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Internal control system deficiency and capital project mis-management in the Nigerian public sector

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Abstract

The aim of this study is to analyse the effects of internal control system deficiency on capital project management in the Nigerian public sector. A sample of two hundred and twenty eight capital projects (228) was used. Kendall's tau_ b τ, ANOVA and Chi-square X^2 statistics were employed for analysing the data collected. This study finds that internal control system deficiency has significant negative effects on capital project management in the Nigerian Public Sector. The study recommends strict compliance with internal control system in the best interest of citizenry.

Keywords: Capital project; compliance; deficiency; internal control system; management

1. Introduction

1.1 Background to this Study

Many societies have created processes and procedures to ensure that there is internal control in public transactions through the independent power vested in audit institutions and internal auditors by the International

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Organisation of Supreme Audit Institutions (INTOSAI). Internal control system is associated with spending such as capital projects in the public sector through its assurance roles.

However, sometimes the public sector does not benefit from strong internal control system which may be side-lined for personal gains. According to Ashbaugh-Skaife, Collins, and LaFond (2008) often there are deficiencies in internal control which makes organisations to be taken undue advantage of. Internal control deficiencies can occur if the internal control system is not in accordance with INTOSAI guidelines, this can result into mismanagement of an organisation's spending such as capital expenditure.

Nwachukwu and Emoh (2011) argue that, in Nigeria, the high level of capital project abandonment has worsened the acceptance of internal control as an effective tool of assurance in the public sector. The study states that capital project is a catalyst to public development in all the agenda of government. It is used for supporting programmes such as health care delivery, roads and transportation, education, security, power, energy and shelter. It is about life. It provides a solid foundation upon which industrial structure is built.

Kiabel (2012) considered the assessment of internal auditing practice on the financial performance of government owned companies (GOC) in Nigeria. The study finds that there is no strong association between internal auditing practices and financial performance of government owned companies in Nigeria. Ayodele and Michael (2011); Oyewobi, Ganiyu, Oke, Olaawo, and Shittu (2011) find that there exists a relationship between internal control and project activities. Amudo and Inanga (2009)'s study in Uganda on evaluation of internal control systems finds that effective internal control systems are lacking in public sector projects.

This study is based on the perspectives adopted by some earlier researchers (Imbeau, 2006; Oyewobi et al. 2011; Ajenjo, 2011; Petrovits, Shakespeare & Shih, 2011). It focuses on the strategic interaction of the actors involved in the internal control process of government on capital project management, which is a major area of spending public funds for development. This study is conducted with the feeling that internal control deficiency would always have an adverse relationship with capital project management in the Nigerian public sector and that it is necessary to reverse the trend. This to ensure that public sector organisations and the capital projects they execute could have the sound internal control system they deserve. Thereby, capital projects are effectively executed to better the lives of the masses.

1.2 Statement of the problem

The Nigerian government has engaged in reforms and campaigns like National Economic Empowerment Development Strategy (NEEDS). This is to improve the Nigerian economy, yet there is a high rate of unaccomplished capital project strategies, resulting into capital project mismanagement. ''Countless kilometres of road, many fine factories and hundreds more projects exist only as dreams in Nigeria despite years of promises'' (Simon, 2012, p.1).

From the report of Presidential Project Assessment Committee (PPAC), there are 'Eleven thousand, eight hundred and eighty- six (11,886) abandoned projects that will cost an estimated ₦7.78 trillion to complete. If the government does not start any new projects, it will take more than five years budgeting about 1.5 trillion annually to complete them all (El- Rufai, 2012, p.1).

Simon (2012) argues that control over project management in Nigeria should improve to reduce the problem of abandonment and wastages of public fund. Oyewobi et al. (2011) argue that the regulatory oversight has not kept pace with internal control development in the Nigerian public sector despite the enactment of Public Procurement Act No.14, 2007, Law of the Federation of Nigeria. Simon (2012); Ingwe, Mboto, and Ebong (2012) argue that there is incessant policy discontinuities and politicians have unquestioned discretion in awarding contracts without following due process.

Oyewobi et al. (2011) state that organisation financial complexity in the stewardship process is a problem in the Nigerian public sector. El- Rufai (2012) explains that when projects fail, the usual reason given is lack of fund whereas it is the pre-contract mishaps and project management deficits that are the fundamental causes. The study explains that section 4 (2) of the Public Procurement Act No.14, 2007 requires that no contract should be awarded if funds are not available from the onset. ''these statutory functions have been hampered by lots of challenges,

including the late passage of the annual appropriation Acts by NASS and abandonment of procurement processes by the MDAs if favoured bidders turn out to be unsuccessful'' (El- Rufai, 2012, p. 2).

Should the problem of stewardship persist, Nigeria's development reforms would not be accomplished. Therefore, this study finds the need to evaluate internal control system deficiency and capital project mismanagement in the Nigerian public sector. This is with a view to guiding government towards achieving a sustainable reform objective.

1.3 Aim and objectives of the study

In view of the stated problem, the aim of this study is to use a logical framework to contribute to National development with regards to improving compliance with internal control system in the public sector in order to improve stewardship responsibility towards management of capital projects in the Nigerian public sector. This aim leads to the following objectives:

  i.   To find out the extent to which lack of stewardship responsibility via poor compliance with internal control system affects capital project management in the Nigerian public sector.
  ii. To find out if financial complexity affects capital project management in the Nigerian public sector.

1.4 Research questions

Based on the objectives of this study some research questions need to be answered as follows:

  i.   To what extent does lack of stewardship responsibility of government due to poor internal control system affect capital project management in the Nigerian public sector?
  ii. How does financial complexity affect capital project management in the Nigerian public sector?

1.5. Research hypotheses

The following null hypotheses were tested in order to provide answers to the research questions raised.

  Hypothesis 1
  H_o: Stewardship responsibility does not have significant effects on capital project management in the Nigerian public sector.

  Hypothesis 2
  H_o: Financial complexity does not have significant effects on capital project management in the Nigerian public sector.

1.6. Significance of the study

This study integrates theoretical, empirical and practical issues in accounting, management and law into financial reporting in order to contribute to cross fertilization of internal control system in both public and private sectors of an economy. This study provides an organised framework that gives evidence to specific requirements for successful project execution, especially in the public sector. The initiators and implementers as well as users of public projects sometimes rely on researches like this to solve their capital project execution and implementation problems.

Watchdog groups such as Financial Reporting Council of Nigeria will find this study useful in promulgating standards on public sector accountability. Structures such as the judiciary, government, economic development and political systems shall find this study useful. This study targets the public and private actors working in the field of

internal control and capital project management of organisations, policies, programs, and projects, including managers, researchers, consultants, professors, students, academics.

In the task of ensuring that all the accumulated information generated by this study has an impact on policies, the Nigerian public sector shall improve in the area of internal control and project management. It is hope that findings from this study shall go a long way in shaping expectations about public governance thereby boosting citizens' welfare.

1.7 Scope of the study

The scope of this study is to analyse the effects of internal control deficiency on capital project deficiency in the Nigerian public sector, with particular reference to Lagos State government which is one of the thirty-six States in the country. The choice of Lagos State is based on the fact that the level of State government's internal control system and accounting have not been adequately focused in research (Jagalla, Becker, & Weber 2011). Lagos State is a fair sample representing other States of the federation, especially as it is arguably the largest economy in the country.

Lagos State is chosen for her endowment. Lagos State investors' handbook (2012) explains that the State is Nigerian nation's economic nerve centre, where over 65% of the country's commercial activities are carried out. Lagos State is a leading State in the Nigerian Federation in terms of industrial and commercial activities, population, internal revenue generation capacity, ability and political awareness. Lagos State creates and implements substantial tasks such as road constructions and electricity generation. The State's auditor general's reports for 2008 to 2012 were analysed for this study. This scope spotlights an African setting of a transitional economy that is yearning for development.

2. Literature review

2.1 Conceptual framework

This study is guided by related existing field of study and theoretical assumptions. A critical review of literature was done to identify possible gaps in research knowledge. This study highlights the problem necessitating further research in order to determine the research objectives, research questions are formulated to satisfy the objectives. These are answered based on results of hypotheses tested. The analysis of conclusions drawn from the result led to contributions to the existing field of knowledge.

2.2 Theoretical framework

This study is based on the need for public sector to comply with the requirements of (COSO) (1994), Criteria of Control Board Guidance on Control (COCO) (1995) and Control Objectives for Information and related Technology (COBIT) (1996). They set out the preconditions for meeting standard requirements in internal control effectiveness in organisations.

Much of COSO (1994), COCO (1994) and COBIT (1996) motivations for informative and verifiable financial reporting, lie with the expectations from Agency theory. For instance, Lambert, Leuz, and Verrecchia (2007) explain that Agency theory is used in accounting research for the two reasons of addressing incentive and compensation problems. Agency theory has generated insight into auditing. It has highlighted principal- agent relationship such as government and citizenry in the internal control system.

Agency theory has helped to provide decision support mechanism in the area of performance measurement in line with the theory of governance, which highlights the way in which a government chooses to carry out its activities. Bevir (2011) and Carrington, DeBuse, and Lee (2008) argue that various theories of governance accommodate that social conflicts are resolved by a sovereign from an accountability perspective as guided by the new public management theory. This necessitates assurance from those who are governing to the governed through stewardship. Internal control system assists in this area of governance in tandem with the new public management

(NPM). Maesschalck (2004) explains that NPM is based on the merit principle, neutral, competent administrators and sound financial management.

2.3 Internal control system deficiency in government stewardship responsibility in the Public Sector

Internal control is a key institutional driver for performance. Kiabel (2012); Baltaci and Yilmaz (2006); INTOSAI (2004) explain that internal control elements reflect locus of controls in the management mode of operations. It requires organisations to institute self -control adjustments as backed by an organisation's structure and effective business process mechanism. However, literature discusses the deficient nature of the internal control system that is obtainable in the public sector. For instance, Kiabel (2012) considers the assessment of internal auditing practices of financial performance of government in government owned companies (GOC) in Nigeria, the study finds that there is no strong association between internal auditing practices and financial performance in GOC in Nigeria. Amudo and Inanga (2009) argue that effective internal control system is lacking in the public sector projects in Uganda.

Government has the responsibility of instituting an efficient internal control that will keep it on track in actualizing its goals in stewardship towards public accountability. However, this has failed in the public sector. Rhahleh (2011) argue that there is a multiplicity of overlapping controls in the public sector and that attention is not paid to performance. Ajenjo (2011) argues that the duty of accountability is an inescapable element of governance. Dandago (2007) explains that the accomplishment of a programme is a problem in Nigeria due to poor accountability. Babatunde (2013) finds a significant relationship between internal control and accountability in the Nigerian public sector. Oyewobi et al. (2011) find that corruption has effect on all stages of construction from planning, tender and completion stages. Nwachukwu and Emoh (2011) argue that there is a need for utilisation of proven management techniques of internal control system.

2.4 Capital project mismanagement in the Nigerian Public Sector

The strategic importance of capital projects as an economic development driver cannot be over emphasised. Its potential attributes are numerous. It serves as a catalyst to public development in all the agenda of government such as health care delivery, roads and transportation, education, security, energy and shelter. Therefore, capital project management gives an impetus to the development ratings of a nation.

Nwachuckwu and Emoh (2011) argues that capital project management cuts across human endeavour from various fields of life such as government and agents of government like members of the State' s tenders' board and procurement officers. Oyewobi et al. (2011) finds that there exists a relationship between internal control and project activities. "project cost control effectiveness will be impacted by how well the basic project management practices are implemented on the project , including the definition of such items as governance, roles and responsibilities" (Basak, 2010, p.3). Examples of some abandoned projects in Nigeria are shown in Tables 1 and 2.

Table 1. List of some abandoned projects in Nigeria

S/N	Location	Project cost	Name	Source
1.	Kogi State	$4 Billion	• Ajaokuta steel rolling complex. • Itakpe iron ore company	http://www.tribune.com.ngs
2.	Bauchi State		• Kafin saki multipurpose Dam. • NIPOST quarters. • NITEL technical training school inland. • Container port. • Hadejia-Katagum-Potiskum road.	http://www.tribune.com.ngs
3.	Lagos, Ondo Ekiti, Edo State		Lagos Benin expressway.	http://www.tribune.com.ngs
4.	Lagos and Oyo States		• National stadium Surulere. • Federal Secretariat Ikoyi. • Lagos –Ibadan express way	http://www.tribune.com.ngs

5.	Niger and Kaduna States	₦ 1.2billion	• Bridge across river Kaduna. • Bida-pategi-nupeko road. • Saki pawa road.	http://www.tribune.com.ngs
6.	Katsina State	₦ 52m	Sobe Dam	
7.	Ondo State	₦ 500m ₦ 15m ₦ 11.5m ₦ 738m 11.5 ₦ 17m ₦ 800m ₦ 18m ₦ 11.5	• Ondo road Akure. • lagbaka Akure. • Akungba Akoko. • Alagbaka Akure. • Iyere owo • Owo • Okitipupa • Ode Ekitan ilaje • Ode aye.	http://www.tribune.com.ngs
8.	Delta state Edo and Rivers States.	₦ 2billion ₦81.9billion	Petroleum Training Institute Warri Kubwa Expressway, Bridge connecting Edo and Port Harcourt.	http:www.punchng.com http://nigerianbestforum.com

Sources: Various websites by Google Nigeria in 2012 and 2013

Table 2. Required funding for completing abandoned projects in Federal universities in Nigeria (₦ 'Million)

S/No	Institution	Total (100%)	2003 (50%)	2004 (50%)
1	University of Ibadan	350.00	175.00	175.00
2	University of Nigeria	350.00	175.00	175.00
3	Obafemi Awolowo University, Ile-lfe	350.00	175.00	175.00
4	University of Lagos	350.00	175.00	175.00
5	Ahmadu Belo University, Saria	350.00	175.00	175.00
6	University of Benin	350.00	175.00	175.00
7	University of Calabar	300.00	150.00	150.00
8	University of Ilorin	300.00	150.00	150.00
9	University of Jos	300.00	150.00	150.00

Source: National Universities Commission 2005, adopted from Ingwe, Mboto and Ebong (2012)

3. Research method

3.1 Research design

In this study, the research design is structured with the aim of identifying the variables that are related to the research objectives and their collective and individual association to each other. The structure and procedure is about assessment of thoughts and opinions. It is the type of study that a survey design accommodates. According to Asika (2008) survey design is an efficient and systematic way of collecting data based on individual opinion from a broad spectrum setting like a public sector organisation. Therefore, survey design is adopted for this study because it is versatile, efficient and accommodates generalisation expected in this type of study.

3.2 Population

The population of this study is all capital projects in the audit reports presented to the house of assembly in Lagos State government for five years of 2008 to 2012 for all the three hundred and thirty-one (331) Ministries, Departments and Agencies (MDAs) over the period covered. This study identified a population of one thousand and five (1005) capital projects upon which the research analysis is based.

3.3 Sample and sampling technique

The sampling procedure adopted for this research work is stratified random sampling. The sample size is two hundred and eighty- six (286) capital projects from the population of one thousand and five (1005). The sample was determined using Slovin's formula n = N/1+ N $(e)^2$, where *n* is the sample size, *N* is the population size, and *e* is the margin of error.

N = Population of 1005

e = Margin of error of 5%

n = 1005/1+ 1005 (e) ^{2}

n = 1005/1+ 1005 (0.05) ^{2} = 1005/ 1+2.5125

n = 1005/3.5125 = 286

Out of the sample of two hundred and eighty –six (286) capital projects, two hundred and twenty –eight (228) were successfully used for this study. This constitutes 80% of the sample as shown in Table 3.1.

Table 3.1. Sample of capital projects in Lagos State's auditor general's reports for 2008 to 2012

Year	Total no. of Ministries, Departments and Agencies covered	Population of capital projects in the audit comments as analysed by coders (10 coders)	Sample of capital projects	No. of capital projects used from the sample
2008	78	155	40	34
2009	38	96	32	29
2010	67	306	98	67
2011	75	251	64	55
2012	73	197	52	43
Total	331	1005	286	228 or 80% of sample

Source: Field survey 2013

3.4 Research instrument

For the purpose of this study, the research instrument is a questionnaire. The questionnaire is used by the coders to identify the audit opinion on internal control mechanism as it affects stewardship responsibility and capital project management The research variables to be measured are identified through content analysis of the selected audit reports. Hence, two aspects of audit comments were isolated. They are those having implications for internal control system deficiencies and capital project management.

The questionnaire contains a set of questions classified into two major sections 'A' and 'B. Section 'A' featured three questions on coders' bio-data. This includes designation and length of service in the public sector. Section 'B' comprised of eleven close-ended questions in 'Yes' and 'No' form. The categories being tested are internal control system deficiency and capital project management Therefore, the questionnaire is outlined and interpreted with points of '1' for 'Yes' and '0' for 'No'.

3.5 Method of data collection and analysis

3.5.1 Data collection

The most widely disseminated information on internal control deficiency that is available for public scrutiny is the statutory annual audit reports as presented by the Auditor general of the State to the House of assembly. These reports for 2008 to 2012 form the basis of this research. They constitute secondary data. A content analysis of the audit opinion contained in the audit report was done. In order to answer the research questions and test the formulated hypotheses, ten (10) coders were trained, tested and interchanged to review the audit reports on capital projects. The ten coders successfully analysed two hundred and twenty-eight (228) or about 80% of sample of capital projects (Table 3.1).

Coders' interpretation of the audit opinion sentences was recorded for the two variables highlighted for this study. Internal control system deficiency (ICSD) is the dependent variable. It is proxied with stewardship responsibility and financial complexity on the part of the government. The independent variable is capital project management (CPM) which is proxied as compliance with procurement policy and highlight of corruption indicators. The related data were collected as follows:

I. Internal control system deficiency (ICSD)

Following the system in Petrovits, Shakespeare, and Shih (2011) internal control system deficiency is measured by a combination of related factors as follows:

a. **Stewardship responsibility of government =** auditor opinion on capital project management, which is recorded as: unqualified opinion = 1, otherwise = 0

b. **Financial complexity** = if an organisation receives funds for various programs from several sources, such as Federation account allocation committee (FAAC), Internally generated revenue (IGR), donor agencies, grants and loans then there is presence of financial complexity. It is recorded as '1' if Yes '0' for No.

II. Capital Project management (CPM):

a. Compliance with procurement policy. Yes = 1, No = 0

b. Highlight of corruption indicators which is evidenced in the level of government satisfaction to failure in the duty of service. That is if audit report contains names of officials and contractors disciplined for corrupt tendencies. Ajenjo (2011) used it. If audit report contains names of contractors disciplined for corrupt tendencies, Yes = 1, No = 0.

If audit report contains names of contractors disciplined for corrupt tendencies, Yes = 1, No = 0

3.5.2 Inter-coders reliability test

In order to ensure an error free codification, an inter-coder reliability test was performed as shown in Table 3.2. Inter-coder reliability is an important issue in this type of content analysis. Inter-coder reliability or reproducibility "measures the consistency of shared understanding (or meaning) held by two or more coders" (Imbeau 2006, p. 8). No matter its source be it cognitive differences among coders, ambiguous coding instructions, or random recording errors, poor inter-coder reliability invalidates the analysis. In order to correct for cognitive differences and ambiguous instructions, coders were trained through the actual application of the unitising and coding schemes to real audit opinions in an iterative process.

After each unitising and coding exercise, disagreements were discussed. Unitising and coding rules were amended until a general consensus was reached. Chi- square 'X^2' test statistics was used for testing inter-coders' reliability because of its advantage of being usable for assessing unadjusted situations. This is to guide against incorrect assumptions and prevent incorrect statistical analysis (Waller and Johnson, 2013, p.2). The test was performed to check whether or not, for each variable, there was a significant difference among coders.

Table 3.2. Result of the Chi Square X^2 Test for inter-coders' reliability in identifying the research variables.

Item No.	Description	Results
1.	**Implication of sentence on internal control system deficiency**	
	(a) Stewardship responsibility of government:	
	Chi Square X^2	178.965[a]
	Degree of Freedom	1
	Significance	.000
2.	**(b) Financial complexity of government:**	
	Chi Square X^2	71.860[a]
	Degree of Freedom	1
	Significance	.000
	Implication of sentence on capital project management:	
3.	**(a) Compliance with procurement policy:**	175.439[a]
	Chi Square X^2	1
	Degree of Freedom	.000
	Significance	
	(b) Highlight of corruption indicators	186.123[a]
	Chi Square X^2	1
4.	Degree of Freedom	.000
	Significance	

Source: Field survey 2013

Table 3.2 depicts the result of the Chi- Square ''X^2'' test statistics for inter-coders' reliability in identifying all the research variables. The result shows 178.96 and 71.86 for items 1 and 2 on stewardship responsibility and financial complexity of government respectively. They are all at .000 level of significance. This indicates that the

coders are reliable in ascertaining sentences that have implication on internal control deficiency. Similarly for items 3 and 4, the result shows Chi- Square X^2 test statistics of 175.44 and 186.12 at .000 levels of significance, for compliancy with procurement policy, on fiduciary responsibility of contractors in the course of duty respectively. This test shows that there is significant consensus in all the research parameters tested. Therefore, this study recorded a high level of inter-coder's reliability.

3.5.4 Data analysis

The completed copies of the research instrument distributed were retrieved and analysed comprehensively, with both descriptive and inferential statistics. The profiles of coders outlined in section 'A' and the itemised questions featured in 'Section' 'B' were analysed through the use of quantitative descriptive statistics. Analysis of variances (ANOVA) statistics was used for answering the research questions, because 'it has the advantage of being used to analyse situations of several independent variables' (Field 2006:309). Besides it can accommodate this type of study of several independent variables because 'it is robust to violations of its assumption which are not completely inflexible' (Field, 2006, p.324)

Kendall's tau _b coefficient of correlation τ was adopted for hypothesis testing. It is regarded as ''a simple measure of correlation for analysing differences between sample means. It ''is a more accurate gauge of what the population would be'' (Field, 2006, p.31). The results of the statistically tested hypotheses were generated with the aid of Statistical Package for Social Sciences (SPSS) version 17.0.

4. Results and discussion

4.1 Frequencies

Table 4.1.1. Designation of coders

		Frequency	Percent	Cumulative Percent
Valid	ACCOUNTANT	98	43.0	43.0
	AUDITOR	130	57.0	100.0
	Total	228	100.0	

Source: Field survey 2013

Table 4.1.1 indicates that 43% of the capital projects were analysed by accountants while 57% were analysed by auditors. This indicates that codification of the audit reports was done by coders who have the expertise for the assignment.

Table 4.1.2. Years of experience of coders

		Frequency	Percent	Cumulative Percent
Valid	LESS THAN 5 YEARS	56	24.6	24.6
	5-10 YEARS	81	35.5	60.1
	ABOVE 10 YEARS	91	39.9	100.0
	Total	228	100.0	

Source: Field survey 2013

Table 4.1.2 indicates that the coders are well experienced at 35.5% and 39.9% for 5 to10 years and above 10 years of experience respectively. The possession of the combination of the required expertise and long service experience indicate that the job output is reliable.

4.2. Analysis of descriptive statistics

Table 4.2 shows the mean score of .05 for item 1 on audit opinion with implications on stewardship responsibility. This score is far from the maximum obtainable of 1 by .95. Items 2 and 3 on audit opinion with implications on financial complexity recorded mean scores of .21 and .64. The standard deviations are low since they are all below 1. This indicates that items 1, 2 and 3 are perceived by coders to affect internal control system

for capital project management in the Nigerian public sector. The generality of coders is in agreement in their opinion, in view of the low deviation from the mean.

Table 4.2. Descriptive statistics of data on the dependent and independent variables

Item No.	Description	N	Minimum	Maximum	Mean	Std. deviation
1	Audit opinion on government performance in capital project management is unqualified.	228	.00	1.00	.05	.23
2	Presence of donor agencies funding.	228	.00	1.00	.21	.41
3.	Presence of third party debt funding.	228	.00	1.00	.64	.47
4.	Compliance with procurement policy.	228	.00	1.00	.06	.24
5.	Discipline of contractors for capital projects malpractice.	228	.00	1.00	.05	.21
	Valid n (listwise)	228				

Source: Field survey 2013

The descriptive statistics in Table 4.2 recorded low mean scores for items 4 and 5 on capital project management at .06 and .05 respectively. This result is closer to the minimum and far from the maximum obtainable at .94 and .95. The standard deviations are low, which indicates that the coders are in agreement.

However, it is worthy of note that descriptive statistics was not possible for names of officials disciplined for corrupt tendencies in capital project management. This is because it was highlighted for analysis, but it recorded zero in all the 228 capital projects analysed.

4.3 *Answer to the research questions*

Tables 4.3 and 4.4 are used to answer the research questions.

Table 4.3. ANOVA of internal control system in terms of stewardship responsibility. *(Research question 1)*

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	6.961	2	3.480	147.796	.000
Within Groups	5.298	225	.024		
Total	12.259	227			

Source: Field survey 2013

Table 4.3 evidences significant effect of internal control system deficiency in terms of stewardship responsibility of government on capital project management in the Nigerian public sector. The ANOVA statistics recorded is $F (2, 225) = 147.796, <.05, \omega = .32$. The significant level is at.000. The effect size ω is calculated as follows:

$$\omega^2 = \frac{SS_M - (df_M) MS_R}{SS_T + MS_R}$$
$$= \frac{6.961-(2).024}{12.259+.024}$$
$$= .5628^2$$
$$= .32$$

Where; SS_M = Sum of squares for between group.
df_M =Degree of freedom
MS_R = Mean square for within group
SS_T = Total sum of squares

Table 4.4. ANOVA of internal control system deficiency in terms of financial complexity. *(Research question 2)*

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.024	2	.512	3.755	.025
Within Groups	30.672	225	.136		
Total	31.696	227			

Source: Field survey 2013

Table 4.4 shows a significant effect of internal control system deficiency in terms of organisation financial complexity on capital project management in the Nigerian public sector. However the effect size is minute at

.00056. This is based on the ANOVA statistics recorded at $F_{(2, 225)} = 3.755$, <.05, $\omega = .00056$ .The significant level is at.025. The effect size ω was calculated as follows:

$$\omega^2 = \frac{SS_M - (df_M)\ MS_R}{SS_T + MS_R}$$
$$= \frac{1.024-(2).136}{31.696+.136}$$
$$= .0236^2$$
$$= .00056$$

4.4 Test of research hypotheses

Table 4.5. Result of Kendall's tau_b Correlations for the independent and dependent variables

			CPM	ICSD- stewardship responsibility	ICSD- financial complexity
Kendall's tau_b	Capital project management	correlation coefficient	1.000	.749**	-.149*
		sig. (2-tailed)	.	.000	.017
		N	228	228	228
	ICSD- stewardship responsibility	correlation coefficient	.749**	1.000	-.123
		sig. (2-tailed)	.000	.	.050
		N	228	228	228
	ICSD- financial complexity	correlation coefficient	-.149*	-.123	1.000
		sig. (2-tailed)	.017	.050	.
		N	228	228	228

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Source: Field survey 2013

Hypothesis 1: Stewardship responsibility of government and capital project management:

In Table 4.5, hypothesis 1 predicts a significant positive effect between internal control system deficiency in terms of stewardship responsibility of government and capital project management in the Nigerian public sector. The correlation coefficient τ, between the two variables is .749. at the .01 level, two tailed. The significance value is .000 which is less than.01. Therefore, the effect of correlation is to the extent $(.749)^2$ which is equal to .56.

Hypothesis 2: Financial complexity and capital project management

Hypothesis 2 in Table 4.5 evidences a significant negative effect between internal control system deficiency in terms of financial complexity and capital project management in the Nigerian public sector. The correlation coefficient τ, between the two variables is -.149. at the .05 level, two tailed. The significance value is .017 which is higher than .01. Therefore, the effect of correlation is to the extent $(-.149)^2$ which is equal to .022.

Hence, In view of the analysed results of the Kendall's tau_ b non-parametric statistics in Table 4.5, this study rejects hypothesis 1 and concludes that there is a significant, positive effect of internal control system deficiency in terms of stewardship responsibility of government on capital project management in the Nigerian public sector. This study also rejects hypothesis 2 and concludes that there is a significant negative effect of internal control system deficiency, in terms of financial complexity on capital project management in the Nigerian public sector.

4.5 Discussion

These findings are as a result of the stewardship and capital project problem in the Nigerian public sector. The result clears any misunderstanding in the literature in this study area. It predicts that the internal control system is significantly deficient with up to about 52% effect size sometimes. This result indicates that whichever way internal control system is viewed in relation with capital project management it is seriously deficient at an above

average level in the Nigerian public sector. This study does not stand alone it supports the evidential tradition in this area of study. For instance, Jumare (2012) finds that, despite the urge for grassroots development, the capacity for such strategy is lacking in Nigerian local governments.

Ajenjo (2011) argues that internal control system has not been effective in controlling corruption in public administration because audit and inspection authorities focus more on evaluative and advisory functions than research tasks. Ayodele and Michael (2011) evidence internal control system deficiency. This result supports the findings in Amudo and Inanga (2009) which argue that effective internal control system are lacking in the public sector projects in Uganda.

5. Summary, conclusion and recommendations

5.1 Summary

This study is motivated by the need for internal control efficiency to improve the current level of capital project mismanagement in the Nigerian public sector. Taking cognisance of the existing body of knowledge in this area of study, this study aims at probing further into the causes and effects of internal control system deficiency on capital projects mismanagement in the Nigerian public sector. This is to contribute to the body of knowledge in this area of study.

The aim leads to two research objectives. And in order to provide evidential support to satisfy these objectives, two research questions were answered and two hypotheses were tested. A sample size of two hundred and eighty-six (286) capital projects from Auditor general's report for five years 2008 to 2012 was statistically identified for this study. Two hundred and twenty eight (228) capital projects were adequately analysed. The data analysis was carried out through the use of descriptive statistics in the form of frequencies, descriptive, Chi square X^2 and ANOVA. Kendall's tau _b coefficient of correlation τ was used to test the hypotheses.

The first objective was to examine the extent to which stewardship responsibility of government affect capital project management in the Nigerian public sector. This study predicts a significant, positive effect of internal control system deficiency in terms of stewardship responsibility of government on capital project management in the Nigerian public sector. The correlation coefficient τ, between the two variables is .749 at the .01 level, two tailed. The significance value is .000 which is less than .01. Therefore, the effect of correlation is to the extent $(.749)^2$ which is equal to .56.

The second objective was to find out the extent to which financial complexity affects capital project management in the Nigerian public sector. The result shows a significant, negative effect of internal control system deficiency in terms of financial complexity on capital project management in the Nigerian public sector. The correlation coefficient τ, between the two variables is -.149. at the .05 level, two tailed. The significance value is .017 which is higher than .01. Therefore, the effect of correlation is to the extent $(-.149)^2$ which is equal to .022.

5.2 Conclusion

The extent of internal control deficiency in capital project management is large at .52, which is worrisome. Also, the findings indicate internal control deficiency in the area of financial complexity. This is an evidence for funding agencies and government to utilise in their financing decision making. This study has largely achieved its aim and objectives. It has provided empirical evidence in support of the need for internal control system efficiency towards improving capital project management in the Nigerian public sector. This study has identified an area for finding solutions to the problem of hunger and poverty, based on infrastructural problems associated with capital project mismanagement in the Nigerian public sector.

This study has contributed to knowledge, in the area of a lasting reform of the governance apparatus by applying an internal control system to revamp capital project management mechanism. It affords the exposure of knowledge and information to network of users such as corporate individuals, public officers and electors. Institutions like rating agencies, donor agencies, and security agencies shall benefit from this study. Credibility of evaluation is enhanced with greater independence. It provides concise empirical evidences that internal control problems have negative implications on capital project management.

The results of this study are comparable with research findings in similar studies World- wide. It is in conformity with statistical research directions. Based on the quantitative analysis, the conclusions drawn from the results of this study are to a large extent similar to that established in the research tradition. This study clearly articulates the deficiency of internal control system and provides guidance for future research in internal control system.

5.3 Recommendations

Based on the conclusions reached in this study, the following recommendations are hereby made:

i.   The Nigerian public sector should strengthen its internal control system towards effective capital project management, especially as they work towards ensuring that all capital projects are executed to a logical conclusion. Project abandonment should always be avoided.

ii. The effect size of government poor stewardship is the highest in this study, which indicates that government has to seriously improve on stewardship. Federal and States Governments of Nigeria should sit up in stewardship to citizenry and fatherland for improvement in capital project management to ensure fast and sustainable economic development of the country.

iii. In view of the finding on financial complexity, government should only bite what it can chew at a time and concentrate on capital projects that can be delivered to time. This would minimise internal control deficiency in financial complexity and capital projects mismanagement

iv. There was no audit opinion on erring public servants for capital project mismanagement. In order not to encourage insider abuse, this oversight should be improved upon. This will improve stewardship and accountability.

v.   The scope of this study is limited to Nigerian public sector at the state government level. It provides a frame work for future researches which might be necessary to cover other tiers of government private and Non – Governmental Organisation (NGO) sectors of the Nigerian economy.

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