Strategic Budgeting System and Management of Public Resources: A Nigeria Review

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Abstract
Nigeria is richly blessed with abundance of human and material resources yet the economy is struggling to leverage the country’s vast wealth in order to displace the overwhelming poverty that affect more than 50 percent of her population. This research paper investigated the effect of budgetary system on management of public resources in Nigeria. The population of the study is made up of Ministry of Finance with emphasis on Accountant General Office and Budget office of the federation, CBN and National Assembly. Related literature was reviewed and there was a consensus opinion that national wealth has not been efficiently management due to weak budgeting system in Nigeria. Source of data was primary and 120 copies of structured questionnaire were administered out of which validly completed 110 were returned. Data were analyzed and Pearson Product Moment Correlation Coefficient used for hypotheses confirmation. The result obtained shows that though there is significant relationship between budget system and public administration but seems very weak in Nigeria’s context. It was recommended that government at all levels should embrace budget reform in order to maximize efficiency.

Key words: Strategic budgeting; Efficient management; Public resources; Budget failure.

1.0 Introduction
Nigeria is one of the few African countries that parades abundant of human and material resources necessary for rapid transformation from peasant based agriculture to a viable industrial economy. The country is richly endowed with crude oil and more than 70 other mineral resources distributed among various states yet no meaningful development has been achieved (Ajakaiye & Akinbinu, 2000). Our experience has shown that daunting poverty and under-development has persisted in the face of tremendous national wealth and potentials (Ariyo, 1998). The level of economic prosperity lags very far behind many of those countries with less endowment. This whole scenario has raised unanswered question about the efficiency of public administration in Nigeria. Kauzya (2007) stated that in discussing the role of government effort and performance in public management within the context of Africa, there is the danger of following the classical role of the state as stipulated in the literature of political science and public administration. He argued that understanding the classical role of the state is desirable but Africa has specific challenges of how to develop the economy in the face of corruption, poor state of economic infrastructure, weak productive sector, unemployment and poverty. It means that the classical role may not be helpful in this regard (Kauzya, 2007). Therefore, Nigerian scholars need to carry out studies into specific areas of interest covering political economy, developmental administration, government budgeting, public sector accounting, strategic management and service delivery in Nigeria public sector. The recommended studies will generate useful findings that will lead to the development of solution models necessary for government budgetary process reform and will serve as a basis for effective and efficient management of national resources in Nigeria. It will also address the issue of economic breakdown in the face of abundance. This study seeks to investigate the problem of national resources management from the budgetary system stand point. To achieve the main objective, the following subsidiary objectives will be examined: government budget as a financial management tool of public administration in Nigeria, efficiency of public administration in Nigeria and the relationship between budget expenditure and achievement of national goals. The research questions on which attempt is made to provide solution includes (i) How does budget influence the management of national resources? (ii) Is there inefficiency in the public administration in Nigeria? (ii) To what extent has the amount of resources invested significantly correlated with the level of economic development? The Research Hypotheses include: (i) There is no significant relationship between budgetary system and efficient management of public resources in Nigeria and (ii) There is inefficiency in the public administration in Nigeria (iii) There is no significant correlation between the amount of resources invested by government and the level of economic development.
in the country. The remaining sections of this paper are as follows: Two (2) review related literature; Three (3) methodology; Four (4) discussions of the study result and conclusion while Five (5) recommendations.

2.0 Review of Related Literature

In most developing countries of the world, the socio-economic and political expectations of the citizens are high and this is coupled with the fact that every government desires to reposition her affairs in other to be in the global economic forefront and be recognized among nations of economic and political consequence (Kauzya, 2007). These expectations include provision of social amenities, building and improving on the economic infrastructure to generate enabling environment for productive sector, reduce unemployment level and poverty rate especially in Africa continent where greater percentage of the citizens of different countries lives below the poverty line (UNDP Report 1998; NAPEP 2008), free or affordable academic and technical education to facilitate human capacity building, strong money, price stability, unity especially in heterogeneous society like Nigeria and creating conditions for even development among various states and ethnicities. Abu & Abdullahi (2010) summarized the above duties of the government upon which resources are expended into two basic roles as follows: (i) protection of citizens from internal and external aggression and the administration of Justices to protect life, property and the nation from external violence (ii) Engagement in activities that are of benefit to the society as a whole because they are not profitable for individual efforts. In any economy whether socialist, capitalist or mixed, the government assumes some or all of the above roles to respond to those emerging social and economic needs of the people and to a great extent, such functions have become part of the accepted responsibilities upon which her performance are measured and rated (Omolariola 2003). Achievement of economic prosperity is a direct function of government policymakers’ priority to formulate quality economic policies to promote the standard of living, economic health of the nation in specific areas and effectively and efficiently implement them. One of the principal ways to promote the economic health is by the efficient management of public resources (Ranis, et al, 2000). The contribution of good national economic policies to governance and its positive implications for national economic success cannot be over emphasized (Ariyo 1998). Nwachukwu (1988) observed that the needs of society if unattended turn into social diseases and no institution whether business, university, or government agencies is likely to flourish in a deceased society. The government cannot ignore the socio-economic need of the people in the midst of abundance of national wealth endowed by God for the benefit of all (Okpala, 2012). Anyanwu (1997) when national resources are managed efficiently, enabling environment is created, productive sector is promoted with minimized cost of production, growth in GDP is experienced and through multiplier effect will result in economic development and a better standard of living (Okpala, 2012). Efficient resources management will generate buoyant economy which in turn will absorb most employable members of the society, bring about a progressive change in the socioeconomic structure of the country and reduce poverty. When this change occurred on a continual basis, public resources are said to be optimally utilized and the economy is developing. Economic development implies changes in technological and institutional organization of production as well as in distributive pattern of income (Anand, & Sen, 2000). This implies that, economic development is possible only when a country's resources are effectively and efficiently managed. Nigeria economy which is richly blessed with abundance of human and material resources is struggling to eradicate the devastating unemployment and poverty that affects more than 50 percent of her population (NAPEP 2008), replace the decayed economic infrastructure in the country and remove her name from the roll call of poor countries. Nigeria was ranked 14th largest oil producing nation with 2.62% of world production and 2,211,000 barrel per day (CIA World Fact book, 2009). It has an estimated population of 168 million (CIA World Fact book 2011) and a highly articulate and educated work force. Our earnings from crude oil - though a mono-product economy, are so good that the Federal and State government's annual budget are in trillions and billions of Naira yet the standard of living and development index measuring the well being of the citizens are on the decline. Okheniaye, (2011) noted that the Central Africa Standard Time Index ranked Nigeria 142 out of 172 countries with less than $300 per capital. The public administrators are yet to account for and reconcile the existence of abundance of national resources and the ravaging poverty in the country. The inefficiency in management of our resources is indubitably the major contributor to this nightmare and has produced poverty, decay in infrastructure, increased the level of corruption, economic down turn and various evil vices among youths. This paradox of a rich nation with poor nationals is the burning issue that needs urgent solution. Ajakaiye & Akinbinu (2000) said that economists refer to the coexistence of vast wealth in natural and human resources and extreme personal poverty in developing countries like Nigeria as the "Resource Curse".
2.1 Theoretical Framework
Accounting to Ciaden (1980) if there was ever a subject which has been over-written, over-analyzed but so little practical result to show for the effort, it is budgeting in developing countries. Report after reports by reputable experts has extorted, cajoled and pleaded in almost identical terms, yet the very consistency of the findings and prescriptions of the reports indicate that little has resulted in the way of budgetary improvement over the years. The same complaints occur with disturbing regularity. Those actually doing budgeting in developing countries find few concrete suggestions they can activate amidst the torrent of verbiage. The experts for their part are increasingly frustrated because the principles they espouse remain on paper. What has gone wrong and why has little progress being made? Although there have been much writing on government budgeting in Nigeria, they are mainly expressions of "what ought to be done" (Omolehinwa, 2002). This has always been the case and Ciaden (1980a) suggested that instead of students of government budgeting in these developing countries depending on books on budgetary system or political decision making, they should carry out studies on actual government budgeting practice and experience in an attempt to reform the financial and administrative system.

2.2 Public Resources
The term public resources encompasses all forms of national wealth and community assets ranging from material, machine, money and human capital owned by both the government and citizens (Mifflin, 2009). There is no universally accepted definition of public resources but regarded as anything economic value and for the purpose of this study, it will be limited to those resources managed and controlled by government official on behalf of the citizens. The broad perspective of corporate governance is the heart of both a market economy and a democratic society (Sullivan, 2000). Fiscal transparency in public administration is propagated as part of a larger policy goal of good economic governance pursued to use public resources to achieve poverty alleviation and attain the Millennium Development Goals (MDGs). African continent is calling for more openness in the budget processes as part of a set of endeavours aimed at solving the paradox of copious resources on the one hand, and seemingly intractable abject poverty on the other. This call will also address the issue of corruption and theft of state resources and money laundering among bureaucrats (UNECA, 2005). Some countries such as Senegal, South Africa and Tanzania are taking measures to ensure efficient use of national resources but their effort is far from being the norm. The effectiveness of spending scarce resources remains weak with a wide variance existing between budget policy and ultimate budget outcomes. This is the case even in countries tentatively applying the multiyear budgeting processes as with Republic of Benin.

2.3 Budgeting
A focus government, in order to carry out her responsibilities plans and prioritize her programmes which include the consideration of all necessary quantitative and qualitative factors as inputs (Omopariola, 2003). Wildavsky & Caïden (1997) noted that all government responsibilities are cost oriented (government expenditures) and since resources are not always adequate to fund these activities that address various socio-economic and political needs of a country, a formal statement of revenue and expenditure at a future date must be made as a matter of constitution thereby paying attention to critical areas of developmental need and maximizes limiting factors (Okpala, 2012). Therefore, government budget is the process of defining direction, and making decisions on how to allocate public resources to pursue the chosen strategies (Omopariola, 2003). A budget system consists of planning, implementation and control. Planning is a tactical process of preparing detailed short term plans (usually one year) for functions, activities, departments, ministries and agencies thereby converting the long term development plan into measurable actions. When budget is approved, it becomes Appropriation Act, a government target to be pursued in the period to which it relates and a basis for management of national resources (Appendix 1A refers).

2.4 Traditional Budgeting and Purpose of Government Budget
According to the 1999 constitution of the Federal Republic of Nigeria, the Executive arm of the government prepares a forecast of income and expenditure (budget) for the forthcoming year and this will be laid before the National Assembly. Omopariola (2003) stated that in recognition of the implications of the budget on broad economic objective, government seek to direct all levels of revenue, expenditure, and debt to achieve the general macro-economic objectives. This involves planning and controlling variables to the desired directions (Omopariola, 2003). A traditional government budget is a legal document prepared annual by the executive, passed
by the legislature, and approved by the president. All over the world, government budget is used for the purpose of proper planning to mitigate waste in the system, identify critical economic, political needs and viable projects to be executive in the year under consideration. It also enables appropriate review by the legislature which will give birth to Appropriation Acts and avoid unapproved disbursements, fiscal accountability and aids post mortem examination by Public Accounts Committees. Government budget assist in programmes prioritization and proper allocation of resources to overcoming financial failure (World Bank, 2004).

2.5 Public Administration and Budgeting

The government accomplishes her role through the apparatus public administration, a field which refers to the manner in which Federal, State, and Local institutions with their procedural, legal, regulatory, financial, human resources and asset aspects are organized, institutionalized and managed with respect to regulation, revenue generation, spending and procurement functions, and the provision of such services as defense, social welfare services, and economic infrastructure (Mhome, 2003). One key component of public administration is financial management. McKinney and Howard (1979) noted that financial management is a critical management function that fuels the engine of the public administration and can be considered in three areas: (a) determining fiscal policies whereby political or community leaders identify programmes of priority and try to fund them through appropriations. (b) providing accountability by ensuring that public funds are spent for the purposes intended and (c) instituting the required organizational structures and controls to effectively carryout the fiscal duties and responsibilities. In all these, budget system is central as public administrators use it to accomplishing government objectives both at short term and long run.

2.6 The Nigerian Experience

Budgeting in African nations has witnessed a lot revolution within the last few decades yet no meaningful developments have been experienced (Mhome, 2003). In Nigeria, at the end of every year, huge sum are budgeted and spent with unacceptable level of economic growth and development. Poor level of accountability of public resources also becomes alarming. This is traced to ineffective budgetary system and poor regulatory framework (Ajakaiye & Akinbinu, 2000). The budget structure of Nigeria consists of macroeconomic policy and framework and expenditure budget which used for direction of the economy. Table 1 below shows allocation for 2001 to 2010.

Table 1: Budget Allocation to Recurrent and Capital Expenditure in Nigeria (=N=b)

<table>
<thead>
<tr>
<th>Budget</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rec. Exp</td>
<td>355.4</td>
<td>354.1</td>
<td>382.8</td>
<td>568.4</td>
<td>1,000.4</td>
<td>1337.1</td>
<td>1,484.9</td>
<td>1,818.9</td>
<td>2,073.8</td>
<td>2,754.7</td>
<td>12,130.00</td>
</tr>
<tr>
<td>Cap. Exp</td>
<td>496.4</td>
<td>486.8</td>
<td>382.3</td>
<td>349.9</td>
<td>617.2</td>
<td>539.2</td>
<td>781.5</td>
<td>673.2</td>
<td>796.7</td>
<td>1,853.9</td>
<td>6,977.10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>851.8</td>
<td>840.9</td>
<td>765.1</td>
<td>918.3</td>
<td>1,617.6</td>
<td>1,876.3</td>
<td>2,266.4</td>
<td>2,492.1</td>
<td>2,870.5</td>
<td>4,608.6</td>
<td>19,107.60</td>
</tr>
<tr>
<td>CE%</td>
<td>58.3</td>
<td>57.9</td>
<td>50</td>
<td>38.2</td>
<td>38.2</td>
<td>29</td>
<td>34.5</td>
<td>27</td>
<td>28</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>AI%</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>92</td>
<td>92</td>
<td>60</td>
<td>30</td>
<td>20</td>
<td>20</td>
<td>51</td>
</tr>
</tbody>
</table>


The percentage of capital expenditure (40%) in relation to the total budgeted expenditure shows that proper attention has not been paid to economic development by Nigeria government. Expenditure is recurrent heavy with average of 60% for the above ten years of the study. It is therefore obvious, that various years budgets of Nigeria government are anti-development.

2.7 Budget failures in Nigeria

Budget failure in Nigeria calls for a deeper understanding of government financial system if solution must be provided. Omeiza-Michael (2009) stated that government agencies must be assisted in capacity building to have the professional wherewithal to handle projects set aside for execution in both federal and state budgets. It is obvious that Nigeria has lived with budget failure since 1960 and 52 years later, the issue is yet to be addressed. The following are major factors responsible for the failure: (i) Planning: budget preparation loopholes are a one of the reasons for the failure. This is seen from the controversy always surrounding the preparation and presentation each year. Sometimes the National Assembly increases the budget without recourse to the executive and revenue upon which the original estimate was based (ii) Allocation and Implementation: Table 1 shows that the average
allocation to development expenditure is 40% and when this is combined with the average of implementation of 51%, it implies that Nigeria will have no meaningful development unless an urgent budgetary reform is carried out. The phenomenon of budget low implementation (failures) and return of unspent monies signify a slack in the provision of welfare for the citizens (CBN Annual reports 2001-2010). (iii) **Budget deficits:** deficits are almost inevitable at the long run but only reasonable if they are used to finance growth through provision of infrastructure which is almost impossible in Nigeria context. The golden rule in economics is that, over the economic cycle, government should borrow only to invest and not to finance current spending (Sani, 2001) (iv) **Professional personnel:** budget office of the Federation may have enough staff but definitely not enough professional. This may have some obvious consequences on the preparation of budget (Phillip Committee 2000 as cited in E. Omolehinwa, 2002). This situation of scarcity of professional Accountants in the Budget office of the Federation has not fully resolved (Okpala, 2012). (v) **Unbalanced interest:** most cases, Nigeria budgets are covered by political considerations while the economic aspect is manipulated given room to unrealistic and unbalanced interest. The resources managers in Nigeria responsible for economic policies are easily silenced by the voice of politicians who are on the top of the affairs. Budget is politicized before it is put in its economic perspective (Okpala, 2012) (vi) **Macroeconomic framework:** another factors inhibiting the successful planning and implementation of capital budget and the achievement of macroeconomic objectives originally promised at the time of approval are macroeconomic framework as a cogs on the wheel. These include policy inconsistency, lack of continuity, government instability, corruptions at all levels and lack of effective coordination across all levels of government (Okpala, 2012).

### 2.8 Strategic Budgeting

Over the years in public sector, budget has not only been a financial plan of government revenue and expenditure but also a tool for macroeconomic management. Strategic government budgeting which is akin to corporate planning is a departure from normal yearly budgeting principles (World Bank, 2004). CARTAC (2011) defines strategic budgeting as the refocusing of budgeting from annual plan for spending inputs to a multi-years plan to achieve policies at a long term. Wildavsky (2003) stated that multi years budgeting has been proposed as a reform to enhance rational choice by viewing resources allocation in a long term perspective. Based on Wildavsky’s view, considering one year budget has the following problem: (i) short-sightedness producing a wrong picture of the budgeted item spanning over one year (ii) over spending because huge expenditure in future are hidden (iii) incremental because changes do not open up larger future view (iv) parochialism because programmes tend to be viewed in isolation rather than in comparison to their future costs and expectations. Strategic budgeting enables an extended time span budgeting between three and five years to be made thereby allowing a long-range planning to overtake short term reaction and substitute financial control for merely disorganized thought. One of the problems of traditional budget in Nigeria is the practice of delayed implementation and sudden rush-spending to use up all remaining resources held in a vote before the end of the budget period. If strategic budgeting is put place, these problems would decline in frequency.

### 3.0 Methodology

The study adopted a survey research design approach to evaluate the level of efficiency in public administration in Nigeria with reference to provision of infrastructure and enhancing standard of living through the use of budget. The population of the study is made up 1,200 management staff -Ministry of Finance-MOF (184), Central Bank of Nigeria- CBN (547) and National Assembly- NA (469) concerned with budgetary affairs. A sample size of 120 persons was selected at random, representing 10% of the total population and using Bourley (1998) proportional allocation formula, it was distributed as follows: MOF (18), CBN (55) and NA (47). A pre test was conducted and outcome yield “r”= 0.92 indicating a high degree of consistency and reliability (Appendix 1.B refers). The instrument was 8- term survey questionnaire with a - 5 Likert scale response options. Very Relevant (VR), Relevant (R), No Effect (NE) Irrelevant (I), and Very Irrelevant (VI). The questionnaire was structured in line with the research objectives, questions and hypothesis of the study. The Pearson product moment correlation coefficient was used to confirm formulated hypotheses.

### 4.0 Data Presentation, Analysis and Discussion

The results of the analysis based on the hypotheses tested are as shown in the summary below:
Table 2: Summary of Hypotheses Test Results

<table>
<thead>
<tr>
<th>H/N</th>
<th>QS</th>
<th>Cal. “r”</th>
<th>LS (x)</th>
<th>Inference</th>
<th>Correlation</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>0.93</td>
<td>0.5</td>
<td>r &gt; x</td>
<td>Highly positive</td>
<td>Accept Alternate Hypothesis</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>0.19</td>
<td>0.5</td>
<td>r &lt; x</td>
<td>Low positive</td>
<td>Accept Null Hypothesis</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
<td>(0.47)</td>
<td>0.5</td>
<td>r &lt; x</td>
<td>Negative</td>
<td>Accept Null Hypothesis</td>
</tr>
</tbody>
</table>

Source: Fieldwork, June 2012
Keys: HN=Hypotheses Number; QS=Questionnaire section; LS= Level of significance.

4.1 Theoretical Findings
Interpretation of Hypotheses tested (Appendix 2): Table 4 (Hypothesis 1). r calculated of 0.93 ≥ 0.5 level of significance. The alternate hypothesis is accepted. This shows that there is significant relationship between budgetary system and management of public resources in Nigeria. Though the variables have high positive correlation but in Nigeria context seem to embody type 11 error as it is negative in practice. This means that there are other factors to be considered in Nigerian environment. Table 5 (Hypothesis 2). r calculated of 0.19 ≤ 0.5 level of significance. The null hypothesis is upheld that says Nigeria economy is not developing due to financial indiscipline and wastages in the system resulting from poor budgeting in public sector. Table 6 (Hypothesis 3). r calculated of (0.47) negative correlation ≤ 0.5 level of significance. The null hypothesis is upheld which means that the relationship between the amount of resources invested by the government and the level of economic development is inverse. This can be seen from huge amount budgeted each year without reasonable outcome. The study also discovered that the amount of resources invested in the country in last few years by the government is far higher than the level of development reordered which implies there are leakages in the system – Corruption at levels of government. The 40% average amount allocated to infrastructure in the annual capital expenditure budget coupled with 51% average implementation rate shows that our national budget has failed and development will be a nightmare unless this level of inefficiency in the public administration is resolved.

4.2 Conclusion Remarks
From the summary of findings presented above, the following conclusions were made: (i) budget system has not been properly planed and used in Nigeria by the bureaucrats as a tool of public administration (ii) government budget is recurrent expenditure heavy and cannot support meaningful development (iii) Traditional budget adopted over the years is short sighted, has encouraged over expenditure on projects that span over one year and fueled corruption (iv) The Federal government do not have enough professional accountants in employment in the Budget Office of the Federation and Accountant-General of the Federation’s office due poor remuneration. This was addressed by question 3 in the questionnaire administered. (v) The macroeconomic policies of the government have not been consistent and lacks continuity to support significant developments (vi) Implementation of capital budget has been partial resulting only in regular returning of the unspent funds to the Consolidated Revenue Fund at the end of the year. This is the effect of budget failure (vii) borrowing to finance budget deficit has always been invested in non viable capital or white elephant projects. This has resulted in abandonment and waste of public resources. (viii) late budget approval is one of the factors responsible for poor implementation.

5.0 Recommendations
This study based on the findings and concluding remarks, recommends improvement in the budgetary process and management of public resources as follows: (a) the government should amend the constitution of Nigeria to provide for extended budget process. This will enable long term budget to be practiced and achieve national policies at the long term, all borrowing should be invested in viable projects and corrupt officials should receive capital punishment when found guilty. (b) Budget approval process should accelerated by the national Assembly and this will enable the recommended 80 to 95% implementation rate to be pursued and pursued and achieved (c) Recurrent expenditure should be reduced by trimming down the number of ministries, department and agencies, similar organizations should be merged and redundant staff be laid off to reduce wastages and cost of governance. Government should build a block
of strategic budgeting by segmenting activities involving aggregate fiscal discipline, allocating resources based on strategic priorities and efficiently and effectively implementing programmes and services.

6.0 Reference


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APPENDIX 1

A. Figure 1: Stages of the annual budget process

B. Reliability test-retest Using Pearson Product Moment Correlation Coefficient

\[
 r = \frac{n \sum xy - (\sum x)(\sum y)}{\sqrt{n} \left[ \sum x^2 - (\sum x)^2 \right] \left[ n \sum y^2 - (\sum y)^2 \right]} \]

<table>
<thead>
<tr>
<th>Test-retest 1</th>
<th>Test-retest 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry/Agency</td>
<td>Top mgmt</td>
</tr>
<tr>
<td>Staff</td>
<td>AR (x)</td>
</tr>
<tr>
<td>MOF</td>
<td>3</td>
</tr>
<tr>
<td>NA</td>
<td>4</td>
</tr>
<tr>
<td>TP</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>17</td>
</tr>
</tbody>
</table>

Source: Fieldwork, June 2012. (AR=Average Response; AAR= Aggregate Average Response)

\[
 n = 34, \Sigma x = 17, \Sigma y = 17, \Sigma xy = 93, \Sigma x^2 = 99, \Sigma y^2 = 101
\]

\[
r = \frac{34(93) - (17)(17)}{\sqrt{(3366 - 289)(3434 - 289)}} = \frac{3162 - 289}{\sqrt{3077(314)}} = 0.92
\]

The Calculated correlation coefficient of 0.92 indicated a very strong positive relationship between the two test-retest exercises. This showed a high degree of consistency and affirmed the reliability of the instrument for data collection.
APPENDIX 2

Test of Statistical Hypothesis

Table 4: (Hypothesis 1)

Ho: There is no significant relationship between budgetary system and management of public resources in Nigeria.
H1: There is significant relationship between budgetary system and management of public resources in Nigeria.

Section A: Question 2 of the questionnaire administered: Efficiency of Public Administration depends on budgetary system in Nigeria

<table>
<thead>
<tr>
<th>Options</th>
<th>Point (x)</th>
<th>Response (y)</th>
<th>xy</th>
<th>x²</th>
<th>y²</th>
</tr>
</thead>
<tbody>
<tr>
<td>VR</td>
<td>5</td>
<td>60</td>
<td>300</td>
<td>25</td>
<td>3,600</td>
</tr>
<tr>
<td>N</td>
<td>4</td>
<td>22</td>
<td>88</td>
<td>16</td>
<td>484</td>
</tr>
<tr>
<td>NE</td>
<td>3</td>
<td>10</td>
<td>30</td>
<td>9</td>
<td>100</td>
</tr>
<tr>
<td>L</td>
<td>2</td>
<td>1</td>
<td>38</td>
<td>4</td>
<td>324</td>
</tr>
<tr>
<td>VI</td>
<td>1</td>
<td>17</td>
<td>17</td>
<td>1</td>
<td>289</td>
</tr>
<tr>
<td>E</td>
<td>15</td>
<td>110</td>
<td>473</td>
<td>55</td>
<td>4,797</td>
</tr>
</tbody>
</table>

Source: Fieldwork, June 2012

\[ r = \frac{\sum_{i=1}^{n} x_i y_i - (\sum_{i=1}^{n} x_i)(\sum_{i=1}^{n} y_i)}{\sqrt{(\sum_{i=1}^{n} x_i^2 - (\sum_{i=1}^{n} x_i)^2)(\sum_{i=1}^{n} y_i^2 - (\sum_{i=1}^{n} y_i)^2)}} \]

\[ = \frac{\sum_{i=1}^{n} x_i y_i - n \bar{x} \bar{y}}{\sqrt{(\sum_{i=1}^{n} x_i^2 - n \bar{x}^2)(\sum_{i=1}^{n} y_i^2 - n \bar{y}^2)}} \]

\[ = \frac{110 - 15 \times 110}{\sqrt{(110 - 15 \times 110)(110 - 15 \times 110)}} \]

\[ = 0.93\ (93\%) \]
Table 5: (Hypothesis II)
H₀: There is inefficiency in the public administration in Nigeria
H₁: There is efficiency in the public administration in Nigeria.

Section A: Question 4 of the questionnaire administered – Public resources in Nigeria are poorly managed by the bureaucrats

<table>
<thead>
<tr>
<th>Options</th>
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Source: Fieldwork June 2012

\[
\begin{align*}
    r &= \frac{\text{N} \cdot \text{xy} - (\sum x \cdot \sum y)}{\sqrt{\text{N} \cdot \text{sx}^2 - (\sum x)^2} \cdot \sqrt{\text{N} \cdot \text{sy}^2 - (\sum y)^2}} \\
    &= \frac{5 \cdot (355) - (15 \cdot 110)}{\sqrt{5 \cdot (250)} \cdot \sqrt{5 \cdot (55) - (15)^2}} \\
    &= \frac{1,775 - 1,820}{\sqrt{1,250 - 225} \cdot \sqrt{250 - 300}} = 125 \div \sqrt{(900 - 300)} = 125 \div \sqrt{600} = 0.12 (12\%) \\
\end{align*}
\]

Table 6: (Hypothesis III)
H₀: There is no positive correlation between the amount of resources invested by Nigeria government and the level of economic development in the country.
H₁: There is positive correlation between the amount of resources invested by Nigeria government and the level of economic development in the country.

Section B: Question 6 & 7 of the questionnaire administered – The amount of resources invested have not resulted in standard of living in Nigeria and Economic infrastructures are inadequate and unreliable

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Source: Fieldwork June 2012

\[
\begin{align*}
    r &= \frac{\text{N} \cdot \text{xy} - (\sum x \cdot \sum y)}{\sqrt{\text{N} \cdot \text{sx}^2 - (\sum x)^2} \cdot \sqrt{\text{N} \cdot \text{sy}^2 - (\sum y)^2}} \\
    &= \frac{5 \cdot (382) - (15 \cdot 110)}{\sqrt{5 \cdot (250)} \cdot \sqrt{5 \cdot (55) - (15)^2}} \\
    &= \frac{1,910 - 1,850}{\sqrt{1,250 - 225} \cdot \sqrt{250 - 300}} = 250 \div \sqrt{(3,662 - 110^2)} = 250 \div \sqrt{557.22} = 0.47 (47\%) \\
\end{align*}
\]

180