



Cost Control Measures and Funds Management in Tertiary Institutions in Nigeria: An Impact Analysis

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Authors' contributions

This work was carried out in collaboration between all authors. Author IEA designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors IEA and NIE managed the analyses of the study. Authors IEA and EOE managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Efficient funds management is critical to the success of tertiary institutions especially in low income countries such as Nigeria where funding of education is abysmal. While available studies investigated cost elasticity on private demand for education in Nigeria, educational policy reform and university funding requirement, the cost centres and the relative cost control measures in Nigeria universities has not been fully explored. Means of cost savings in universities were explored in order to strike a balance between lack, insufficiency and bad management of resources. A survey research was conducted to examine the cost control measures and their ability to enhance funds management in Nigerian universities drawn across the six geopolitical zones of the country estimated under administration, finance and operations. The analyses revealed the weaknesses in the cost centres and shows that a strong positive and significant relationship exist between funds

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management and university administration, operation and finances with R Square 0.7019. There is a need for streamlined decision making process, greater attention to research and entrenchment of internal control mechanisms in all levels of management. Universities should be more innovative, result driven, and also de-emphasise increase in school enrolment through skills acquisition and training to create alternative jobs and drive the economy.

Keywords: Cost control; funds management; tertiary institution; universities; education; Nigeria.

JEL classification: M1; G2; E62.

1. INTRODUCTION

There is paucity of cost effective measures and savings culture in most government establishments in Nigeria. Besides the limited resources, the management of tertiary institutions spend money with laxity, and pay little attention to priority needs of the institutions. Poor checks and balances in the institutions results to questionable accountability and erodes the zeal to account for the use of the institutions' resources. For the sake of this research, our emphasis is on Nigerian universities. Cost control typically refers to all means or mechanisms that prohibit or limit (excessive or unnecessary) expenditures or costs. It involves a deliberate and holistic effort aimed at reducing cost or achieving cost effectiveness. The consequences of poor management of resources among Nigerian universities abound, as manifested in almost every public institution in Nigeria through strike actions, riots, distortions in academic calendar of the institutions and sometimes destruction of properties and loss of lives in extreme cases. Staff and students are often the victims of this enigma. The role of institutions of higher learning in shaping the society and contributing to the global economy can never be over-emphasized. Table 1 shows that Nigerian education sectors has been serially underfunded. This is far below the United Nations Educational Scientific and Cultural Organisation (UNESCO) benchmark of 26% of annual budget for developing countries. The table explains the chronic degradation of Nigerian educational system through poor funding from 2010 to date. The budgetary allocations are not proportionate to the needs of the sector, this is responsible for the deplorable state of higher institutions in Nigeria [1].

Research proves that economic competitiveness is driven by institutions of higher learning and it is evidenced by the increasing knowledge and global economy [2,3]. The recent increase in the

number of universities in Nigeria under the then President Goodluck Jonathan was preceded by the growing need to meet the ever increasing demand for education by Nigerians occasioned by the increasing population and the rising need to meet economic competitiveness and academic emancipation. However, this obvious gap can never be met by increasing the number of universities but by strengthening the existing ones, opening up the economy such that higher degree education will no longer be a prerequisite for "paying jobs" in Nigeria but skills and competence. Researches have been conducted in many aspects of Nigerian tertiary education system, such as funding requirements of Nigerian universities [4], cost elasticity estimate of private demand for education and household income [2], Nigerian educational policies and reform [5] and so on, however, no research has been able to identify the cost centres, highlight the cost control measures in the higher institutions and link it with funds management to determine how effective the management of the scarce resources in the institution has been which is the major aim of the research. This research is divided into five sections which are the introduction, the literature review, the methodology, the analysis and conclusion.

1.1 Problem of the Study

Most universities in Nigeria do not domesticate the culture of cost control by identifying the loopholes in the management and administrative architecture of the institutions and by devising modern method of cost savings. They are particularly unaware of the impact on the institutions' growth and development including the daunting effect on the provisions of the basic duty of teaching and research in the institutions. Bowen [6] identified the 'extravagant spending culture of higher institutions', where each institution is allowed to raise as much money as it can and spend it all as it wishes without monitoring. Poor funds management has greatly

affected universities in Nigeria ranging from administration, finance and operations. The academic calendar of public institutions in Nigeria is marred by distortions, strike action, loss of accreditation of courses, such that students are only sure of when they are admitted into the institution but are unsure of when to graduate. Poor funding results to poor laboratories, poor teaching infrastructures and ultimately poor graduates since bad input will automatically yield bad output.

The authors wish to delineate the modern ways of cost control to be adopted in tertiary institutions in Nigeria to improve the educational system and impact more positively on the society, reduce management excessiveness and increase savings by exploring the cost control mechanisms and examining the impact on funds management of Nigerian universities. The research focuses on measures that reduces cost and espouses the need for proper funds management by the administrative structure of higher institutions in Nigeria.

1.2 Hypothesis

In response to the problem of underfunding of Nigerian universities, the institutions had adopted measures in order to absorb the cost under administration, finance and operation [7]. Underfunding of Nigerian universities coupled with bad management has led to a decay in education sector of Nigeria [8]. The bulk of the problems in Nigerian tertiary institutions lies under finance, administration and operation [3]. Based on this, the hypothesis is developed for the study to investigate the relationship between funds management and universities' administrative.

H1: Nigerian universities' administrative efficiency is negatively linked with funds management.

In this research, university administration is measured in terms of its ability to streamline decision making process, limit oversubscribed classes and outsource its non-core services in other to save cost and increase efficiency. Some university administration is haphazard, resulting to student unrest and staff agitation for improved welfare. Decision making processes in most institutions are full of bureaucratic bottlenecks.

Sources and application of funds among universities in Nigeria is a very controversial issue including the adoption of treasury single account (TSA) by the government. Internal control mechanism of public institutions in Nigeria is a grey area that is hardly looked at as well as the audit of the activities of the principal officers of universities.

Most universities in Nigeria operate in a way that researches are not justified and in some cases, non-researchable. Personnel training costs are huge, and cost savings can be made through alternative programs, community involvement and also through proper planning of the transport service routes of the universities to reduce delays and increase operational efficiency.

2. OVERVIEW OF TERTIARY INSTITUTIONS IN NIGERIA

According to the National Policy on Education [9], tertiary institutions include Universities, Polytechnics and Colleges of Education. They are established to meet the nations' need for socio-economic development through knowledge sharing, research and development [10]. Tertiary institutions in Nigeria are characterised with myriad of problems ranging from poor funding, unhealthy educational policies, poor administration and inept cost control systems. The funding of universities in Nigeria is either by the Federal Government through direct intervention from Tertiary Education Trust Fund (TETFUND) or through private ownership. Bako [11] called for the participation of the private sector in funding of Nigerian university education since it was obvious that Government can no longer shoulder the responsibilities of higher education in Nigeria alone through adequate funding. He also advocated privatisation of public institutions including academic union body themselves through the Academic Staff Union of Universities (ASUU). Furthermore, it was expected to encourage private sector participation, autonomy of institutions, strengthen management and enhance greater participation and competition sequel to deregulation and will result to quality assurance and eliminate government funding [12,13]. Judicious use of funds will solve the problem of deteriorating facilities on campuses, obsolete books in the library, poor maintenance, ill equipped laboratories, dilapidated offices and lecture rooms currently experienced in the education sector as a result of low budgetary education.

Table 1. Budgetary allocation to education from 2010-2017

Years	2010	2011	2012	2013	2014	2015	2016	2017
Budgetary Allocation to Education Sector (in Billion Naira)	249.09	306.30	400.15	426.53	493.00	492.34	367.73	448.01
Total Budget Figures (in Trillion Naira)	4.079	4.484	4.877	4.697	4.642	4.454	6.070	7.298
Percentage of Allocation with Total Budget	6.10%	6.83%	8.20%	9.08%	10.62%	11.05%	6.05%	6.13%
Percentage Increase/Decrease in Allocation	-	18.6%	23.4%	6.2%	13.5%	-0.13%	-	17.9%
							33.9%	

Source: Data from Ministry of Finance, Nigeria

Table 1 shows that Nigeria has not spent more than eleven percent of its annual budget on education against the recommendation of UNESCO. The trend is worse in 2016 with just 6.05% of its budgetary allocation to the education sector and 33.9% decline in allocation from the previous year. The allocation is not much different with 2017 with only 6.13% of the annual budget for education. In the year 2013, ASUU embarked on a six months strike to demand better funding for universities in Nigeria [7]. However, it is regrettable that even after that, the budgetary allocation to education remained abysmally low at 9% and 10.6% in the preceding year. The university system is still characterised by poor laboratories, poor and inadequate residential and lecture halls, poor security and health care for students and staff alike. To underscore the despicable situation, no Nigerian university is ranked among the top 10 universities in Africa or among the top 800 universities in the world university ranking [14]. Due to these degradations in the sector, Nigerian Government has been urged to strive to for a minimum of 30% of its annual budget on education to shore up for the inadequacies [15].

2.1 Social Concerns and Economic Implications

Higher education is seen by [16] as the “sale of knowledge to the highest bidder”. This is because of the high cost of acquiring education, misplaced priority, poor management of scarce resources in the form of finance and general apathy. Public good is most times seen as no man’s property in Nigeria. It is either that those entrusted with the management of Nigerian universities do not care or they lack the requisite knowledge and skills to curtail the excesses in the institutions’ spending. It is important to review ways to increase sources of funds and explore ways of savings, bearing in mind that these steps that reduce cost, increases savings and revenue

and vice versa. Educational policies are the machineries through which government respond to all issues relating to education ranging from admission, curriculum design, school management/board, class size, degrees to be awarded, fees, teaching methods and so on. Nigerian institutions are perennially bedevilled by poor funding, bad oversight function (poor monitoring activities/expenditure in higher institutions), and other unfavourable government policies such as ‘no fee policy’ (in principle) have a stink in the school administration. Universities in Nigeria once agitated for autonomy in their quest for increased funding in order to bridge the gap in the cost of running universities but met stiff resistance by the government who argued that the burden of such will be passed on the parents. Due to the dilapidated infrastructures coupled by poor funding, institutions lack the capacity and the resources to run and admit the number of applicants qualified for admission in Nigeria [3]. The carrying capacity in tertiary institutions in Nigeria is less than the ability of institutions to admit new students [17]. Education is seen to be an expensive social engagement that requires sufficient funding from government [3]. This entails adequate planning and strict cost control mechanism to entrench good governance, effectiveness and quality in the system. There is argument on the quality of graduates from public institutions in Nigerian ranging from quality of education to employability. Finance is needed to run institutions, many institutions are characterised with insensitivity to internally generated revenue and huge waste of resources, hence the need for cost reduction mechanism.

2.2 Cost Control and Funds Management in Nigerian Universities

The pressure to control cost among higher institutions in Nigeria is far below expectations, however, barriers to effective cost control

abound. The fees in public institutions apparently appear to be less than the private institutions except for few State universities in Nigeria. The cost of higher education in Nigeria has relatively gone high, due primarily to organisational culture and market forces in the higher institutions. Courses are generally oversubscribed with high pressure for a few majors often regarded as “more selling disciplines” perhaps “good courses”. Higher institutions usually have a target quality with regards to resources acquired rather than result achieved [18,19]. According to the National Universities Commission (NUC), no institution in Nigeria can survive without interventions from the government. With the deplorable state of the economy in Nigeria that is highly dependent on oil and the dwindling oil prices in international market, many government institutions are struggling to even pay workers’ salaries, a number of them owe staff salary for quite a number of months not to mention rebuilding the dilapidated academic infrastructures and other infrastructural investments. A general fallen standard in education in Nigeria calls for a rethink of strategies especially self-sustainable measures aimed at saving the institutions from total collapse. Poor infrastructures in higher education in Nigeria ranges from class room certain to poor laboratory and to poor research. Common knowledge shows that when the input is poor, the output is bound to be poor; a bad input can never yield good output.

2.2.1 Management of funds and allocations

Poor funding has almost become synonymous with the term ‘Nigerian Universities’ either because of inadequate funding or the limited resources are poorly managed. Besides this, these institutions have been criticized for misuse of funds and allocations. In line with this, we have identified some key areas of loopholes and measures that will result to cost savings and maximise revenue. It is a common knowledge that measures which reduce cost consequently increases savings and revenue either directly or indirectly. In addition, internal control techniques could be adopted in managing government grants and allocations through monthly or quarterly electronic filling of reimbursement report of allocations to ensure probity and judicious use of resources. A grant writer can also be hired to pursue grants for institutions via Government, Non-Governmental Organisations (NGOs), Partners, Alumni Associations and so on. Also, setting up of funds balance

management policy that ensures increment in funds balance at certain determinable minimum and having a regular fund balance projection for replenishment.

Another area of concern is asset and risk management. Cash flow forecast, establishment or diversification of internally generated revenue centres, investment selection based on cash flow projections, prioritizing investment based on rate of interest and subsequent return are veritable areas of cost savings and revenue sources. Implementing insurance schemes to cater for indemnities in the case of eventuality and employee claims including work related claims in the form of hazards and a consistent review of such claims and addressing high claim areas with attendant cost reduction measures.

A common impediment to cost control among universities in Nigeria is poor cost information and mal-administration. Poor attitude to accountability; most times in public service accountability is seen to mean ‘witch-hunt’. Record system is also very poor. There is lack of a general consensus on cost control mechanism in public institutions, management reports most often focuses on travels, salaries, training and research in a few cases ignoring indirect costs. Zemsky [20] averred that academic administration is pervaded by consensus management that results in inefficiencies in decision making process of the institutions’ administration. This is because public institutions are labour intensive and labour intensive organisations find it difficult to record productivity which in turn exposes institutions to a range of benefit costs.

2.3 Cost Control Strategies

Discussion on the methods of cost control have been grouped under administration, finance and operation.

2.4 Administration

2.4.1 Streamlined decision process

The decision process of most institutions in Nigeria takes the form of consensus management or centralised approach. In this case, decision making is installed, full of delay and meets unnecessary bureaucratic routes before attention is given to it. This style of decision making has resulted to inefficiencies and obscured responsibilities within decision making processes. The problems of consensus

management and centralised decision making could be solved via Responsibility Centre Management (RCM) approach. Use of RCM approach will reduce obscurity in decision process and devolve budgetary authority to individual academic unit constituting a responsibility centre. This gives rise to fiscal autonomy by the units and results to flexibility and responsibility. It also enhances accountability which sets in as each unit assumes control and independence. This approach will effectively eliminate the time it takes to follow up mails and letters from one office to the other, eliminates the man-hour lost in tracing letters from desk to desk when decision making is streamlined. Stocum [21] affirmed that RCM has been adopted and proven to be successful in Indiana University USA among other universities like, University of New Hampshire [22]. This approach has been proven to be highly profitable in the University of Michigan, University of Pennsylvania and University Southern California [23].

2.4.2 Outsource non-core services

Outsourcing functions that do not require core competence is a veritable means of cost reduction. Outsourcing is not common in institutions of higher learning in Nigeria. While some organisations outsource non-essential services some do not, thinking that it will cost more. Outsourcing is basically cost effective, and entrenches competence, efficiency and effectiveness. For instance, food services, laundry, bookstore operations, legal services and other non-core competence services relatively unrelated to the main business (teaching) of the institution can be outsourced. According to Guskin [18] dining and bookstore services are usually outsourced where institutions lacked the requisite competence required to run it. Aside rent, outsourcing services not only save money but helps institutions to make money, this is because contractors are usually more skilled in rendering services not seen as core to the main operation of the entity. A notable example of the efficacy of outsourcing can be seen in University of Georgia bookstore management [24].

2.4.3 Limit oversubscribed classes

Many institutions in Nigeria strive to run a wide variety of undergraduate programmes, with less emphasis on the quality of graduates resulting from poor teaching, supervision, infrastructural damage and institutional decay. Undergraduate courses, particularly the entry level courses are

taught in a very large section while higher degree courses including continuing education courses fall very low and in some cases record zero student enrolment. Institutions should concentrate more on the areas they have relative comparative advantage and the requisite skills/expertise/personnel requirement and perhaps the environmental or locational or regional advantage. For instance, a school of Agriculture or Engineering can remain as a school of Agriculture or Engineering and compete to be the best in that area. This situation sharply contrasts the European style of education where in most cases each institution has its own curricular foci with one or two specified areas of specialization. Oversubscribed courses/classes adds additional pressure on the lecturers which in itself is a huge cost to the institution in the form of excess work load, material cost per student, time and a number of other overhead costs. Affected students are denied sufficient or desired attention from the lecturers and the obvious resultant effect is poor quality in the long run. Moreover, forming a consortium among reachable institutions for perhaps undersubscribed courses will also result in cost savings as economies of scale is utilised, in this case, multiple institutions put on a class which are undersubscribed when a single institution undertakes same. This will inevitably save cost and lead to competitive advantages for the institution and government at large.

Over enrolment and perhaps under enrolment of programmes in Nigerian higher institution is a big problem and leads to huge cost directly or indirectly as outlined above. However, it is sometimes unavoidable but a consistent level of either of them raises cause for alarm among Nigerian higher institutions. It adds to the susceptibility of the common notion in Nigeria that some disciplines are more lucrative than others. Supportive actions by the institution will definitely result to synergy and cooperation in lieu of competing to host a number of different disciplines that will lead to inefficiency and poor quality. This may however, reduce the need for government funding and result to effective cost control mechanisms in institutions of higher learning in Nigeria.

2.5 Finance

2.5.1 Treasury single account (TSA)

TSA was introduced by the government of Nigeria to enable her achieve financial prudence

in public service. It is a situation where public account and finances are centrally managed. According to Isa [4], government expects to block financial leakages of resources of government and entrench transparent financial management system through TSA. Other factors that support TSA include increase in fiscal savings, more accurate accounting, and record keeping which improves financial reporting with a clear view of government financial obligations [4]. Higher institutions in Nigeria under the leadership of ASUU however, rebuffed this idea citing financial autonomy for higher institutions as reasons for opposing it. However, TSA will help to improve efficient use of resources and block most of the loopholes of fraud, provide means of monitoring financial misappropriation, poor accounting and finally improve the internal control processes and effective management of resources. This process will streamline sources and allocation of funds in the institutions and help to internalise probity and prudence in the Nigerian universities and help institutional reform agenda by entrenching accountability, alleviating revenue leakages and shoring up funds for other government exigencies.

2.5.2 Internal controls/audit

Proper checks and balances are key to entrenching managerial control and reducing management excessiveness. Experience shows that human beings are not naturally immune to corrupt/sharp practices but when there is an effective system that checks and punishes such, human behaviour will be tamed. Every responsibility beholds accountability and the process of audit provides an oversight function to responsibilities. Internal control provides measures that checks operational loopholes, prevent fraud in organisations thereby increasing savings through judicious use of resources and allocation, and enhancing efficient funds management.

2.6 Operational

2.6.1 Research justification

In University of Phoenix (US) for instance, researches are non-funded [25], hence making savings thereof. While this study does not recommend this approach, It could be stated that some researches funded and perhaps supervised in Nigeria universities are either un-researchable or lack a justified problem leading to the research. Teaching and research can be

said to be mutually exclusive and research of this nature that are inherently ill conceived should be discouraged or not allowed because the cost is innumerable for both the student, the supervisor and the institution.

2.6.2 Transport services

Huge cost could be saved up if a careful analysis of the transport routes are done in order to explore ways to maximise bus use, seat capacity, reduce idle time and avoid traffic. Other ways to save cost here includes implementing policies under school curriculum activities that will transfer the burden of transportation cost to the departments and students.

2.6.3 Community involvement

An area of saving here includes educational foundation via community participation including non-profit organisation that raise funds in form of grants and scholarships. Partnership with the community in business that improves education or its foundation that enable students and staff to get sales discount.

2.6.4 Human resource management

Online professional development classes or establishment of training colleges for non-teaching staff can be adopted to reduce travel, training and teaching cost. More so, incentives that encourage employee attendance will lead to a reduction in the cost of finding substitute or alternatives. Adoption of employment and retention policies through motivational packages and other related incentives to minimise labour turnover and improve working conditions will ultimately reduce cost and increase savings thereby stabilizing our university system.

3. RESEARCH METHODS

This study utilised survey research method based on 21 questions on Likert scale. The population of the study comprises (bursary, finance, account, audit, budgeting and supplies unit) of tertiary institutions' staff in Nigeria. 21 copies of the questionnaire was distributed to each of the six geo-political zones that make up Nigeria while 7 copies of each was given to one Private University, one State University and one Federal University in each of the six geopolitical regions to make up the sample. A total of 126 copies of the questionnaire was distributed to eighteen universities in Nigeria (three universities

in each of the six geo-political regions of the country). Respondents were requested to respond to questions based on a five point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Correlation matrix was conducted using SPSS to ascertain the level of significance cum relationship between funds management among Nigerian Universities and the administrative, financial and operational activities of the institutions. Descriptive statistics was conducted to analyse the percentage of the responses including their work units and finally a regression analysis was carried out to test the hypotheses.

In order to carry out this research, the below regression model was examined by running the data on SPSS

$$FM = C + \beta_1 ADMIN + \beta_2 FIN + \beta_3 OPR + \epsilon$$

Where: FM = Funds Management, ADMIN = Administration, FIN = Finance, OPR = Operation, C = Constant, β_1 = Coefficient of administration, β_2 = Coefficient of finance, β_3 = Coefficient of operation and ϵ = error term of the model. FM represents the dependent variable while the sets of independent variables are; ADMIN, FIN and OPR.

4. RESULTS AND ANALYSIS

4.1 Descriptive Analysis

The response rate was 76.19% based on 96 questionnaire returned out of 126 sent. Out of the 96 respondents, 12.5% were Account Staff, 28.1% were Finance Staff while Bursary and Audit staff were 55.2% and 4.2% respectively (Table 2). Moreover, 35.4% of the returned questionnaire came from Federal University, while 31.3% and 33.3% were from State Universities and Private Universities respectively (Table 3).

4.2 Correlation Analysis

Correlation analysis was conducted for analysing the relationship between the dependent variable and the explanatory variables in the data. Table 4 explains the result of the correlation that exist with measures of funds management in Nigerian universities explained under administration, finance and operation.

The correlation analysis presented in the Table 4 above shows that the dependent variable FM has

a strong and positive correlation with admin with a correlation coefficient of 0.702. This result shows a significant relationship between the variables. This is significant at 1% level of significance. The correlation coefficient between FM and finance is 0.768. This shows a strong and positive correlation between funds management and finance, however, this is also significant at all levels of significance. The correlation coefficient of 0.707 between FM and operation of universities in Nigeria shows a strong positive relationship. The findings show that improved funds management will enhance the administration, finance and operation of Nigerian universities in general. The correlation coefficient between finance and admin is 0.789, operation and admin is 0.746 and finally between operation and finance is 0.675. These shows strong and positive correlation and suggests that improvement in any of the explanatory variables has a positive impact over efficient funds management. Overall, all the correlation coefficients are >0.80 which shows that there is no problem of multicollinearity between the variables.

4.3 Regression Analysis

The regression model proposed for the study is based on three explanatory variables that are used to estimate funds management in Nigerian Universities. The sets of the explanatory variables include administration, finance and operation. Multiple regression analysis was performed for examining funds management. The finding of model best fit is presented in the tables.

Table 5 shows the result of regression analysis. The result shows that the value of R Square for the model with dependent variable FM is 0.706. This means that 70.6% of the variations in the dependent variable is explained by the model. The remaining 29.4% unexplained variation accounts for the error term. It is believed that the value of R Square closer to 1 shows that the model is best fit. The value of R Square 0.706 which is near to 1, shows that the model is good for the study and estimates obtained for the variables are reliable. Furthermore, the findings of ANOVA presented in Table 6 show that the value of F-Statistics is 73.572. This value is significant at all levels of significance. This significance of F-Statistics further confirms that the model with FM as dependent variable is reliable and stable.

Table 2. You are a

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Account Staff	12	12.5	12.5	12.5
	Finance Staff	27	28.1	28.1	40.6
	Bursary Staff	53	55.2	55.2	95.8
	Auditor	4	4.2	4.2	100.0
	Total	96	100.0	100.0	

Source: Authors' Computation, 2017

Table 3. Your institution is

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Federal University	34	35.4	35.4	35.4
	State University	30	31.3	31.3	66.7
	Private University	32	33.3	33.3	100.0
	Total	96	100.0	100.0	

Source: Authors' Computation, 2017

Table 4. Correlations matrix

		FM	ADMIN	FIN	OPR
Pearson Correlation	FM	1.000	.702	.768	.707
	ADMIN	.702	1.000	.789	.746
	FIN	.768	.789	1.000	.675
	OPR	.707	.746	.675	1.000
Sig. (1-tailed)	FM	.	.000	.000	.000
	ADMIN	.000	.	.000	.000
	FIN	.000	.000	.	.000
	OPR	.000	.000	.000	.
N	FM	96	96	96	96
	ADMIN	96	96	96	96
	FIN	96	96	96	96
	OPR	96	96	96	96

Source: Authors

Table 5. Model summary^b

Model	R	R square	Adjusted R square	Std. Error of the estimate	Change statistics		Durbin-Watson
					R square change	F change	
1	.840 ^a	.706	.696	.42623	.706	73.572	1.873

a. Predictors: (Constant), OPR, FIN, ADMIN

b. Dependent Variable: FM

Source: Authors' Computation, 2017

Table 6. ANOVA^b

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	40.098	3	13.366	73.572	.000 ^a
	Residual	16.714	92	.182		
	Total	56.811	95			

a. Predictors: (Constant), OPR, FIN, ADMIN

b. Dependent Variable: FM

Source: Authors' Computation, 2017

Table 7. Coefficients^a

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	.093	.163		.569	.571
	ADMIN	.446	.112	.415	3.982	.000
	FIN	.338	.101	.316	3.357	.001
	OPR	.187	.088	.184	2.119	.037

a. Dependent Variable: FM

Source: Authors' Computation, 2017

4.3.1 Coefficient statistics

This explains the value of the estimates obtained from the regression analysis as presented below in Table 7.

The above table shows that the value of administration coefficient is 0.446. This value is significant at all levels of significance and shows that university administration has a positive impact on funds management of Nigerian universities. This suggests that a unit increase in administrative ability will result to 0.446 unit increase in funds management of Nigerian universities. This finding leads to the rejection of hypothesis H1 proposed for the study which states that *Nigerian universities' administrative efficiency is linked negatively with funds management*. The value of the coefficient for finance is 0.338. The value is significant at 1% level of significance and shows that finance of Nigerian universities has a positive effect to funds management. Improved financing will enhance funds management and a unit increase in finance will result to 0.338 unit increase in funds management. This result further confirms the rejection of the hypothesis. The last variable is operation and it has a positive coefficient of 0.187. This is significant at 5% level of significant and shows that university operation has a positive effect on funds management and unit improvement in the Nigeria university operation will lead to 0.187 unit improvement in funds management. This also leads to the rejection of the hypothesis.

5. CONCLUSION AND RECOMMENDATIONS

To examine funds management in Nigerian universities, a survey research was conducted with the help of a questionnaire drawn across universities in the six geopolitical regions of the country. Funds management was measured under administration, finance and operation. To

empirically test the impact of administration, finance and operation on funds management of Nigerian universities, a descriptive analysis, correlation analysis and regression analysis was performed.

The findings obtained through descriptive analysis suggests that 76.19% of the questionnaire distributed across the Federal, State and Private universities selected at random in the six geopolitical zones in Nigeria were successfully completed and returned. This is reasonably high and a conclusion can be drawn from it. In addition, a total of 83.3% of the respondent represented either bursary staff or finance staff and these group of people further makes the findings of this research more reliable since these group of people are believed to have the basic knowledge and experience of funds management in their respective universities and will respond to questions more appropriately.

The correlation matrix shows that there is a strong positive and significant relationship between the variables chosen for this study. This gives credence to the outcome of the research in its ability to explain funds management in Nigerian universities.

The regression analysis leads to the rejection of the hypothesis raised for this study, as such, there is no strong evidence to believe the hypothesis. Thus, we conclude that administration, finance and operation has a positive relationship with funds management and any improvement in each will ultimately enhance funds management in Nigerian universities.

A reorientation of attitude to work and an overhaul of the status quo is necessary in exploring gainful means of cost savings in universities in order to strike a balance between lack, insufficiency and bad management of resources. Though resources are limited supply, it must be allocated to priority areas. While

outsourcing non-core services, universities are advised to take comparative advantages of their different competence such that a university with greater skills in say medicine will specialise in it while the one with competence in agriculture (for instance) will specialise in it and skills can be transferred. Oversubscribed classes should be limited especially among the federal universities, and greater attention given to research. Proper mechanism for checks and balances should be put in place to curtail the excesses of the management. Universities should encourage innovation through manpower training and skills acquisition, this will ultimately reduce school enrolment, and create jobs. In addition, holding the existing institutions accountable through proper checks and balances and by creating the enabling environment for the entrenchment of cost control measures in higher institutions, funds would be better managed.

6. LIMITATIONS OF THE STUDY

While the survey instrument captured the account, finance, audit and bursary staff of universities, the principal university management body such as the Vice-Chancellors (VC), their deputies and the registrars were not captured. Also, the National Universities Commission (NUC) and the Tertiary Education Trust Fund (TETFUND) are bodies in Nigeria through which the federal government interface with institutions higher learning in Nigeria. These bodies were not captured in this research. Future research may look into unit cost analysis, product and service costs using historical data.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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QUESTIONNAIRE

This questionnaire is to solicit your response regarding the topic “**COST CONTROL MEASURES AND FUND MANAGEMENT IN TERTIARY INSTITUTIONS IN NIGERIA**”. The information supplied will be kept strictly confidential and will be used for the purpose of this research only. Kindly assist us with the questions.

Thank you.

SECTION A

1. You are a:

Account Staff: FinanceStaff: Bursary Staff: Auditor: Other Units:

2. Highest educational qualification:

HND/BSc MBA MSc PhD Others (Please specify)

3. You are a member of :

ICAN ANAN NIMNone Others (Please Specify)

4. Your institution is: Federal University State University Private University

SECTION B

Instruction: Please answer the questions in the table by ticking the spaces provided in the boxes. Strongly Agree (**SA**), Agree (**A**), Undecided (**U**), Disagree (**D**) and Strongly Disagree (**SD**)

In your opinion about this university (where you work);

S/N	Statements	SA	A	U	D	SD
1	The accounting system contains separate accounts or sub-account for specific cost allocation or unit					
2	There is effective co-ordination between all levels of management					
3	There is a streamlined decision making process in this university					
4	There is a an organisational chart that clearly defines lines of authority and responsibility					
5	Non-core services are outsourced to increase efficiency and effectiveness					
6	Admission process is effectively controlled to avoid oversubscribed classes					
7	The account unit are periodically audited					
8	There is a specific unit/committee responsible for cost control and effective utilisation of resources					
9	There is reconciliation of proofs of collection with amounts banked					
10	Purchases are centralised and made only from approved suppliers					
11	All remittances to the government are done through the Treasury Single Account (TSA)					
12	Students' research is very useful in guiding our operations, budget and planning					
13	There are development classes & training to reduce travels and teaching cost and boost human resource capacity					
14	School Bus routes are streamlined to save time and maximise usage					
15	There is a community involvement aimed at raising funds/providing scholarship or support via business dealings for staff and or students.					

S/N	Statements	SA	A	U	D	SD
16	There is a community involvement aimed at improving relationship and peace within the school environment					
17	There is accurate record of inflow and outflow of funds in the finance/account/bursary department					
18	There is a good cost control system in place to reduce wastage of resources					
19	The cost control system is effective					
20	Funds are adequately managed and utilised to priority needs					
21	Allocations and subvention from the federal/State government or private body are satisfactorily utilised					
22	Management is highly concerned about efficient cost control and fund management					

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