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FUND ACCOUNTING AND INFRASTRUCTURAL DEVELOPMENT IN NIGERIA

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ABSTRACT

This research paper examined the relationship between Fund Accounting and Infrastructural Development in Nigeria for a period of 10 years from (2008-2017). Secondary data obtained from the Central Bank of Nigeria Statistical Bulletin of each year, the Recurrent and Capital Budget of the selected time series, and the Appropriation Act of each year were used for analysis, to test the hypotheses formulated. Ordinary least square multiple linear regression was the statistical tool used for the analysis with the aid of E-view 10. The proxy for the independent variable; Fund Accounting; Capital Development Fund and dependent variable Infrastructural Development; Education Sector was used to formulate the hypotheses tested. In carrying out the analysis, the stationary test showed that the variables were stationary at first difference. The co-Integration test proved the presence of a long run relationship between the variables. The granger causality test proved no causality between the variables. The recommendation made after the results posits that theFund accounting principle should be adhered to, for an effective and efficient accountability system, infrastructural development, economic growth and all round development in Nigeria.

KEYWORDS

Fund Accounting, Infrastructural Development, Capital Development Fund.

Introduction

In the recent past, the deplorable state of infrastructures and poor state of repairs andmaintenance are evident in our electricity, roads, railways, schools, health sectors and water facilities. Poor infrastructural development has constituted a serious hindrance to sustainable growth and development and possibly worsens poverty level in Nigeria. Nigeria is experiencing a stunted growth due to the sluggish infrastructural development. Resources provided for the provision of infrastructural services are largely inadequate and sub optimal. According to Bello (2001), huge amounts of Naira is lost through one financial malpractice or the other in Nigeria, which is to say the least, drains of the nation's resources through fraudulent means with far-reaching and attendant consequences on the development or even socio-economic or political programs of the nation. Billions of Naira meant for capital developments is lost in the public sector every year through fraudulent means. Accountability has therefore become imperative because the keys to creating wealth and maintaining a free society have been recognized to lie primarily in accountability and transparency, (Acho&Abuh, 2016, cited in Corruption and Accountability in the Nigerian Public Sector, p.3). The accountability of funds allocated for infrastructural developmentpurposesis of special interest here. The fund accounting system is a concept which is used to describe how government resources are accounted for from one major fund source. The Audit Guide defines fund accounting as the procedure by which resources for various purposes are classified for accounting and reporting purposes in accordance with regulations, restrictions, or limitations imposed by sources outside the institution, or in accordance with directions issued by the governing board. Fund which is an independent accounting entity is the hallmark of modern democratic governance. Hence this study examined the relationship between Fund Accounting and infrastructural development in Nigeria

Theoretical Framework

Neoclassical Counter-Revolution Theory

In the 1980s, neoclassical counter-revolution economists used three approaches, namely the free market approach, the new political economy approach and the market-friendly approach, to counter the international dependence model. In contrast with the international dependence model, these approaches mainly argued that, underdevelopment is not the result of the predatory activities of the developed countries and the international agencies but was rather caused by the domestic issues arising from heavy state intervention such as poor resource allocation, government induced price distortions and corruption (Meier, 2000). As a response to public sector inefficiency, economists of the counter-revolution thinking, for example Bauer (1984), Lal (1983), Johnson (1971), & Little (1982), focused on promoting free market eliminating government-imposed distortions associated with protectionism, subsidies and public ownership.

Conceptual Framework

Capital Development Fund

Also known as Development Fund is a fund set up primarily to accommodate expensesthe second Schedule of Finance, Control and Management Act of 1958 stipulates thaton capital development projects or infrastructural development in Nigeria. Section 1 of the shall be established the Development Fund to be maintained by the Accountant General of the Federation and which shall be used to finance all capital developmentprojects to be executed by the government. Sources of revenue for the developmentfund include;

1. Contribution from the Consolidated Revenue Fund; 0.2 of transfer of fundallocated to the Consolidated Revenue Fund.
2. The product of external loans raised by the Federal Government purposely forspecial capital expenditure.
3. External grants in form of money or direct services e.g. IMF, World Bank, e.tc.
4. Internal loans — This may be raised through sale of Stocks, sale of TreasuryCertificate or Treasury Bills.
5. Any other source as may be prescribed by law.

However, the charges against development fund include;

1. Summary of Capital Expenditures: - e.g. Construction of federal roads, constructionof bridges, provision of pipe-borne water to the populace, maintenance of the powersector e.tc.

2. General Administration: - Provision and maintenance of Army Barracks, PoliceStations, Motor Vehicles, Federal Medical Centres, Tertiary Institutions of Learning e.tc.
3. External Financial Obligations: - Provision of financial assistance to neighboringcountries in dire need. This may be in form of grants, aids or loans.
4. Loans to State: - Money lent to State Governments by the Federal Government forthe execution of capital projects for development purposes (cited in: ICAN Study Pack2015).

Education Sector

This symbolizes the total amount of money/fund allocated to the Education Sector forinfrastructural development within one year, the data for the time series was gottenfrom the CBN Statistical Bulletin Database; The Federal Government RecurrentExpenditure Account and The Nigerian Budget for each year.

Empirical Framework

Babatunde (2012) attempted to investigate the impact of infrastructure on economicgrowth in Nigeria using a multivariate model of simultaneous equation during 1970 to2010. The study utilized three-stage least squares technique to capture thetransmission channels through which infrastructure impacted on growth in Nigeria. Thestudy concluded that, infrastructure investment directly impacted on the overall output
and indirectly stimulates growth of selected sectors.

Identification of Gap

This work "Fund Accounting and Infrastructural Development in Nigeria", using independent variable; Capital Development Fund and dependent variable; Education Sector examined the relationship between Fund Accounting and Infrastructural Development in Nigeria and emphasize on the importance of the Fund Accounting Principle and Advocating for the strict adherence to it for an effective financial accountability system, infrastructural development and all around economic growth. This research work seeks to fill a gap in study from the sectorial point of view of the Education Sector, looking at the holistic point of view of the sector because infrastructural development is beyond structural development but also economic, financial, mental, human and physical development as a whole. Other studies relating to this research, examined this topic only on different single variable; the construction of roads, hospital and schools etc. Others examined infrastructural development arid economic growth like in the case of, Nedozi et.al (2014) who analyzed infrastructure development and economic growth in Nigeria. This is the gap this study seeks to fill.

Methodology

Research Design

The survey design was used. This method involves the direct inspection of past records
for the purpose of extracting useful information.

Population for the Study

The population of the study was the sector under investigation; Education Sector.

Sampling/Sample Determination

The sample size was l0 years from (2008-2017) data selected from the Central Bank of Nigeria. Statistical Bulletin of each year and the Recurrent and Capital Budget of the selected time series, Purposive sampling technique or judgmental sampling technique was used.

Data Collection Method

Data for the study was collected from secondary sources. Secondary data which was the. major source was collected from the Central Bank of Nigeria Statistical Bulletin of each year and the Recurrent and Capital Budget of the selected time series. The data collected Was for the period of l0 years (2008-2017). It was for both the independent and dependent variable.

Data Analysis Technique

This work used the ordinary least square, multiple regression analysis on E-view 10 to determine the relationship between the independent variable and the dependent variable. With the aid of; The Unit Root Test, Co-integration Test, Granger Causality Test, Descriptive Analysis

Model Specification

Model specification showing the functional relationship is expressed as follows:

$ES = \int (CDF)$.....1

Expanding the functional relationship in mathematical terms:

$ES = \beta_o + \beta_1 CDF$ 1

Adding error terms to the econometric form:

$ES = \beta_o + \beta_1 CDF + \mu$.....1

Where: CDF = Capital Development Fund

ES = Education Sector

$\beta_1 - \beta_3$, = Coefficient of explanatory variables

β_o, = Constant or Intercept

μ = Error Term

Results and Discussion

Research Question

1. What is the relationship between Capital Development Fund and the Education Sector in Nigeria?

a) Descriptive Statistics

The result of the descriptive statistics is presented in the table below.

Table 1 Summary of the Descriptive Statistics

	CDF	ES
Mean	674.6350	291.1530
Median	660.3950	338.8400
Maximum	904.8300	390.4200
Minimum	432.0100	137.1200
Std. Dev.	158.7093	94.26932
Skewness	0.155242	0.787656
Kurtosis	1.878796	1.840791
Jarque-Bera	0.563958	1.593907
Probability	0.754289	0.450700
Sum	6746.350	2911.530
Sum Sq. Dev.	226697.7	79980.35
Observations	10	10

Source: Extracts from E-view print out Version 10 and author's compilation

The result in table 1 provided some insight into the nature of both the independent and dependent variables used. Capital Development Fund and the Education recorded an average value of 674.6350 and 291.1530 respectively for the 10 years under review. All the variables recorded a standard deviation which is lower than their respective mean and this shows that these variables recorded a low growth within the period under study. This is also seen in the wide margins between their respective maximum and minimum values. Jarque-Bera statistics which measures whether the series is normally distributed shows that the variables were not statistically significant at 5%.

b) Unit Root Test

Table 2 Summary of the Unit Root Test, Augmented Dickey-Fuller (ADF) results at Difference.

Source: Extracts from E-view print out Version 10 and author's compilation

	ADF STATISTICS	CKINNON 1% critical Value	5% critical Value	10% critical Value	Order of INT	Prob
VARIABLES						
CDF	-6.246460	-4.803492	-3.403313	-2.841819	1(1)	0.0080
ES	-5.455607	-4.582648	-3.320969	-2.801384	1(1)	0.0176

The ADF results in table 2 above shows that CDF and ES showed that the test in absolute terms were less than the test critical values in absolute terms at conventional levels of significance (1%, 5% and l0%). To this effect the null hypothesis; there is a unit root, implying that the variables are not stationary was rejected and the alternate hypothesis; there is no unit root, implying that the variables are stationary was accepted, thus concludes that the variables are stationary integrated of order one. This research analysis applied 5% level of significance and judging from the P-values computed they are all below 0.05 and the null hypothesis is also rejected. The results of the variables being stationary at first difference makesit inappropriate for the application of the ordinary least square method of regression, therefore the test to determine the long run relationship can be achieved with of the co-integration test.

c) Co-integration Test

Table 3 Summary of the Result of Johansen Multivariate Co-integration Test

Unrestricted Co-integration Rank Test (Trace)

Date: 8/03/19 Time: 22:53

Sample (adjusted): 2004 2017
Included observations: 14 after adjustments
Trend assumption: Linear deterministic trend
Series: CDF ES
Lags interval (in first differences): 1 to 1

Unrestricted Co-integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigen value	Trace Statistic	0.05 Critical Value	Prob.**	Decision
None *	0.909378	23.71570	15.49471	0.0023	Reject
At most 1	0.659800	12.97607	15.49471	0.1157	Accept

Trace test indicates 2 co-integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: Extracts from E-view print out Version 10 and author's compilation

Table 3 Summary of the Result of Johansen Multivariate Co-integration Test

Unrestricted Co-integration Rank Test (Maximum Eigen)

Hypothesized No. of CE(s)	Eigen value	Max-Eigen Statistic	0.05 Critical Value	Prob.**	Decision
None *	0.909378	19.20843	14.26460	0.0076	Reject
At most 1	0.659800	8.625778	14.26460	0.3186	Accept

Max-Eigen value test indicates 2 co-integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: Extracts from E-view print out Version 10 and author's compilation

It can be seen from Table 3 that both the trace statistic and the maximum- Eigen value statistic indicate the presence of co-integration among the variables. This confirms theexistence of a stable long-run relationship amongst the variables and assures that thevariables will not produce a spurious regression.

d) Granger Causality Tests

Summary of Pair Wise Granger Causality tests conducted.

The result of the test proves that there is no causal relationship between the variableThis is because the probability of all the variables are above 0.05, this makes the null hypotheses acceptable.

e) Regression Test

Ordinary Least Square was employed to measure the relationship between FundAccounting and Infrastructural Development in Nigeria. The results obtained arepresented in the tables below.

$$ES = ß_o + ß_1CDF + ß_2NIF + µ$$

Dependent Variable: ES				
Method: Least Squares				
Date: 03/08/19 Time: 23:38				
Sample: 2008 2017				
Included observations: 10				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CDF	0.463870	0.054294	8.543656	0.0000
R-squared	0.579342	Mean dependent var		291.1530
Adjusted R-squared	0.526760	S.D. dependent var		94.26932
S.E. of regression	64.85016	Akaike info criterion		11.35889
Sum squared resid	33644.34	Schwarz criterion		11.41941
Log likelihood	-54.79446	Hannan-QSuinn criter.		11.29251
Durbin-Watson stat	0.998432			

Source: Extracts from E-view print out Version 10 and author's compilation

B Coefficient

The result shows that the independent variable CDF produced a positive coefficient,meaning a unit change in CDF resulted to a 46% increases in ES in Nigeria within theperiod under investigation. This means an increase in Capital Development Fund had and will have a great impact in the Education sector in Nigeria.

Coefficient of Determination (R^2)

This shows the value of changes in the dependent variables attributable to changes in the explanatory variables. R^2 and Adjusted R^2 is the ratio that explains the variation in the model. From the result, 58% and 53% of the total variable of ES can be explainedby the independent variable; CDF, in a multiple relationship. The remaining the 42%and 47% of the total variation were not fully included in the model but have beentaken care of by the error term.

Durbin Watson

The Durbin Watson statistics from the result is 0.998432, this value is below 1.5, and hence there is a minimal presence of serial auto correlation in the model. The findings are however fit for short and long term decision making.

F-statistics
This shows goodness of fit of the model, with the probability value less than 0.05 forCapital Development Fund. It means there is a significant relationship between CapitalDevelopment Fund and the Education Sector in Nigeria for the period covered by thisstudy.

Summary of Results
H_{01}: There is no significant relationship between Capital Development Fund and theEducation Sector in Nigeria

REJECT

Hypotheses	T-statistics	T-cal	Prob	Sig.5%	Decision
H01	8.543656	2.080	0.0000	0.05	REJECT H0

Summary, Conclusion and Recommendations
Summary
In carrying out the analysis, the stationary test shows that the variables are stationary at first difference. The co-integration test proved the presence of a long run relationship. The granger causality test proved no causality between the variables and the results of the regression analysis carried out revealed positive relationships that exist between the variables. In testing the hypothesis, one independent variable;Capital Development Fund was statistically significant at 5% level of significance andhad a positive relationship with the dependent variable, the Education Sector.

Conclusion
In accordance with the research findings of the study, we can therefore conclude that Fund Accounting has the potential of increasing the Infrastructural Development in Nigeria. This goal can and will be achieved if the reasons for the deplorable conditions of these infrastructures; reduction in government spending on infrastructure, vandalization of existing ones, corruption, bureaucratic bottlenecks and delay, maintenance and repairs of damaged facilities, are tackled.

Recommendation
The Fund accounting principle which states that, “as a fiscal entity, a fund receives public money into it and money is also disbursed from it for purposes allowed underthe laws and regulations governing the fund”. Meaning that money meant for a fundcannot go elsewhere and any expenditure chargeable to a fund cannot be chargedelsewhere should be adhered to in order to improve infrastructural development in
Nigeria.

Contribution to knowledge
With the rate of misappropriation and mismanagement of public funds andbackwardness of the infrastructural development in Nigeria, it is imperative thatscholars constantly enlighten the government and citizens of the relevance are importance of accountability and prudence in handling public funds.

References

Acho, Y. &Abuh, P. A. (2016). Corruption and Accountability in the Nigerian Public Sector: an empirical discourse. International Journal of Public Administration and Management Research (IJPAMR), 3(3).

Babatunde, O.A., Salisu, A.A.&Oseni, I.O. (2012). Infrastructure and Economic Growth in Nigeria: A Multivariate Approach. Research Journal of Business Management and Accounting, 1(3), 30-39.

Bello, S. (2001). Fraud Prevention and Control in Nigerian Public Service: The need for a Dimensional Approach. Journal of Business Administration, 1(2), 118-133.

Johnson, I. E. (2004). Public Sector Accounting and Financial Control. Lagos: Finance Institutions Training Centre.

Nedozi, F.O., Obasanmi, J.O. &Ighata, J.A. (2014). Infrastructural Development and Economic Growth in Nigeria: Using Simultaneous Equation. JournalEconomics, 5(3), 325-332.