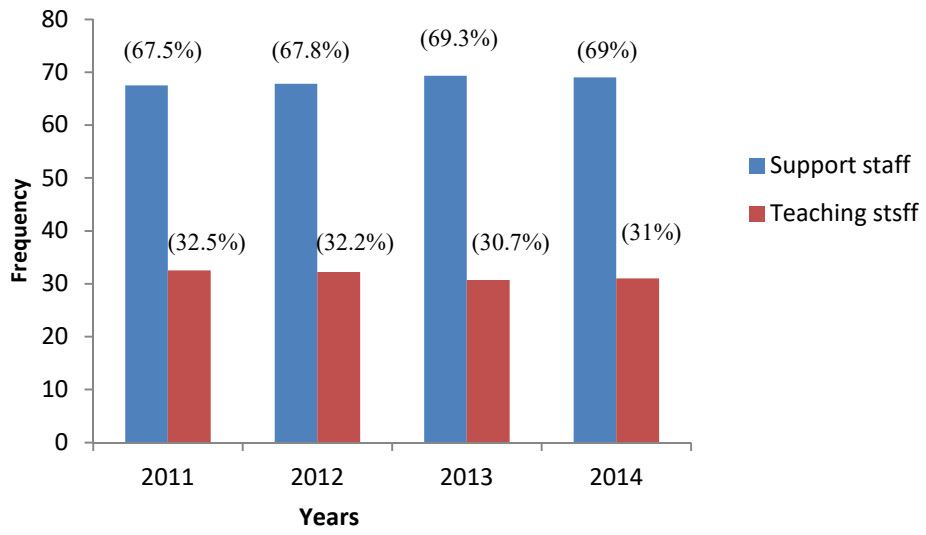
Another issue raised in the data is that most teaching staff do not have doctoral degrees in universities. This is attributed to certain factors such as inadequate manpower and inadequate budgetary allocations for staff training to universities. This means that if budgetary allocations for academic staff training are increased, more lecturers will be trained. And if budgetary allocations for academic staff training are not adequate, it means that few lecturers will have doctoral degrees. This is in line with the finding of Odiegwu (2012) and Bamiro (2012) who both revealed in their studies that, the allocation of more funds for the training of teaching staff in universities will result to the training of more teaching staff, which will improve the quality of teaching staff. This increases the number of teaching staff with doctoral degrees in universities.

4.8 Staff ratio between teaching and support staff

Research question four was prepared to answer the question: To what extend does federal government budgetary allocation to universities affect ratios of teaching staff and

support staff in federal universities in North-Central Nigeria? University Vice-Chancellors shared information on how budgetary allocations affect the ratio between teaching and support staff, quality and adequacy of teaching and support staff in universities. University students also provided their views on the ratio between teaching and support staff in universities.

Relevant data relating to the number of support and teaching staff were extracted from the sampled universities documents. The data are as presented in figure 4.13.



Scale: Vertical axis 10cm= 1000 Staff

Figure 4.13 Number of teaching staff and support staff (2011-2014)
Source: University documents from the five sampled universities

The data in Figure 4.11 shows that in 2011, budgetary allocations for recurrent expenditure were ₦11,806,392,585.48 while personnel expenditure got

₦11,361,102,175.72 from that year's recurrent allocations, representing 96.2 percent. Though these personnel allocations were for both support and teaching staff salaries, they are not enough. This is because the ratio between support and teaching staff is low as seen in Figure 4.13. For example, in 2012, the number of support staff was 6,255 compared to only 2,968 teaching staff, leading to a ratio of about 2:1 (67.8 percent support staff and 32.2 percent teaching staff).This was corroborated by university Vice-Chancellors and bursary staff who disclosed that the ratio between support and teaching staff is low, with university Vice-Chancellors disclosing that the ratio between support and teaching staff in universities is 2:1, which implies that academic staff are overworked and not properly supported. This was attributed to inadequate budgetary allocations by the Vice-Chancellors. Appendices G, H, I, J and K provided the documents from the sampled universities. This is attributed to inadequate budgetary allocations to universities. This is in line with Chao (2014) who revealed that universities should have at least a ratio of 5:1 support to teaching staff ratios.

The data collected from university bursary staff also aided in furnishing a response for research question four. A simple frequency count of the percentage of respondents viewpoints were captured in a tabular form. Table 4.14 shows the views of university bursary staff on how budgetary allocations influence the ratio of teaching and support staff in universities.

Table 4.14 Distribution of percentage of respondents' views on influence of budgetary allocations on ratio of teaching and support staff

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Support staff are given more priority than teaching staff through budgetary allocations in this university	45.5	41.6	6.9	5	1
Budgetary allocations do not influence the ratio between teaching and support staff	34.2	32.6	2.7	19.4	11.1
Budgetary allocations are adequate for teaching and support staff	42.3	29.9	3.1	17.8	6.9
Budgetary allocations influence the working relationship between teaching and support staff	21.5	37.8	2.2	23.6	14.9

N=101

Table 4.14 indicates that of the 101 bursary staff who responded to this questionnaire, 87.1 percent of the respondents disagreed that support staff are given more priority than teaching staff in universities. Moreover, 66.8 percent also disagreed that budgetary allocations do not influence the ratio between teaching and support staff. In responding on how adequacy of budgetary allocations affect ratios of teaching and support staff in universities, the university Vice-Chancellors reported that budgetary allocations to universities are not adequate for teaching and support staff.

It was evident that 72.2 percent disagreed that budgetary allocations are adequate for teaching and support staff in universities. Furthermore, 59.3 percent of the bursary staff

disagreed that budgetary allocations influence the working relationship between teaching and support staff in universities. On the whole, the direction for all the indicators for adequacy of budgetary allocations tilted towards disagreement as against agreement thus indicating that budgetary allocations for the provision of ratios between teaching and support staff in universities are not adequate.

The data collected from university lecturers also aided in furnishing a response for research question four. A simple frequency count of the percentage of respondents viewpoints were captured in a tabular form. Table 4.15 shows the views of university lecturers on how budgetary allocations influence the ratio of teaching and support staff in universities.

Table 4.15 Distribution of percentage of respondents' views on influence of budgetary allocations on ratio of teaching and support staff

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
The quality of teaching and support staff is high in this university	21.3	32.3	6.7	22.5	17.2
Budgetary allocations do not influence the ratio between teaching and support staff	22.4	36.6	5.8	24.1	11.1
Budgetary allocations are adequate for teaching and support staff	24.5	38.6	4.5	18.8	13.6
Budgetary allocations influence the working relationship between teaching and support staff	23.6	30.2	2.5	27.7	16

N=437

Table 4.15 indicates that of the 437 lecturers who responded to this questionnaire, 53.6 percent of the respondents disagreed that the quality of teaching and support staff is high in universities. Moreover, 59 percent also disagreed that budgetary allocations do not influence the ratio between teaching and support staff.

It was evident that 63.1 percent disagreed that budgetary allocations are adequate for teaching and support staff in universities. Furthermore, 53.8 percent of the bursary staff disagreed that budgetary allocations influence the working relationship between teaching and support staff in universities. On the whole, the direction for all the indicators for adequacy of budgetary allocations tilted towards disagreement as against agreement thus indicating that budgetary allocations for the provision of ratios between teaching and support staff in universities are not adequate.

The University Vice-Chancellors also reported that budgetary allocations influence the ratio between teaching and support staff in universities. The university Vice-Chancellors further reported that budgetary allocations influence the working relationship between teaching and support staff. On whether support staff are given more priority than teaching staff through budgetary allocations, the university Vice-Chancellors disclosed that budgetary allocations give more priority to teaching staff than support staff in universities.

University students were asked in a focus group discussion on the adequacy of their departmental support staff in relation to their lecturers. Most of them reported that both

teaching and support staff were not adequate in their department. This is how one university student puts it:

> *"We don't have enough support staff in our department. Because, most times, when you go for certain clarifications from the departmental support staff, they usually tell us that they are busy, that we should come next time, when you come next time the oga (sir) will shout at you, telling you that he does not have your time because of his tight schedule. We want more lecturers and support staff to be employed so that our problems can be attended to as at when due."*

This comment, together with other comments from the university students and Vice-Chancellors suggest that budgetary allocations to universities are not adequate for a healthy ratio between teaching and support staff in universities. Some of the students however disclosed that some of the support staff assist them whenever they needed clarifications on certain issues in their department.

4.8.1 Discussion of findings

The thrust of research question four was to examine the influence of budgetary allocation to universities and how it affects ratios of teaching staff and support staff in federal universities in North-Central zone of Nigeria. The key data issues under adequacy of budgetary allocations and its influence on the ratio between teaching and support staff include the fact that budgetary allocations have a positive relationship with the ratios of teaching and support staff. This means that, if budgetary allocations are increased for teaching and support staff, the ratio between support and teaching staff will be enhanced and vice-versa. This finding agrees with what Omole (2009) and Miroiu and Aligica (2002) established in their studies that more funding for teaching and support staff will enhance their ratios in universities.

In this present study, it was established that budgetary allocations to universities for teaching and support staff are inadequate. The finding is in line with what Tilak (2009) and Majoni (2014) reported in their studies that inadequate funding of universities results in poor supply of human capital, and the effect shows in inadequacy of teaching and support staff in universities.

The next issue from these data relates to the fact that through budgetary allocations, teaching staff are given more priority than support staff in universities. This concurs with Conway, (2012) and Caballero, Galache, Gomez, Molina and Torrico, (2003) who disclosed in their studies that most universities give more priority to teaching staff than support staff in their budgetary allocations.

Another issue raised in the data is that the quality of teaching and support staff in universities is not high. This can be attributed to inadequate budgetary allocations to universities. This is because poor funding of universities does not attract quality personnel to the system. The finding agrees with Akintoye (2008) and Okowa (2011) who both revealed in their studies that paucity of quality university personnel is affected by inadequate budgetary allocations to the system.

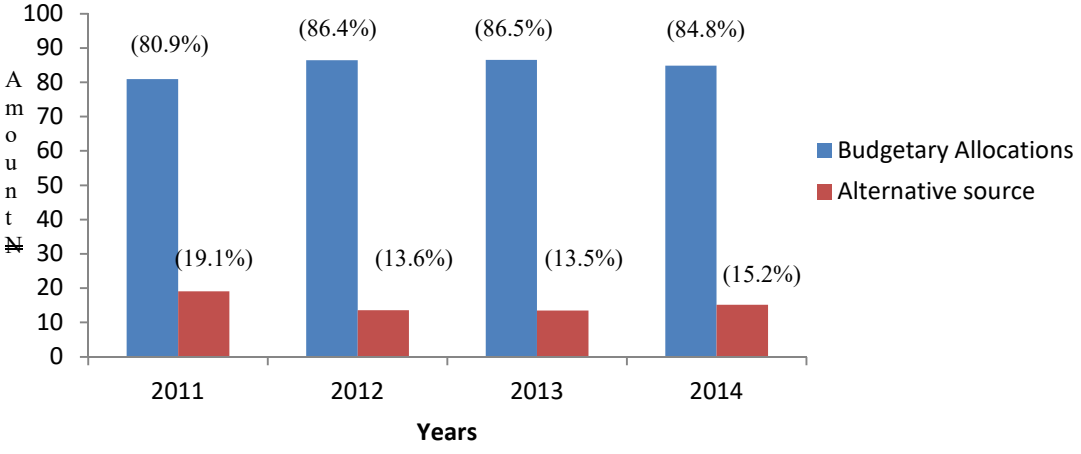
It was also established in this study that the working relationship between teaching and support staff is not influenced by budgetary allocations to universities. The finding concurs with McMaster (2003) and Conway (2012) who both established in their studies that, the relationship between teaching and support staff is generally positive. That

though they may have their differences, budgetary allocations to universities do not influence their working relationship.

4.9 Alternative sources of funding universities

Research question five was prepared to answer the question: How does budgetary allocation to universities influence alternative sources of funding available to federal universities in North-Central Nigeria? University Vice-Chancellors shared information on how alternative sources of funding available to universities affect budgetary allocations from government. University students also provided their views on how alternative sources of funding universities can be used to complement budgetary allocations to universities.

Relevant data relating to universities budgetary allocations and funds generated from alternative sources of funding were extracted from the sampled universities documents. The data are shown in Figure 4.14:



Scale: Vertical axis 10cm=₦ 10,000,000,000

Figure 4.14 Universities budgetary allocations and funds generated from alternative sources (2011-2014)
Source: University documents from the five sampled universities

Note: 1Ksh = ₦3

The data in Figure 4.14 shows that in 2012, budgetary allocations to universities were ₦18,284,959,050.76 while the universities generated ₦2,889,236,267.41 from alternative sources of funding, representing 13.6 percent of budgetary allocations to universities. Findings of this present study however show that most of the funds generated from alternative sources of funding are from fees and other sundry charges generated from students instead of business initiatives of the universities. This was corroborated by university Vice-Chancellors and bursary staff who disclosed that universities do not generate much income from alternative sources as they depend mostly on government budgetary allocations, with university Vice-Chancellors disclosing that universities only generate between 10 and 15 percent of their incomes from alternative sources of income, which is not adequate for them to implement their developmental priorities. Appendices G, H, I, J and K provided the documents from the sampled universities. This concurs with Ali (2011) who revealed that many Nigerian universities augment their income from government mainly by charging students registration fees (such as acceptance fees, developmental levies, and other sundry charges), recoveries from salaries and miscellaneous income from part-time programs and consultancy outfits (Bamiro, 2012).

The data collected from university bursary staff also aided in furnishing a response for research question five. A simple frequency count of the percentage of respondents

viewpoints were captured in a tabular form. Table 4.16 shows the views of university bursary staff on how alternative sources of funding available to universities affect budgetary allocations from government:

Table 4.16 Distribution of percentage of respondents' views on how alternative sources of funding affect budgetary allocations from government

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
This university has alternative sources of funding	4.2	9.4	2.4	23.6	60.4
Alternative sources of funding to this university apart from budgetary allocations are adequate	28.7	45.5	10.9	12.9	2
This university is constantly exploring alternative sources of funding	21.3	36.6	14.9	9.9	17.3
This university's request(s) for funding from alternative sources yields positive result(s)	38.9	40.2	4.3	10.1	6.5
Funds are misapplied in this university	11.2	7.1	3.7	36.4	41.6

N=101

Table 4.16 indicates that of the 101 bursary staff who responded to this questionnaire, 84 percent of the respondents agreed that their universities have alternative sources of funding. Furthermore, 74.2 percent disagreed that alternative sources of funding to their universities apart from budgetary allocations from government are adequate. In responding on how alternative sources of funding available to federal universities affect budgetary allocations from government, the university Vice-Chancellors reported that though universities have alternative sources of funding, alternative sources of funding

available to universities apart from being inadequate, does not affect budgetary allocations from government.

It was evident that 57.9 percent disagreed that universities are constantly exploring alternative sources of funding. Also, 79.1 percent of the bursary staff disagreed that universities' requests for funding from alternative sources yields positive results, while 78 percent of the respondents agreed that funds are mismanaged in universities. On the whole, the direction for most of the indicators for alternative sources of funding tilted towards disagreement as against agreement thus indicating that alternative sources of funding available to universities has no effect on budgetary allocations from government to universities.

The University Vice-Chancellors also reported that alternative sources of funding universities are not adequate. The university Vice-Chancellors further reported that universities requests for funding from alternative sources do not yield positive result. They also reported that funds in universities are sometimes misapplied in the university system.

University students were asked in a focus group discussion to suggest ways in which universities can raise funds through alternative sources of funding apart from budgetary allocations. Most of them suggested ways that universities can raise funds. This is how one university student puts it:

> *"Universities can go into different businesses in order to augment budgetary allocations. They can invest in businesses such as bottled water, agriculture, printing, hotel business and consultancy."*

This comment, together with other comments from the university students and Vice-Chancellors shows the alternative ways that universities can explore to raise funds for development apart from budgetary allocations from government.

4.9.1 Discussion of results

The thrust of research question five was to determine how budgetary allocations to universities affect alternative sources of funding federal universities in North-Central zone of Nigeria. The key data issues under alternative sources of funding universities include the fact that universities, apart from budgetary allocations from government, have alternative sources of funding. This finding concurs with Meglio (2008) and Altbach, Reisberg and Rumbley (2009) who both reported in their studies that, universities around the world, possess other sources of funding higher education apart from tuition and government support

In this present study, it was established that alternative sources of funding universities apart from budgetary allocations are inadequate. Furthermore, the findings of this study agree with what Yusuf (2010) and Onuoha (2013) established in their studies that alternative sources of funds to universities are inadequate.

The next issue from these data relates to the fact that universities are not constantly exploring alternative sources of funding. Most universities are comfortable with budgetary allocations from government, without exploring alternative sources. This concurs with what Onuka (2004) and Famade, Omiyale and Adebola (2015) reported in

their studies that most universities do not explore other sources of funding as they rely on government funding. This compounds their funding problems.

Another issue raised in the data is that universities' request for funding from alternative sources does not yield positive results. This is because universities do not take alternative sources of funding serious. This is in line with Yusuf (2010) and Walshe (2010) who both revealed in their studies that universities quest for alternative sources of funding hardly yield any positive result, because their internally generating enterprises are moribund and ineffective.

Furthermore, the issue of misallocation of funds was also raised in the data where it was established that funds are misallocated by universities. The findings agree with Aborode (2005) and Ali (2011) who both established in their studies that only few universities have been able to develop any rational and clearly articulated basis for internal distribution of resources. Because of this, scarce resources are often easily misapplied, with critical functions starved of resources while merely facilitating activities are generously supported.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, conclusions and recommendations from the results of the present study. A list of conclusions based on the interpretations offered to the study, and recommendations for practice, policy and further research were also reported in this chapter. The study examined the influence of federal government budgetary allocation on developmental priorities of federal public universities in North-Central zone of Nigeria.

5.2 Summary of the study

The purpose of the study was to examine the influence of federal government budgetary allocation on developmental priorities of federal public universities in North-Central zone of Nigeria. The study was necessitated by the need to fill the gap created by unavailability of empirical data as well as provide evidence on the influence of budgetary allocations for the provision of academic staff offices, lecture halls, recruitment of teaching staff, ratio of teaching and support staff and alternative sources of funding federal universities in North-Central zone of Nigeria.

By means of a descriptive research design, data was collected from university Vice-Chancellors, bursary staff, lecturers and students of 5 universities. A census of 101 bursary staff and 437 lecturers was considered since the remaining 28 bursary staff and 111 lecturers had taken part in the pilot study. Again, 5 university Vice-Chancellors were interviewed out of 7 Vice-Chancellors, since 2 were used for pilot study. 50 University

students were stratified and purposively selected for focus group discussions out of 84,304.

The study reported both the universities' figures on budgetary allocations for the provision of academic staff offices and further juxtaposed those figures with the collected data during the present study's findings on provision of academic staff offices. It was found from the documents that in 2011, 2012, 2013 and 2014, percentage of capital allocations for the provision of academic staff offices were 8.99 percent, 3.90 percent, 3.30 percent and 9.79 percent respectively. This shows that universities budgetary allocations for the provision of academic staff offices are inadequate.

As revealed by the study, budgetary allocations to universities were not adequate for the provision of office accommodation to academic staff in universities. Apart from inadequate academic offices in universities, academic staff offices are not adequately furnished. Also, the offices are not spacious and only few lecturers occupy offices alone. It became evident that budgetary allocations to universities accounted for 25 percent for the provision of lecturers offices in universities

The study reported both the universities' figures on budgetary allocations for the provision of lecture halls and further juxtaposed those figures with the collected data during the present study's findings on provision of lecture halls. It was found from the documents that in 2011, 2012, 2013 and 2014, percentage of capital allocations for the provision of lecture halls were 19.69 percent, 7.97 percent, 8.41 percent and 14.24 percent respectively. Furthermore, the documents revealed that in 2011, 2012, 2013 and

2014, the percentage of enrolled applicants to the number of applicants were 12.84 percent, 13.89 percent, 20.18 percent and 31.80 percent respectively. This shows that universities budgetary allocations for the provision of lecture halls are inadequate.

From the findings, budgetary allocations to universities were not adequate for the provision of lecture halls in universities. In addition, budgetary allocations to universities for the construction of lecture halls are not adequate. Undergraduate students are enrolled in universities without consideration to existing lecture halls. Furthermore, budgetary allocations influence the provision of lecture halls for undergraduate students' enrolment. It was also revealed from the study that existing lecture halls in universities are not adequate. Thus, confirming the fact that university students do not learn comfortably in existing lecture halls. All these are attributed to inadequate budgetary allocations to universities.

The study showed both the figures retrieved from universities on budgetary allocations for the recruitment of teaching staff and further juxtaposed those figures with the collected data during the present study's findings on recruitment of teaching staff. It was found from the documents that in 2011, 2012, 2013 and 2014, percentage of recurrent allocations for personnel expenditure were 96.23 percent, 92.69 percent, 96.37 percent and 97.32 percent respectively. Furthermore, the documents revealed that in 2011, 2012, 2013 and 2014, the percentage of lecturers with doctoral degrees were 38.53 percent, 42.38 percent, 41.71 percent and 37.26 percent respectively. Though some new academic staff were employed during the period under review, findings from the study shows that

they were not adequate, furthermore, most of the allocations were used for the payment of existing staff salaries and not for the recruitment of new academic staff.

According to the results, budgetary allocations to universities influence recruitment of teaching staff. However, teaching staff recruitment is not a priority in universities, teaching staff are not adequate to teach in universities, leading to them being overworked. Also, most teaching staff in universities do not have doctoral degrees. All these are due to inadequate budgetary allocations by government to universities.

Findings from the study showed that both the figures retrieved from universities on budgetary allocations for ratios of teaching and support staff were further juxtaposed with data collected during the present study's findings on ratio between teaching and support staff. It was found from the documents that in 2011, 2012, 2013 and 2014, percentage of recurrent allocations for personnel expenditure were 96.23 percent, 92.69 percent, 96.37 percent and 97.32 percent respectively. Though these personnel allocations were for both support and teaching staff salaries, they are not enough. This is because the ratio of support staff to teaching staff from the documents between 2011 and 2014 was 2:1. This shows that universities budgetary allocations for the ratios of support staff to teaching staff are inadequate.

The fact that the findings of the study revealed that budgetary allocations to universities are not adequate for the ratio of teaching and support staff in universities is an indication that as seen from the study, the quality of teaching and support staff is not high in universities. In addition, while teaching staff are given more priority than support staff in

universities, inadequacy of budgetary allocations influences the ratio between teaching and support staff in universities. Budgetary allocations also do not influence the working relationship between teaching and support staff.

Findings from the study showed that both the figures retrieved from universities on alternative sources of funding universities were further juxtaposed with figures collected during the present study's findings on alternative sources of funding. It was found from the documents that in 2011, 2012, 2013 and 2014, percentage of alternative sources of funding to budgetary allocations were 23.54 percent, 15.80 percent, 15.61 percent and 17.96 percent respectively. Findings of this present study however show that most of the funds generated from alternative sources of funding are from fees and other sundry charges generated from students instead of business initiatives of the universities.

From the findings of the study, it was established that though universities have alternative sources of funding apart from budgetary allocations from government, they are inadequate. Also, universities are not constantly exploring alternative sources of funding, and universities requests for funding from alternative sources does not yield positive results. Implying that, federal universities depend on government budgetary allocations for their developmental priorities.

5.3 Conclusions of the study

On the basis of the findings of the study, the following conclusions were reached.

i. It was established that budgetary allocations for the provision of academic staff offices in universities were inadequate. This was in tandem with the universities

documents as shown in Figure 4.8.This was corroborated by university Vice-Chancellors and bursary staff who disclosed that budgetary allocations for academic staff offices were inadequate. This implies that universities may not be able to achieve their mandate of teaching, community service, research & training of manpower.

ii. It was noted that budgetary allocations for the provision of lecture halls in universities were not adequate. Universities documents support this fact as shown in Figure 4.9. Furthermore, documents in Figure 4.10 revealed that not all qualified applicants are enrolled. This is as a result of inadequacy of budgetary allocations for the provision of lecture halls in universities. This was corroborated by university Vice-Chancellors and bursary staff who disclosed that budgetary allocations for lecture halls were inadequate. The implication of a shortfall in enrolment is that there may be shortage of manpower needed for Nigeria to achieve its Vision 202020 target.

iii. Despite the fact that teaching staff were not adequate to teach in universities as established in the study, it was revealed that due to inadequacy of budgetary allocations for the recruitment of teaching staff in universities, teaching staff recruitment is not a priority in universities. Also, most teaching staff in federal universities do not have doctoral degrees. This is because budgetary allocations are not adequate. Universities documents in Figures 4.11 and 4.12 support this fact. This implies that Nigeria may not be able to achieve the target of achieving quality and equitable education as outlined by Sustainable Development Goal 4.

iv. It was discovered that budgetary allocations influence the ratio between teaching and support staff in universities. Due to its inadequacy, the ratio of support to teaching staff in universities is low. This is supported by documents in Figure 4.13. The implication of this to the university system is that academic staff are overworked, with negative consequence on their productivity.

v. Universities do not take advantage of alternative sources of income available to them, because they depend mostly on budgetary allocations from government for their developmental priorities. Data in Figure 4.14 support this fact. This means that they have limited avenues for generating income, which affects them in realizing their developmental priorities.

5.4 Recommendations of the study

Considering the findings and conclusions of the study, the following recommendations are proposed:

i. ADEFORMANCE model (an acronym for "Adequate Performance" designed by the researcher) should be adopted by the Nigerian government in funding Nigerian universities. This is a funding model designed by the researcher which will take due cognizance of actual number and quality of staff and students as well as the expected performance outputs like number and quality of graduates, number and quality of research grants, projects and publications, ICT deployment in teaching and research.

ii. There is also the need for the federal government to create time to facilitate the revision of its policies on university infrastructural development so as to provide clear guidelines in infrastructure development as well as avoiding the delays which are experienced in the award of contracts for infrastructural development.

iii. As far as possible, there is the need for an increase in budgetary allocations by government by taxing companies operating in Nigeria to support infrastructural and human capital development in the areas of academic staff offices, lecture halls and recruitment of staff in federal universities.

v. The university Vice-Chancellors have a role to play in mobilizing alumni, state and local governments on the importance of their involvement in the infrastructure development process of universities. Through frequent meetings and courtesy visits, the Vice-Chancellors can inform them how their involvement in universities can create a lot of opportunities in facilitating infrastructural development in universities.

vi. The federal government should make it a policy to compel universities to generate funds through alternative sources of funding by investing in profitable ventures such as consultancy, printing and agriculture. This will enhance their incomes.

5.5 Suggestions for further research

In line with conclusions and recommendations of the study, the following areas are suggested for further study:

i. This study examined the influence of federal government's budgetary allocations on developmental priorities of public universities by limiting itself to only academic staff offices and lecture halls as infrastructural development. A study on federal government's budgetary allocations on developmental priorities of public universities with emphasis on students' hostels and libraries can be done.

ii. This study focused only on adequacy of federal government's budgetary allocations on developmental priorities of federal public universities. A comparative study on influence of budgetary allocations on developmental priorities of federal, states and private universities can be done.

iii. This study was limited to North-Central zone of Nigeria. Other studies on influence of budgetary allocations on developmental priorities of federal public universities should be done in other parts of Africa to look at other developmental priorities and compare the findings.

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APPENDICES
APPENDIX A

QUESTIONNAIRE FOR BURSARY STAFF

Dear Sir/Madam,

I am a PhD student from University of Nairobi, Kenya currently on my field work. This study is for academic purpose. It is intended to assess the adequacy of federal government's budgetary allocations on developmental priorities of federal universities. Kindly respond to the questions as candidly and precisely as possible. Your honesty and cooperation in responding to these questions will highly be appreciated with utmost confidentiality.

Augustine Sambo Azi
(Researcher)

Please kindly supply the following preliminary information.

BACKGROUND INFORMATION

1. Age: 18-30years ( ) 31-40years ( ) 41-50years( ) 51-60years 61 years & above ( )
2. Highest academic qualification: WAEC/SSCE ( ) NCE/OND ( ) B.A/B.Sc ( ) M.A/M.Sc/MBA ( ) PhD ( )
3. Type of appointment: Permanent ( )Temporary ( ) Contract ( )

PART ONE: EXTENT OF ADEQUACY OF BUDGETARY ALLOCATIONS

The following statements follow from the premise that federal universities receive budgetary allocations from government. Please indicate whether you

SD = Strongly Disagree, D = Disagree, U = Undecided, A = Agree, SA = Strongly Agree. Please tick (✓) the most appropriate response in your opinion from the list of options.

#	**Statement**	**SD**	**D**	**U**	**A**	**SA**
4	This university relies on budgetary allocations from government.					
5	Budgetary allocations to this university are adequate					
6	Budgetary allocations are equitably distributed					
7	Budgetary allocations are approved as requested.					
8	Budgetary allocations are implemented as approved					

PART TWO: PROVISION OF OFFICE ACCOMMODATION TO ACADEMIC STAFF.

The following statements follow from the premise that government provides office accommodation to academic staff in federal universities through budgetary allocations. Please indicate whether you **SD = Strongly Disagree, D = Disagree, U = Undecided, A = Agree, SA = Strongly Agree.** Please tick (✓) the most appropriate response in your opinion from the list of options.

#	Statement	SD	D	U	A	SA
9	Budgetary allocations are adequate for academic staff offices					
10	Budgetary allocations are adequate for furnishing Academic staff offices					
11	Academic staff offices are spacious as a result of adequate budgetary allocations					
12	Budgetary allocations make provisions for one office per lecturer in the university					

PART THREE: PROVISION OF LECTURE HALLS FOR UNDERGRADUATE STUDENTS ENROLLMENT.

The following statements follow from the premise that government provides lecture halls for undergraduate students' enrolment in federal universities through budgetary allocations. Please indicate whether you **SD = Strongly Disagree, D = Disagree, U = Undecided, A = Agree, SA = Strongly Agree.** Please tick (✓) the most appropriate response in your opinion from the list of options.

#	Statement	SD	D	U	A	SA
13	Budgetary allocations are adequate for the construction of students' lecture halls.					
14	Budgetary allocations influence the provision of lecture halls for undergraduate students' enrolment.					

#	Statement	SD	D	U	A	SA
15	Budgetary allocations influence enrolment of students for first degree admissions					
16	Existing lecture halls are adequate for students' enrolment due to adequate budgetary allocations.					
17	Students learn comfortably in existing lecture halls					
18	Undergraduate students are enrolled without consideration to existing lecture halls and budgetary allocations to the university					

PART FOUR: RECRUITMENT OF TEACHING STAFF

The following statements follow from the premise that government provides budgetary allocations for the recruitment of teaching staff in federal universities. Please indicate whether you **SD = Strongly Disagree, D = Disagree, U = Undecided, A = Agree, SA = Strongly Agree.** Please tick (✓) the most appropriate response in your opinion from the list of options.

#	Statement	SD	D	U	A	SA
19	Staff recruitment is a priority in this university.					
20	Budgetary allocations affect teaching staff recruitment.					
21	Budgetary allocations affect the quality of Teaching Staff					
22	Budgetary allocations affect the number of teaching staff					
23	Budgetary allocations are adequate for the frequent recruitment of Teaching staff					

PART FIVE: STAFF RATIOS BETWEEN TEACHING AND SUPPORT STAFF

The following statements follow from the premise that through budgetary allocations, there are variations between teaching and support staff in federal universities. Please indicate whether you **SD = Strongly Disagree, D = Disagree, U = Undecided, A = Agree, SA = Strongly Agree.** Please tick (✓) the most appropriate response in your opinion from the list of options.

#	Statement	SD	D	U	A	SA
24	Support staff are given more priority than teaching staff through budgetary allocations					
25	Budgetary allocations do not influence the ratio between teaching and support staff.					
26	Budgetary allocations are adequate for teaching and support staff.					
27	Budgetary allocations influence the working relationship between teaching and support staff.					

PART SIX: ALTERNATIVE SOURCES OF FUNDING THE UNIVERSITY

The following statements follow from the premise that federal universities have alternative sources of funding apart from budgetary allocations from government. Please indicate whether you **SD = Strongly Disagree, D = Disagree, U = Undecided, A = Agree, SA = Strongly Agree.** Please tick (✓) the most appropriate response in your opinion from the list of options.

#	Statement	SD	D	U	A	SA
28	This university has alternative sources of funding.					
29	Alternative sources of funding to this university apart from budgetary allocations from government are adequate.					
30	This university is constantly exploring alternative sources of funding.					
31	This university's request(s) for funding from alternative sources yields positive result(s).					
32	Funds are misapplied in this university					

33. In order of preference, what other sources of generating revenue do you think the university system can explore to improve its internally generated revenue?.....

.....

.....

34. What recommendations can you give to improve budgetary allocations to the university system?

.....

.....

.....

.....

APPENDIX B

QUESTIONNAIRE FOR LECTURERS

I am a PhD student from University of Nairobi, Kenya currently on my field work. This study is for academic purpose. It is intended to assess the adequacy of federal government's budgetary allocations on developmental priorities of federal universities in Nigeria. Kindly respond to the questions as candidly and precisely as possible. Your honesty and cooperation in responding to these questions will be highly appreciated with utmost confidentiality.

Augustine Sambo Azi
(Researcher)

Please kindly supply the following preliminary information.

1. Age: 18-30years ( ) 31-40years ( ) 41-50years ( ) 51- 60years ( ) 61years & above ( )
2. Type of appointment: Permanent ( ) Temporary ( ) Contract ( )

Please tick (✓) the most appropriate response in your opinion. Response key:

SD = Strongly Disagree, D = Disagree, U = Undecided, A = Agree, SA = Strongly Agree.

PART ONE: PROVISION OF OFFICE ACCOMMODATION TO ACADEMIC STAFF.

The following statements follow from the premise that government provides office accommodation to academic staff in federal universities through budgetary allocations. Please indicate whether you **SD = Strongly Disagree, D = Disagree, U = Undecided, A = Agree, SA = Strongly Agree.** Please tick (✓) the most appropriate response in your opinion from the list of options.

#	Statement	SD	D	U	A	SA
3	There are adequate academic staff offices					
4	Academic staff offices are adequately furnished					
5	Academic staff offices are spacious					
6	Each lecturer occupies an entire office alone.					

PART TWO: PROVISION OF LECTURE HALLS FOR UNDERGRADUATE STUDENTS' ENROLLMENT.

The following statements follow from the premise that government provides lecture halls for undergraduate students' enrolment in federal universities through budgetary allocations. Please indicate whether you **SD = Strongly Disagree, D = Disagree, U = Undecided, A = Agree, SA = Strongly Agree.** Please tick (✓) the most appropriate response in your opinion from the list of options.

#	Statement	SD	D	U	A	SA
7	Budgetary allocations are adequate for the construction of students' lecture halls					
8	Undergraduate students are enrolled without consideration to existing lecture halls					
9	Budgetary allocations influence the provision of lecture halls for undergraduate students' enrolment.					
10	Existing lecture halls are adequate for students					
11	Students learn comfortably in existing lecture halls					

PART THREE: RECRUITMENT OF TEACHING STAFF

The following statements follow from the premise that government provides budgetary allocations for the recruitment of teaching staff in federal universities. Please indicate whether you **SD = Strongly Disagree, D = Disagree, U = Undecided, A = Agree, SA = Strongly Agree.** Please tick (✓) the most appropriate response in your opinion from the list of options.

#	Statement	SD	D	U	A	SA
12	Teaching staff recruitment is a priority in this university.					
13	Budgetary allocations affect teaching staff recruitment.					
14	Teaching Staff are not adequate to teach					
15	Teaching staff are overworked					
16	Most academic staff have doctoral degrees					

PART FOUR: STAFF RATIOS BETWEEN TEACHING AND SUPPORT STAFF

The following statements follow from the premise that through budgetary allocations, there are variations between teaching and support staff in federal universities. Please indicate whether you **SD = Strongly Disagree, D = Disagree, U = Undecided, A = Agree, SA = Strongly Agree.** Please tick (✓) the most appropriate response in your opinion from the list of options.

#	Statement	SD	D	U	A	SA
17	The quality of teaching and support staff is high in this university.					
18	Budgetary allocations do not influence the ratio between teaching and support staff					

#	Statement	SD	D	U	A	SA
19	Budgetary allocations are adequate for teaching and support staff					
20	Budgetary allocations influence the working relationship between teaching and support staff.					

21. In your opinion, how do you think the government can adequately fund the university system?.....

….....

……..……

……..……

……..

APPENDIX C

INTERVIEW GUIDE FOR UNIVERSITY VICE-CHANCELLORS

1. Government budgetary allocations to your university are adequate ( )
   Inadequate ( )
2. If inadequate, the extent of the inadequacy is high ( ) Moderate ( ) Low ( )
3. Why do you think it is high, low or moderate?
4. Budgetary allocations to this university are approved and implemented as requested. Yes ( ) No ( )
5. If no, why?.....
6. Funds are sometimes misapplied in this university. Yes ( ) No ( )
7. If yes, why do you think so?.....
8. Budgetary allocations to this university can adequately cater for academic staff offices. Yes ( ) No ( )
9. If no, what is the extent of the inadequacy in percentage?.....
10. Academic staff offices in this university are Adequate ( ) Inadequate ( )
11. If inadequate, could this be attributed to budgetary allocations? Yes ( ) No ( )
12. The available academic staff offices are spacious. Yes ( ) No ( )
    If no, could it be attributed to inadequate budgetary allocations?.....
13. Do academic staff share offices? Yes ( ) No ( )
14. If yes, could it be as a result of inadequate budgetary allocations to the university? Yes ( ) No ( )

15. Budgetary allocations to this university can adequately provide lecture halls for undergraduate students' enrolment. Yes ( ) No ( )
16. If no, what is the extent of the inadequacy in percentage?.....
17. Budgetary allocations to this university are adequate for the enrolment of all qualified first degree applicants. Yes ( ) No ( )
18. Budgetary allocations to this university influence the availability of lecture halls. Yes ( ) No ( ).
19. Budgetary allocations to this university are adequate for the recruitment of teaching staff. Yes ( ) No ( )
20. Most teaching staff in this university have doctoral degrees. Yes ( ) No ( )
21. If no, could it possibly be as a result of inadequate budgetary allocations? Yes ( ) No ( ).
22. If yes, what is the extent of the inadequacy in percentage?.....
23. Budgetary allocations to this university influence the ratio between teaching and support staff. Yes ( )No ( )
24. If Yes, what is the extent in percentage?.....
25. Budgetary allocations affect the quality of teaching and support staff in this university. Yes ( ) No ( ).
25. Mention the alternative sources of funding available to your university……
……
26. What is the influence of alternative sources of funding to this university in percentage?.....

27. In order of preference, what other alternative sources of funding can this university explore?.....
28. What recommendations can you give to improve budgetary allocations and implementation in your university?.....

APPENDIX D

FOCUS GROUP DISCUSSION GUIDE FOR STUDENTS

The following semi-structured questions constitute the items in the focus group discussion with university students

Name of the university……...

Number of discussants Male……

Female……

Name of recorder……

1. How do you feel about the funding of this university? (probe for adequacy of budgetary allocations)
2. What do you think of your lecturers' office accommodation? (probe for comfortability of lecturers in their offices)
3. What is your perception of the furnishings in your lecturers' offices? (probe for reasons from their responses)
4. How do you feel about the availability of lecture halls? (probe for availability of lecture halls for students)
5. What do you think of the standard of your lecture halls? (probe for lecture halls furniture)
6. What do you notice about the population of students' enrolment in your university? (probe for students enrolment)
7. How do you feel about the quality of lecturers in your university? (probe for quality of teaching)
8. How often do you have new lecturers? (probe for lecturers' recruitment)

9. How does your departmental support staff assist you? (probe for adequacy of support staff)
10. How do you think that this university can be adequately funded?(probe for suggestions for funding)
11. Is there anything else you would like to say about funding of your university generally?

APPENDIX E

OBSERVATION SCHEDULE/GUIDE

State of Academic staff offices	**Poor**	**Fair**	**Good**
Have sufficient space			
Have chairs to accommodate visitors			
Adequate cupboards and bookshelves			
Adequate for lecturers			
Furniture appropriate for use			
State of Classrooms/Lecture Halls			
Spacious enough			
Wide enough			
Floors are level			
Floors are kept clean			
Walls are well maintained			
Properly furnished			
Furniture appropriate for use			
Floors have cracks			
Desks are arranged in a manner that facilitates easy and orderly movement of learners in the classroom			
Classrooms are adequate for learning			

APPENDIXF

A SAMPLE OF THE PROFORMA USED TO EXTRACT DATA FROM UNIVERSITY DOCUMENTS

S/NO	DESCRIPTION	QUANTITY/ AMOUNT
1.	Budgetary allocation for capital and recurrent expenditure	
2.	Budgetary allocation for the provision of office accommodation to academic staff	
3.	Budgetary allocation for the provision of undergraduate lecture halls	
4	Budgetary allocation for the recruitment of academic staff	
5	Budgetary allocation for the provision of funds for the ratio of teaching to support staff	
6	Number of teaching staff	
7	Number of support staff	
8	Alternative sources of funding	
9	Number of undergraduate applicants	
10	Number of undergraduates enrolled	

APPENDIX G

UNIVERSITY OF JOS RELEVANT BUDGETARY ALLOCATIONS

DOCUMENTS

Year	Capital allocations(₦)	Recurrent allocations(₦)	Approved budget (₦)	Actual released budget (₦)	Tetfund Interventions (₦)
2011	198,761,853.75	4,289,279,548	5,479,335,640.35	4,488,041,401.75	395,844,348.95
2012	211,211,072.75	5,075,142,544.75	6,375,295,017.15	5,286,353,617.50	121,020,001.04
2013	143,944,956.80	4,852,996,247.50	5,976,378,034.70	4,996,941,204.30	398,387,607.89
2014	106,528,246.20	5,082,334,959.10	6,440,939,951.05	5,188,863,205.30	420,096,888.02

Year	Allocations for academic staff offices (₦)	Allocations for lecture halls (₦)	Approved allocations for personnel expenditure (₦)	Released allocations for personnel expenditure (₦)	Alternative sources of funding (₦)
2011	124,209,181.95	271,635,167	4,998,883,727.15	4,124,578,594.25	770,689,641.30
2012	38,637,162.64	82,382,838.40	5,859,491,944.75	4,942,130,560.80	754,924,054.95
2013	17,416,392.21	29,056,794.49	5,489,997,320.45	4,715,406,628.50	1,068,420,805.90
2014	178,660,608.90	242,309,279.20	6,068,560,895.10	4,995,607,416.60	1,122,025,593.50

Year	No. of Teaching staff		Non teaching staff	Students enrolment	
	PhD holders	Others		No. of Applicants	No. Enrolled
2011	355	632	1,971	18,216	4,593
2012	356	650	1,989	18,220	4,410
2013	386	681	2,075	15,407	3,446
2014	411	725	2,103	18,216	3552

Note: 1ksh = ₦3.00

Source: Relevant documents on budgetary allocations from university of Jos (2011-2014)

APPENDIX H

FEDERAL UNIVERSITY OF TECHNOLOGY MINNA RELEVANT

BUDGETARY ALLOCATIONS DOCUMENTS

Year	Capital allocations(₦)	Recurrent allocations (₦)	Approved budget (₦)	Actual released budget (₦)	Tetfund Interventions (₦)
2011	303,786,545	2,824,950,167	3,284,274,124	3,128,736,712	395,680,309
2012	253,504,998	4,399,061,393	4,898,353,209	4,652,566,391	598,908,886
2013	164,621,363	4,369,548,018	4,768,439,833	4,534,169,381	646,175,328
2014	98,987,050.30	4,568,023,178.53	4,852,084,246	4,667,010,228.83	912,004,179

Year	Allocations for academic staff offices(₦)	Allocations for lecture halls(₦)	Approved allocations for personnel expenditure(₦)	Released allocations for personnel expenditure(₦)	Alternative sources of funding(₦)
2011	31,393,526.25	88,144,361.71	2,722,554,788	2,722,554,788	1,079,391,509.02
2012	73,286,173.21	154,213,827.12	4,270,075,271	4,270,075,271	928,165,483.19
2013	21,374,284.31	160,025,716.31	4,247,860,987	4,247,860,987	684,355,871.80
2014	54,218,731.35	102,471,342.31	4,484,614,150	4,484,614,150	961,941,833.51

Year	No. of Teaching staff		Non teaching staff	Students enrollment	
	PhD holders	Others		No. of Applicants	No. Enrolled
2011	214	471	1,280	6,736	2,653
2012	247	536	1,479	7,824	3,197
2013	254	545	1,498	10,256	4,446
2014	314	480	1,491	12,526	6,496

Note: 1ksh = ₦3.00

Source: Relevant documents on budgetary allocations from federal university of technology Minna (2011-2014)

APPENDIX I

UNIVERSITY OF ILORIN RELEVANT BUDGETARY ALLOCATIONS DOCUMENTS

Year	Capital allocations (₦)	Recurrent allocations (₦)	Approved budget (₦)	Actual released budget (₦)	Tetfund Interventions (₦)
2011	49,768,778.65	4,526,217,292.07	5,151,534,135	4,575,986,070.72	315,075,517.31
2012	18,033,404.60	5,163,631,325.08	5,267,437,572	5,181,664,729.68	407,318,060.60
2013	15,970,806	5,347,205,532.12	5,035,734,971	5,363,176,338.12	499,837,363.16
2014	1,100,079,909	5,289,929,548.96	6,390,009,457.96	5,289,929,548.96	538,371,862.51

Year	Allocations for academic staff offices(₦)	Allocations for lecture halls(₦)	Approved allocations for personnel expenditure(₦)	Released allocations for personnel expenditure(₦)	Alternative sources of funding(₦)
2011	21,217,382.16	27,362,114.13	4,989,488,459	4,444,624,545.80	1,098,359,744.45
2012	21,861,346.10	36,319,979.74	5,124,614,937	5,016,792,013.23	1,183,730,029.27
2013	5,659,291	8,361,782.41	4,814,712,276	5,265,620,173.12	1,164,530,010.32
2014	79,631,322.53	121,381,463	4,814,712,276	5,211,850,870.96	1,279,722,130.59

Year	No. of Teaching staff		Non teaching staff	Students enrolment	
	PhD holders	Others		No. of Applicants	No. Enrolled
2011	390	457	1,973	73,392	5,386
2012	444	561	2,084	74,959	6,099
2013	506	625	2,187	50,148	7,102
2014	528	679	2,301	26,459	8,459

Note: 1ksh = ₦3.00

Source: Relevant documents on budgetary allocations from university of Ilorin (2011-2014)

APPENDIX J

FEDERAL UNIVERSITY LAFIA RELEVANT BUDGETARY ALLOCATIONS DECUMENTS

Year	Capital allocations (₦)	Recurrent allocations (₦)	Approved budget (₦)	Actual released budget (₦)	Tetfund Interventions(₦)
2011	88,139,446	65,945,578.41	154,085,024.41	154,085,024.41	243,960,819.41
2012	697,668,828	688,188,652	1,385,857,480	1,385,857,480	686,547,729.02
2013	993,719,818	964,895,746	1,958,615,564	1,958,615,564	680,936,724.07
2014	740,414,699	1,100,865,571	1,841,280,270	1,841,280,270	390,296,359.42

Year	Allocations for academic staff offices (₦)	Allocations for lecture halls (₦)	Approved allocations for personnel expenditure (₦)	Released allocations for personnel expenditure (₦)	Alternative sources of funding (₦)
2011	13,783,603	25,200,600	50,000,000	50,000,000	2,394,586
2012	26,729,921.58	48,948,861	585,247,663	585,247,663	13,002,001
2013	56,884,575.23	98,655,434.50	815,879,092	815,879,092	27,941,100
2014	79,214,240.90	109,714,240.90	1,011,518,432	1,011,518,432	99,020,292

Year	No. of Teaching staff		Non teaching staff	Students enrolment	
	PhD holders	Others		No. of Applicants	No. Enrolled
2011			11		
2012	21	105	348	978	248
2013	27	116	884	1,246	433
2014	44	137	936	1,729	424

Note: 1ksh = ₦3.00

Source: Relevant documents on budgetary allocations from Federal university Lafia (2011-2014)

APPENDIX K

FEDERAL UNIVERSITY LOKOJA RELEVANT BUDGETARY

ALLOCATIONS DOCUMENTS

Year	Capital allocations (₦)	Recurrent allocations (₦)	Approved budget (₦)	Actual release budget (₦)	Tetfund Interventions(₦)
2011	100,000,000	100,000,000	200,000,000	200,000,000	219,342,248.30
2012	1,036,779,256.68	741,737,575.90	1,778,516,832.58	`1,778,516,832.58	698,715,656.70
2013	333,077,777	1,786,944,726.89	2,120,022,503.89	2,120,022,503.89	659,806,538.50
2014	166,538,888	1,478,809,110.37	1,660,705,460	1,645,347,998.37	381,712,087.30

Year	Allocations for academic staff offices (₦)	Allocations for lecture halls (₦)	Approved allocations for personnel expenditure (₦)	Expected allocations for personnel expenditure (₦)	Alternative sources of funding (₦)
2011	17,069,741.01	42,669,319.80	19,344,247.67	19,344,247.67	2,986,557
2012	23,879,250.12	54,964,927	78,992,545.51	78,992,545.51	9,414,699
2013	48,349,183.50	85,622,068.90	1,966,549,238	1,648,486,970	16,719,818.41
2014	83,513,809.50	115,278,706.25	1,447,603,171	1,347,663,889.99	81,016,654

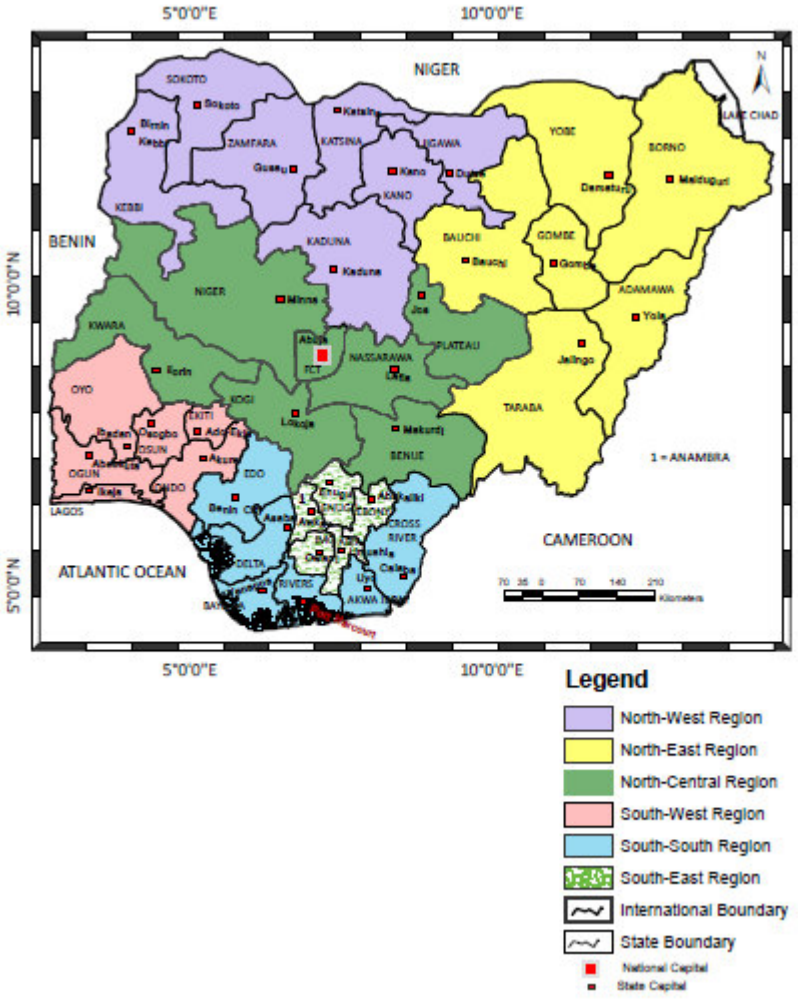
Year	No. of Teaching staff		Non teaching staff	Students enrolment	
	PhD holders	Others		No. of Applicants	No. Enrolled
2011			06		
2012	17	31	355	1,652	445
2013	43	119	799	1,567	440
2014	52	129	944	1,809	383

Note: 1ksh = ₦3.00

Source: Relevant documents on budgetary allocations from Federal university Lokoja (2011-2014)

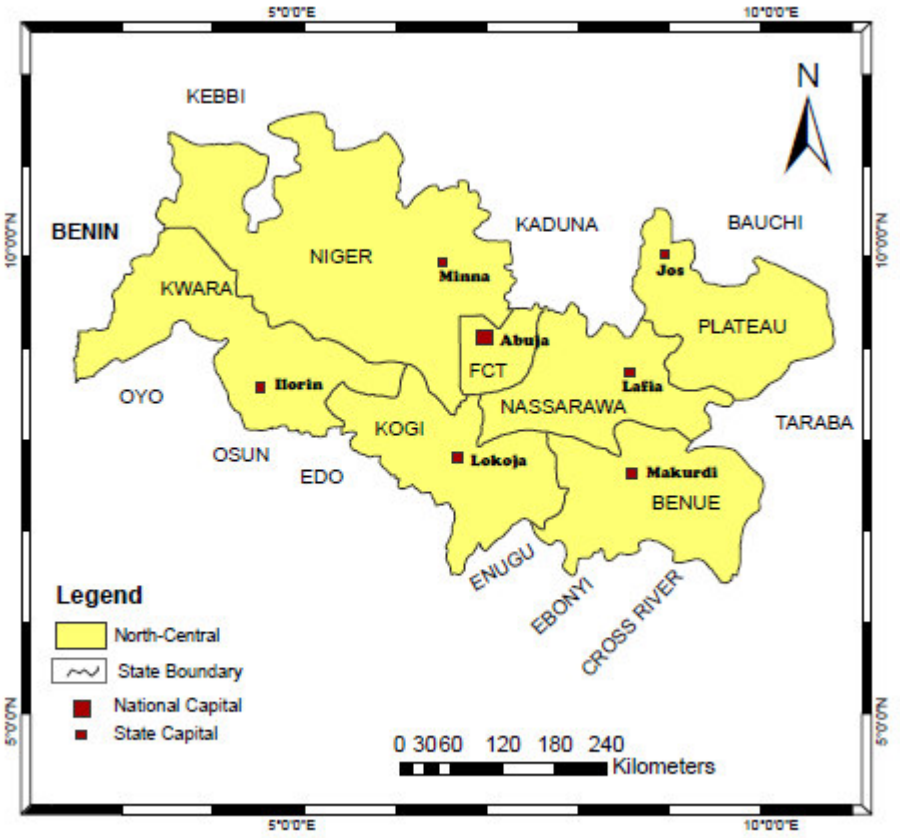
APPENDIX L

MAP OF NIGERIA: SHOWING SIX GEOPOLITICAL ZONES AND THIRTY SIX STATES



APPENDIX M

MAP OF NORTH- CENTRAL ZONE OF NIGERIA



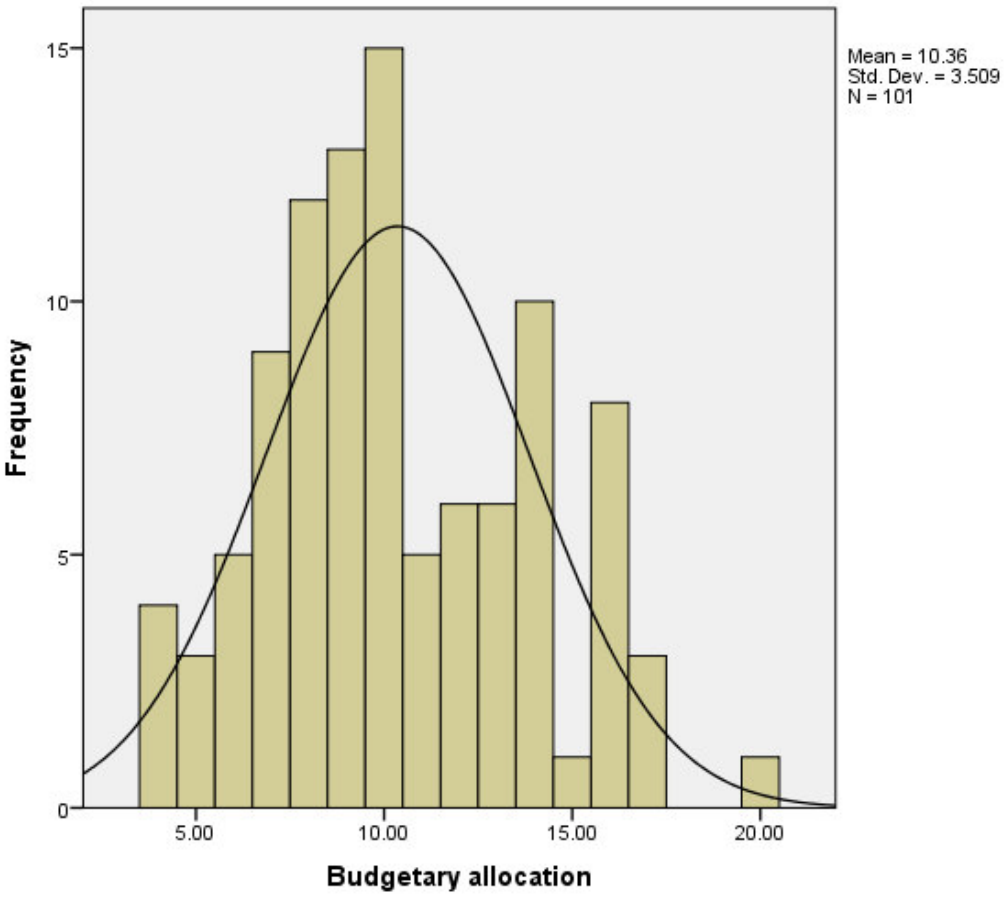
APPENDIX N

MAP OF FIVE STATES IN NORTH- CENTRAL ZONE OF NIGERIA WHERE THE SAMPLED UNIVERSITIES ARE LOCATED

APPENDIX O

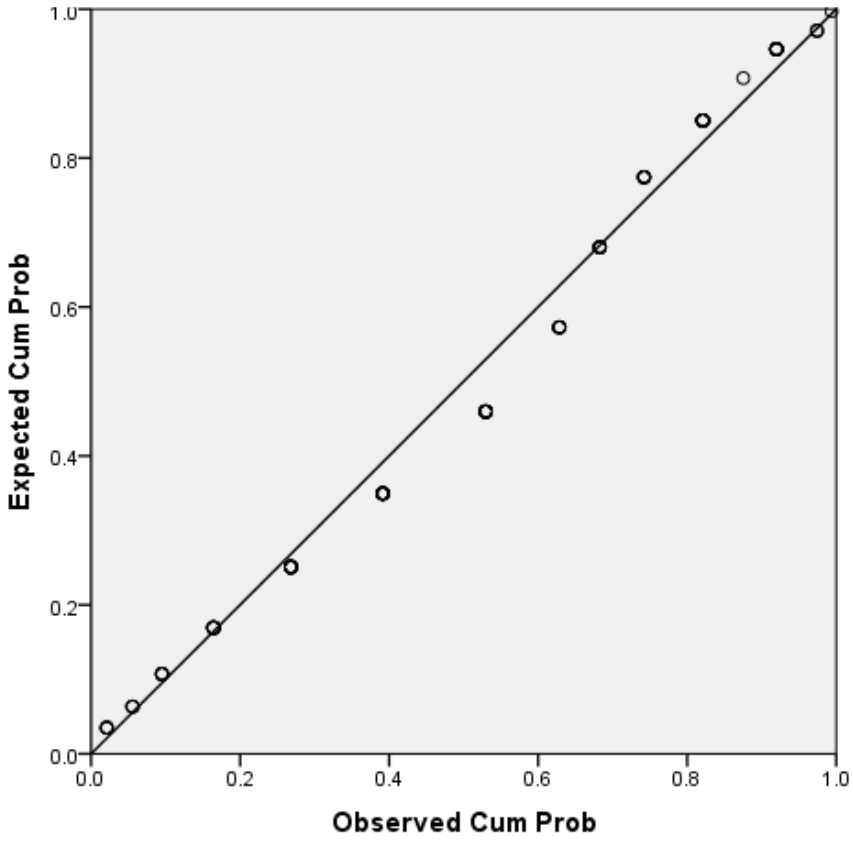
HISTOGRAM

INDEPENDENT VARIABLE: BUDGETARY ALLOCATIONS



APPENDIX P

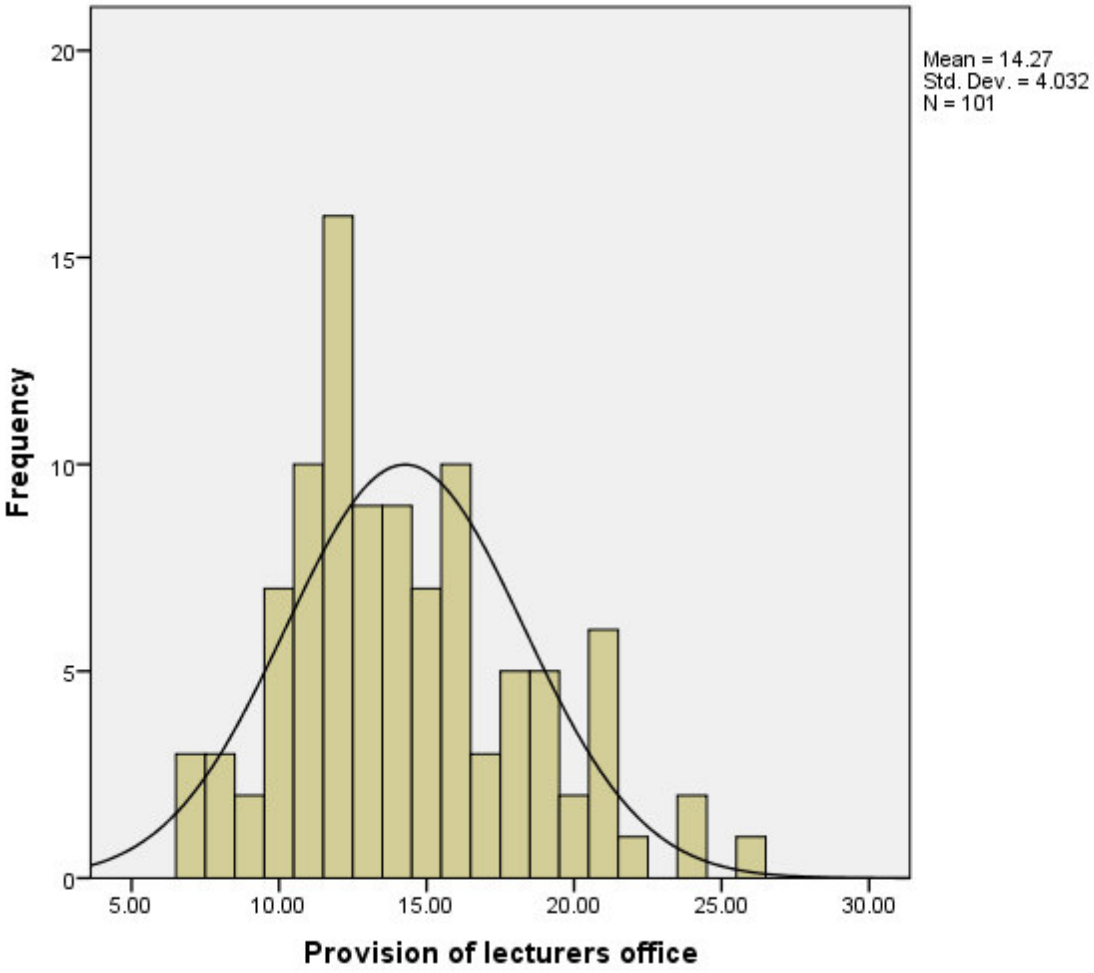
NORMAL P-P PLOT OF BUDGETARY ALLOCATION



APPENDIX Q

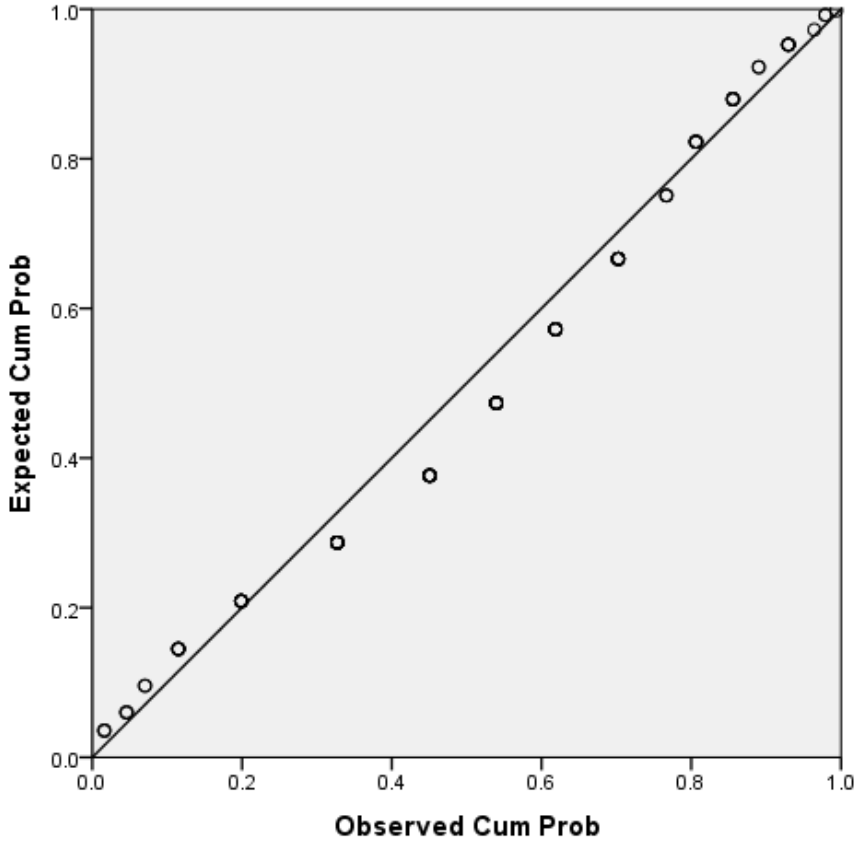
HISTOGRAM

DEPENDENT VARIABLE: PROVISION OF LECTURERS' OFFICES



APPENDIX R

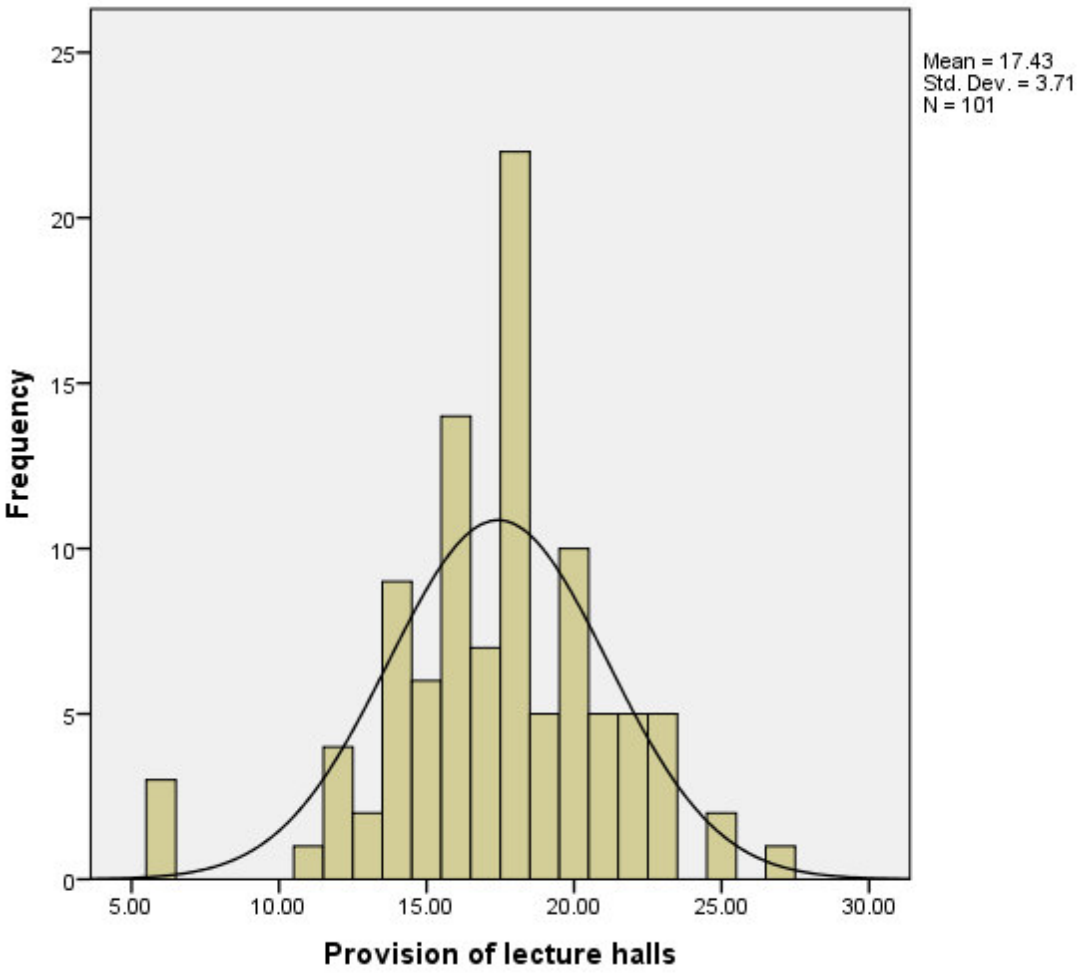
NORMAL P-P PLOT OF PROVISION OF LECTURERS OFFICES



APPENDIX S

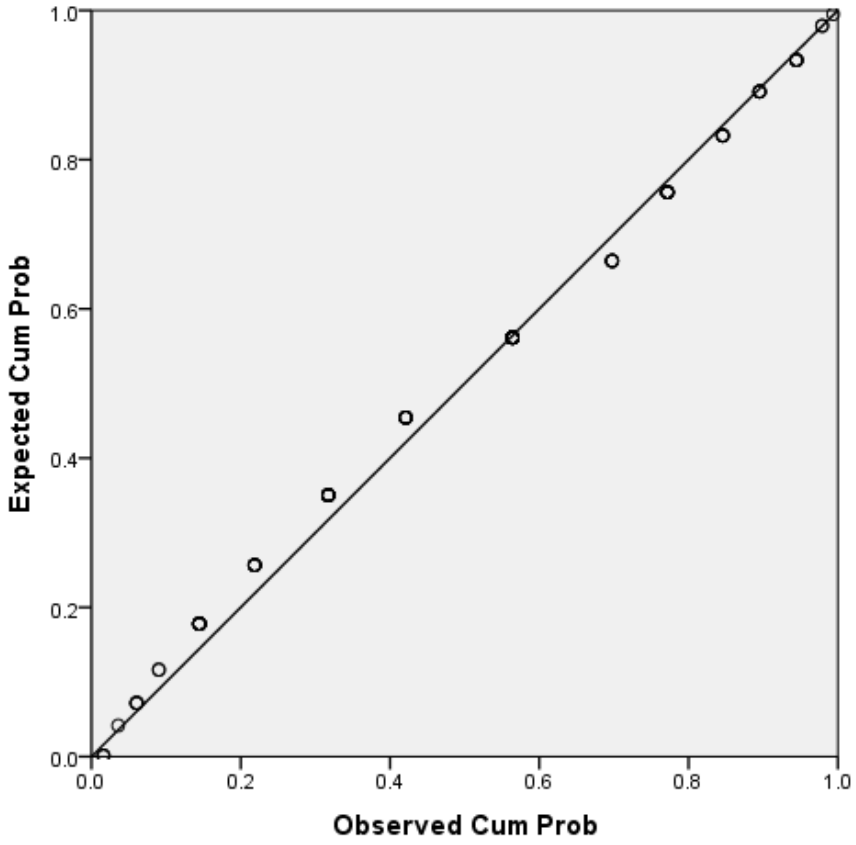
HISTOGRAM

DEPENDENT VARIABLE: PROVISION OF LECTURE HALLS



APPENDIX T

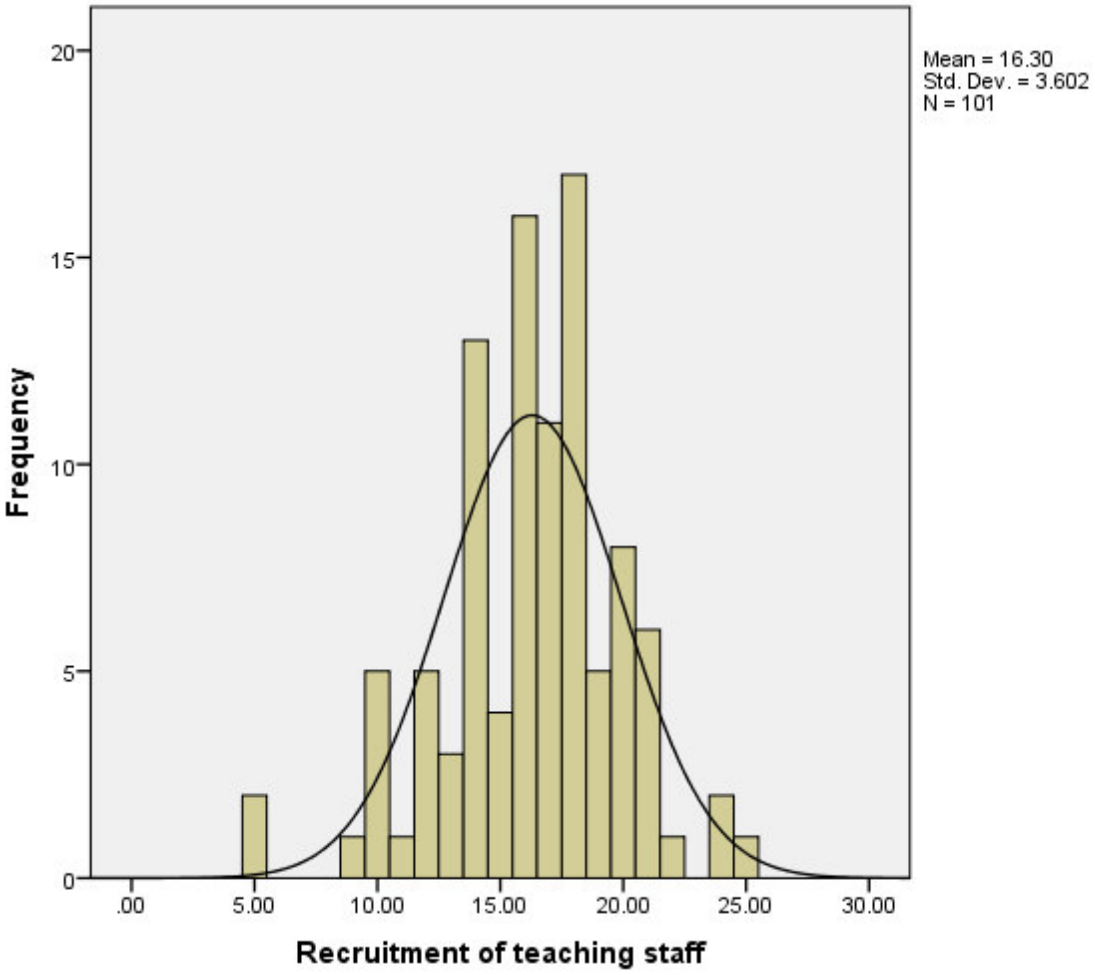
NORMAL P-P PLOT OF PROVISION OF LECTURE HALLS



APPENDIX U

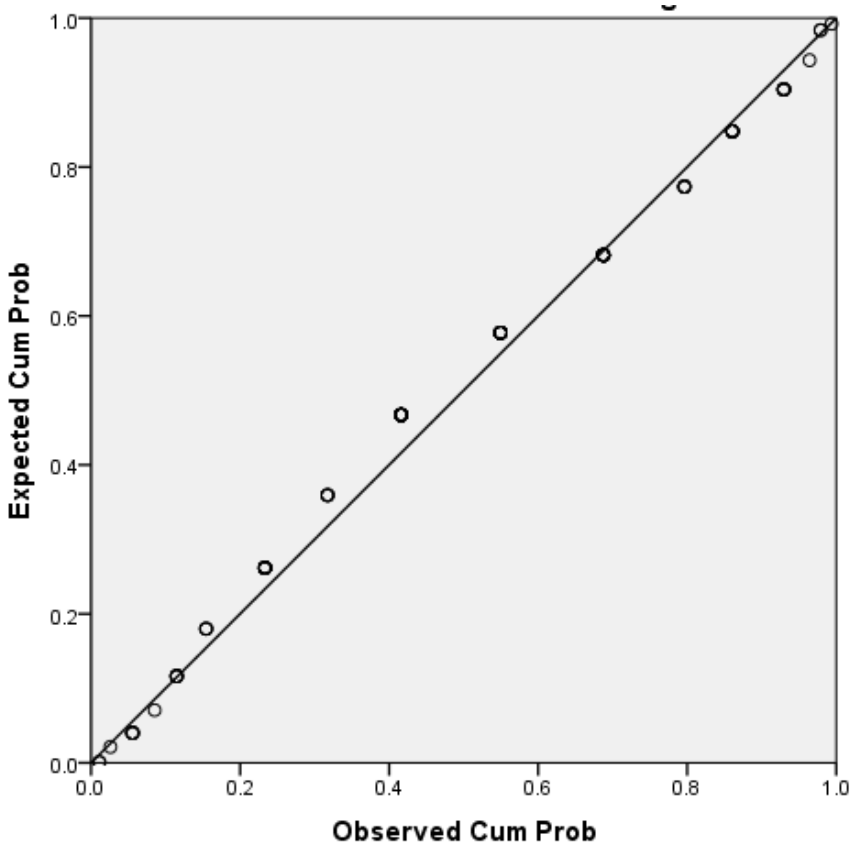
HISTOGRAM

DEPENDENT VARIABLE: RECRUITMENT OF TEACHING STAFF



APPENDIX V

NORMAL P-P PLOT OF RECRUITMENT OF TEACHING STAFF



APPENDIX W

Transformed coded raw data from Bursary Staff Questionnaire for regression

SN	v13	v14	v15	v16	v17	v18	Provision of lecturers office total (**Y**)	v9	v10	v11	v12	Federal Government Budgetary allocation total (**X**)	v17	v18	v19	v20	v21	v22	Provision of lecture halls total (**Y**)	v23	v24	v25	v26	v27	Recruitment of teaching staff total **(Y)**
1	1	1	1	1	2	2	8	2	2	2	2	8	2	2	3	2	3	4	16	4	4	4	4	4	20
2	1	2	1	2	1	5	12	1	2	3	1	7	1	5	4	2	2	4	18	5	5	5	5	4	24
3	1	1	2	3	1	3	11	1	1	1	2	5	1	3	3	1	2	3	13	4	3	4	4	3	18
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5	2	2	2	2	3	5	16	3	2	2	2	9	3	5	5	2	2	4	21	2	4	5	5	3	19
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18	2	2	2	2	1	4	13	2	2	1	2	7	1	4	4	2	2	4	17	4	4	4	4	2	18
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SN	v13	v14	v15	v16	v17	v18	Provision of lecturers office total (**Y**)	v9	v10	v11	v12	Federal Government Budgetary allocation total (**X**)	v17	v18	v19	v20	v21	v22	Provision of lecture halls total (**Y**)	v23	v24	v25	v26	v27	Recruitment of teaching staff total **(Y)**
22	4	2	1	1	1	4	13	4	4	2	4	14	1	4	4	1	1	5	16	5	5	5	5	1	21
23	2	2	2	4	2	4	16	2	2	2	4	10	2	4	2	2	2	4	16	2	4	4	4	2	16
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SN	v13	v14	v15	v16	v17	v18	Provision of lecturers office total (**Y**)	v9	v10	v11	v12	Federal Government Budgetary allocation total (**X**)	v17	v18	v19	v20	v21	v22	Provision of lecture halls total (**Y**)	v23	v24	v25	v26	v27	Recruitment of teaching staff total **(Y)**
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SN	v13	v14	v15	v16	v17	v18	Provision of lecturers office total (**Y**)	v9	v10	v11	v12	Federal Government Budgetary allocation total (**X**)	v17	v18	v19	v20	v21	v22	Provision of lecture halls total (**Y**)	v23	v24	v25	v26	v27	Recruitment of teaching staff total **(Y)**
71	2	2	2	4	4	4	18	2	2	2	4	10	4	4	1	3	2	2	16	4	3	4	4	2	17
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SN	v13	v14	v15	v16	v17	v18	Provision of lecturers office total (**Y**)	v9	v10	v11	v12	Federal Government Budgetary allocation total (**X**)	v17	v18	v19	v20	v21	v22	Provision of lecture halls total (**Y**)	v23	v24	v25	v26	v27	Recruitment of teaching staff total **(Y)**
96	2	1	1	2	1	4	11	1	3	2	4	10	1	4	2	2	1	2	12	4	5	5	5	1	20
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Note: X= Independent Variable

Y= Dependent Variables

APPENDIX X

CONSENT FORM

STUDY ON "AN ASSESSMENT OF ADEQUACY OF FEDERAL GOVERNMENT'S BUDGETARY ALLOCATIONS ON DEVELOPMENTAL PRIORITIES OF FEDERAL PUBLIC UNIVERSITIES IN NORTH-CENTRAL ZONE OF NIGERIA"

I agree to take part in the above doctoral study by Augustine Sambo Azi. I understand that agreeing to take part means that I am willing to:

- Be interviewed by the researcher for up to approximately 45 minutes.
- Allow the researcher to audio-record the interviews.

I give permission for the researcher to store securely, analyse and publish data as part of the study and also for this information to be used within future written reports, presentations and journal articles which make reference to this study on the understanding neither my real name nor the name of my institution will be used.

I understand that my participation is voluntary, that I can choose not to participate in part or all of the study, and that I can withdraw my participation at any stage of the study.

Consent can be withdrawn by contacting Augustine Sambo Azi, Doctoral student, University of Nairobi, KENYA, on aziaustin@yahoo.com and simply requesting withdrawal.

Name (please print).....

Signature.....

Date: .....

APPENDIX Y

LETTER REQUESTING AUTHORIZATION TO CONDUCT STUDY

UNIVERSITY OF NAIROBI
COLLEGE OF EDUCATION AND EXTERNAL STUDIES
SCHOOL OF EDUCATION
DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND PLANNING
Telegram: "CEES"
Telephone: 020-2459073
dept-edadmin@uonbi.ac.ke
P.O. BOX 30197
OR P.O. BOX 92
KIKUYU

Our Ref: *UON/CEES/SOE/A&P/1/3*

14th September, 2015

The Executive Secretary,
National Universities Commission,
Aja Nwachukwu House, No. 26,
Aguiyi Ironsi Street Maitama District,
P.M.B. 237, Garki G.P.O.,
Federal Capital Territory,
Abuja, Nigeria.
http://www.nuc.edu.ng/

SUBJECT: LETTER OF INTRODUCTION FOR MR. AUGUSTINE SAMBO AZI

I hereby introduce Augustine Sambo Azi from the University of Nairobi who is a PhD student embarking on his field work (data gathering) on the topic, "*An Assessment of Adequacy of Federal Government's Budgetary Allocations on Developmental Priorities of Federal Public Universities in Nigeria.*"

He will require a letter from your agency permitting him to carry out his research in the following universities; University of Jos, University of Abuja, University of Ilorin, Federal University of Agriculture Makurdi, Federal University of Technology Minna, Federal University Lafia and Federal University Lokoja.

The exercise is strictly academic and complete confidentiality of the information is assured.

Kindly offer him any assistance he might require from you.

Thank you.

Yours sincerely,

DR. GRACE NYAGAH
CHAIRMAN
DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND PLANNING

GN/nd

APPENDIX Z

AUTHORIZATION TO CONDUCT STUDY

NATIONAL UNIVERSITIES COMMISSION

PROFESSOR JULIUS A. OKOJIE
EXECUTIVE SECRETARY

TEL: (09) 4133185, 4133176-82
FAX: 07098212004

SECRETARIAT

AJA NWACHUKWU HOUSE
No. 26, AGUIYI-IRONSI STREET
MAITAMA DISTRICT
P.M.B. 237, GARKI G.P.O.,
ABUJA-NIGERIA

24 November, 2015

Mr. Augustine Sambo Azi
University of Nairobi
P. O. Box 30197
Nairobi

TO WHOM IT MAY CONCERN

Your application, vide letter Ref. No: UON/CEES/SOE/A&P/1/13 of 14 September, 2015 requesting for authority to carry out Research on ***"An Assessment of Adequacy of Federal Government's Budgetary Allocations on Developmental Priorities of Federal Public Universities in Nigeria"*** in some Nigerian Universities refers please.

I am pleased to inform you that you have been authorized to conduct research in the Seven Universities for a period ending 31 December, 2017.

Please accept the assurances of the Executive Secretary's best wishes.

Mrs. Constance N. Goddy-Nnadi, *MNIM*
Director, Executive Secretary's Office
For: Executive Secretary

CC: Vice-Chancellor, University of Jos, Plateau
Vice-Chancellor, University of Abuja, Gwagwalada,
Vice-Chancellor, University of Ilorin, Kwara State,
Vice-Chancellor, Federal University of Agriculture, Makurdi,
Vice-Chancellor, Federal University of Technology, Minna,
Vice-Chancellor, Federal University Lafia, Nasarawa State,
Vice-Chancellor, Federal University Lokoja, Kogi State