

# **The Effect of Control Measures in the Power Sector Reforms on Electricity Development in Nigeria**

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## **Abstract**

This work examined the effect of the control measures available for project evaluation and monitoring in power sector reforms on electricity development in Nigeria. Electric power reforms are necessary for private sector participation in electricity development in Nigeria in order to break monopoly in that sector of the economy. In the course of this study, we employed fairly closed-ended and few open-ended questionnaire as research instrument. Also, data were gotten through personal interview with top management staff of Enugu Electricity Distribution Company (EEDC) at Corporate Headquarters, Enugu. While secondary data were collected from in-house News journal (NEPA Profile), Journal articles, Publications on national Newspapers and Magazines. Data collected from both primary and secondary sources were analysed using the spearman Rank correlation co-efficient, percentages, frequency tables, and Chi-square. We postulated three hypotheses and the results of the test revealed that there is positive and significant relationship between internal control measures in power sector reforms and electricity generation and distribution on one hand and efficient and effective project evaluation and monitoring on another hand. Our finding also revealed that there are internal control measures available for management in the power sector but political office holders normally compel the staff to ignore such control. We therefore recommend that investors should make fund available for generation and distribution companies to enable them complete on-going projects in order to enhance power supply in the country. There should be effective monitoring and evaluation of projects by ensuring that oversight function of the National Assembly is operational without executive interference.

Government should not protect any public office holder found diverting project funds. This study contributes to knowledge gap on the challenges of electricity development in Nigeria. It is of worthy to note that electricity is the drivers of all sectors of the economy and as such all users of electricity and government stand to benefit from this work. The importance of the study cannot be over emphasized. We would be able to ascertain from this study the problem associated with electricity development in Nigeria. This study apart from providing solution to power outage that affects the households, the firms and government, would assist further researches in the related areas of the study.

**Keywords:** Control measures, Power sector reforms, Electricity development.

### **Introduction**

According to Akhere (2008) the rationale, basis and authority of the Nigerian Government's involvement in the act of power generation and distribution, obviously a major economic sector is beyond question. For many years the National Electric Power Authority (NEPA) has enjoyed unbridled monopoly in power generation and distribution in Nigeria. It goes without saying that power supply in Nigeria which began in Ijora in 1896 before 1914 amalgamation, through the emergence of the Electricity Company of Nigeria in 1962, a one hundred percent fully owned Government Company which later metamorphosed to NEPA, has been anything but satisfactory. With the nearly one hundred and seventy million Nigerians in need of constant supply of electricity today, coupled with our unprecedented surge in industrial activities, the need for efficient and steady power supply in Nigeria is top priority. Various administrations since independence have failed woefully to redress this grave need. It is common knowledge that power is a *sin qua non* to the manufacturing industry. The health of a nation's Gross Domestic Product (GDP) is investment proportional to the manufacturing activities the nation is engaged in. Manufacturing as we know is in effect the transfer of raw materials into finished goods.

The Obasanjo administration's at reforming the power sector on assuming office in 1999 started with the appointment of Bola Ige of the blessed memory, on assumption of office promised to make epileptic power supply in Nigeria a thing of the past. This was not to be as the problems with this sector were endemic and more profound and monumental than the honorable minister thought. The seemingly intractable problem in this sector was the monopoly of that inefficient and corrupt NEPA. Realizing this, government had earlier passed an Act in 1998 setting up the Power Holding Company of Nigeria Plc, to end NEPA's monopoly and encourage private participation in the power sector of our economy. The participation of only a few private companies in this sector did not, as envisaged matters largely because the laws governing the operations of private companies in power generation and distribution in Nigeria did not provide enough incentives to private companies. Today, NEPA has been broken into six generation companies and eleven distribution companies all under the control of the Nigeria Electricity Regulatory commission (NERC), set up in 2005 to make private sector participation in this all important sector of our economy attractive and productive.

The Electricity Power sector Reform Act 2005, was passed setting up the commission with responsibilities to license companies to generate, transmit and distribute electricity in Nigeria. In addition, the government has taken steps to expand the existing generation capacities by the Ogun State, Abia State, Ondo State stations as well as encouraging independent power producers to buy into Kwale, Abuja Obajana and Enugu plants (Akhere, 2008). These well intentions lofty plan are all well and good, provided that those people implementing them operate with the general good in mind. It is hoped however, that with the arrival on the scene

of the Electricity Regulatory Commission fully and adequately funded, the situation in the Nigeria Power sector, where hitherto there has been much motion without movement can now be reversed. This however is not without challenges. Thus, Jonathan administration pursued privatization of Power Holding Company of Nigeria (PHCN) vigorously and in October, 2013 some successor companies of PHCN were handed over to private investors. Since the handover of Generation companies (Gencos) and Distribution companies (Discos), one can only see motions without movements on the part of new investors, hence electric supply has not improved as expected. In view of the development, the researcher was interested in investigating the effect of control measures in power sector reform on the development of electricity in Nigeria.

### **Statement Of Problem**

The Coalition Against Corrupt Leaders (CACOL) was concerned that the Federal government has developed a penchant for rubbishing any report that unsettles it by setting up other phony committees to review reports compiled by statutory panels or lord it over agencies that comes up with such reports. The treatment meted out on the Uwais led Electoral Reform Panel and Ndudi Elumelu led committee on power probe by setting up a review panel is the latest of the antics of different arms to the Yar'Adua's government to bail their indicted cronies out of their malfeasance, (Obikwelu, 2008). Epileptic power supply, which has been the bane of our country, cannot help and has actually hampered manufacturing activities in Nigeria. Lack of constant supply of electricity is not only a drag on manufacturing but also bound to affect productivity in the rendering of services by three of the four economic decision makers in the market place i.e. the households, the firms and the government. The above deleterious effects of deficient power generation and distribution must have informed various efforts by various governments at power sector Reforms in Nigeria.

It is worrisome that despite all effort of successive governments in Nigeria, regular power supply has eluded the citizenry. Poor power generation and distribution is a great concern for individuals, businesses and organizations especially when it was on good record that enormous public funds were committed to electricity development in Nigeria. Hence, the need to investigate the extent to which control measures in power sector reforms have enhanced electricity development and constant power supply in Nigeria.

### **Objectives of the study**

The main objective of this study is to examine the effectiveness of control measures in the power sector reforms on electricity development in Nigeria. Other specific objectives include:

1. To determine the effect of project monitoring and evaluation in power sector reforms on electricity growth in Nigeria.
2. To examine the challenges and opportunities of power sector Reforms on electricity development.

### **Research Questions**

1. What are the internal control measures available for project monitoring and evaluation in Power Sector Reforms?
2. What are the challenges and opportunities of power sector reform for sustainable power supply in Nigeria?

### **Hypotheses**

1. Ho: There is no significant relationship between internal control measures in power sector reforms and project monitoring and evaluation.

Hi: There is positive and significant relationship between internal control measures in power sector reforms and project monitoring and evaluation.

2. Ho: Sustainable power sector reforms would not enhance electricity development in Nigeria.

Hi: Sustainable power sector reforms would enhance electricity development in Nigeria.

## **Review Of Related Literature**

### **Historical Background Of Electricity Generation In Nigeria**

As stated in Okorie (2004) Electricity generation in Nigeria began in 1896. The Nigerian Electricity Supply Company (NESCO) commenced operations as an electric utility company in Nigeria in 1929 with the construction of a hydroelectric power station at kurra near Jos in Plateau State. The Electricity Corporation of Nigeria (ECN) was established in 1951, while the first 132KV line was constructed in 1962, linking Ijora power station to Ibadan Power station. The Niger Delta Authority (NDA) was established in 1962 with a mandate to develop the hydropower potentials of the country. However, ECN and NDA were merged in 1972 to form the National Electric Power Authority (NEPA).

In 1998, Nigeria ceased to have an exclusive monopoly over electricity generation, transmission, distribution and sales. The National Electricity Grid generation, presently consists of nine generating stations (i.e. three (3) hydro and six (6) thermal) with a total installed generating capacity of 5906MW.

The demand for electricity is estimated to be about 9, 500MW. However, the present generation level is about 3,500MW. There is about 2,400 MW of self generation in the form of small diesel and petrol generating sets. The estimated percentage of Nigerians having access to electricity from NEPA is only 36%. The estimated demand for power in 2015 is about 9,780MW. This will require a generating capacity of about 12,700MW.

Thus, it is necessary to fully rehabilitate the existing power stations (which will provide a maximum of 5,400MW generating capacity), rehabilitate some critical transmission and distribution lines and other associated sub-stations and add new generating, transmission and distribution capacity from Nigeria Integrated Power Projects (NIPP) to the Grid, in the immediate and foreseeable future. It was expected that the projects will contribute about 1968MW to National Grid bearing in mind the mandate of 6,000MW by December, 2014. This shows that NIPP is to account for 33% of the 6,000MW. We discovered that some of the NIPP projects are yet to be commissioned as at the time of this study.

### **Power Sector Refroms In Nigeria.**

The call for power sector reform in Nigeria is primarily as a result of inadequate electricity supply, incessant power outages, low generating plant availability and high technical and non-technical losses that characterize the Nigeria Electricity industry (Okoro, 2005).

The Federal Government in 2000 adopted a holistic approach of restructuring the power sector and privatizing of business units unbundled from NEPA. By this development, NEPA would be unbundled into seven Generation companies (Genocos), one Transmission company (Transyco) and eleven Distribution companies (Discos). This arrangement is expected to encourage private sector investment particularly in generation and distribution.

This will definitely break NEPA monopoly and pave way for the entry of independent power producers (IPPs). The structure has since come into effect in January, 2004 into what is now called the Power Holding Company of Nigeria (PHCN). This structure is to be test-run for two years with a down-pruned management team at the headquarters, while the individual

managers of the unbundled segments are expected to enjoy some level of autonomy (Okafor, 2005).

In the new arrangement, Transysco will be government owned and managed by system operators (SO) and transmission operators (TO). The reform bill, approved by the Federal executive council (FEC) is intended to achieve five objectives:

1. Unbundle NEPA
2. Privatize the unbundled entities
3. Establish regulatory agency
4. Establish rural electrification agency and fund.
5. Providing a legal basis with necessary enabling provisions for establishing, changing, enforcing and regulating technical rules, market rules and standards.

In November 2005, The Nigerian Electricity Regulatory Commission (NERC) was inaugurated and charged with the responsibility of tariffs regulations and monitoring of the quality services of the PHCN.

### **Theoretical Framework**

Financial control can be defined as the process which assures that financial resources are obtained economically and used efficiently and effectively in accomplishment of desired goals (Oshisami, 1994). Traditionally, financial control has concentrated on monitoring and controlling inputs, regardless of the outputs achieved rather than the cost of resources consumption. Mainoma(2009) observed that financial control has concentrated on the control of cash flows, purchasing procedures and accountability of budget holders for current expenditure on resources input. Tiku (2001) defines financial control as the process that the management in public sector seeks to obtain in order to sustain the objectives of efficiency, effectiveness and economy in the process of managing financial and human resources.

Financial management in the public sector rotates heavily around the financial control systems that ensure the safety of funds, stores and plants. Its main objective is to conserve funds and other resources for future use. The focus of public administrators is directed towards where and how to raise adequate financial resources as well as applications of such funds in an efficient and effective manner.

When reviewing the development of financial control, two fundamental conditions are borne in mind. First, effective budgetary control system must mirror the organizational structure and accountability framework. Secondly, for budgetary control to be effective, it is essential that the cost or expenditure reported against budgets must be reliable and quickly available for discussion and for management action or else the whole budgetary exercise will lose credibility and authority. Jones and Pendlebury (1996) opined that budgetary control is concerned with ensuring that actual expenditure is in line with budgeted amounts and that the objectives and levels of activity envisaged in the budget are achieved.

Control and controls are often erroneously used interchangeable. Control is a leadership function (controllership) while controls are operational functions (Oshisami, 1994). Control will however be meaningful and effective if the controls are functioning at tolerable and acceptable levels. Financial control can be classified into different categories based on what aspect to be controlled, mode of effecting the control, focus and the control system design.

### **National Integrated Power Projects (Nipp)**

As an intervention of the federal government to salvage the precarious situation of electric power shortages in the country, the National Integrated power project (NIPP) was initiated

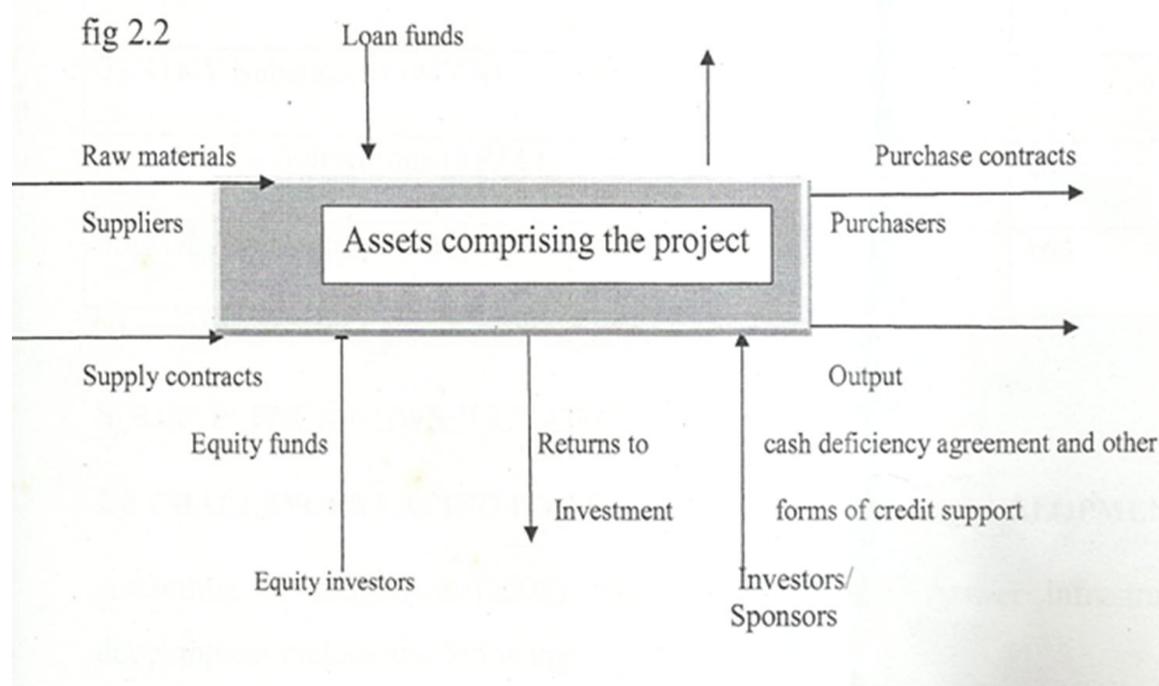
late 2004 to inject some new generation capacity into the National Grid through the construction of new medium-sized power plants on a fast tract basis and to provide the ancillary infrastructure to evacuate power from the new generation plants to major load centers for on-ward distribution to electricity consumers throughout the nation.

In the words of Obikwelu (2008), a project can be defined as a time endeavour undertaken to create a unique product or service that either brings about beneficial change or adds value to the system. Historically, infrastructure development were public works which were funded from public funds because they were too costly for private sector participation due to their large initial capital outlay, the slow rate of returns on investment, and the risk that the project will never be profitable. Thus, several developing country governments regarded the services that infrastructural projects provided such as public water supply system, telecommunication services and public electricity as public utilities. Their services were provided to improve on the welfare of the people.

In the 1980s, some developed countries had to find alternative sources of finance for infrastructural projects. For example, rising energy cost during the late 1970s and early 1980s led the United States (US) to pass legislation that made it possible for utilities to purchase power from independent power producers (IPP) by way of long term power sale and purchase agreements. Basically, project financing has two requirements:

- i. Technical feasibility
- ii. Economic viability

The basic elements of project financing are as shown in fig. 2.2 below:



Source: NEPA Profile, (2004)

### Research Design And Methodology

This study is a descriptive survey. Questionnaire and oral interviews were used to determine the opinions, preferences, attitudes and perceptions of the respondents about issues. The

study was carried out in Enugu Electricity Distribution company one of the successor companies of Power Holding Company of Nigeria (PHCN). All the eighteen business units in the zone were surveyed. The Business Units are Aba, Abakaliki, Abakpa, Ariaria, Awka, Awkunanaw, Ekwulobia, Mbaise, New Owerri, Nnewi, Nsukka, Ogbaru, Ogidi, Ogui, Onitsha, Orlu, Owerri and Umuahia.

The population of the study consist of management staff from Enugu Electricity Distribution Company (EEDC). Forty (40) senior staff from Zonal headquarters and forty (40) field management staff randomly selected from all the Business units of Enugu Electricity Distribution Company, who are in position to give vital information on control measures in power sector reforms as it affects Power Holding Company of Nigeria (PHCN) Plc. The distribution of the population was as follows:

• Finance and Account Sector	-	30
• Internal Audit Unit	-	15
• Distribution Sector	-	15
• Marketing Sector	-	15
• Administration and Services	-	5
<b>Total population</b>	<b>=</b>	<b>80</b>

The population of the study was small and as such there was no need for Sample and sampling technique. The whole population (80) was used.

The major statistical tools that were applied in the analysis of data collected on this study, mostly in testing of the stated hypothesis include the spearman Rank Correlation Co-efficient (R) and Chi-square test ( $\chi^2$ ).

### **Spearman Rank Correlation Co-Efficient (R)**

The Spearman Rank Correlation Co-efficient is represented by the letter "R". Its purpose is to establish whether there is any form of association between two variables when the variables are arranged in ranked form.

$$R = 1 - \frac{6\sum d^2}{n(n^2 - 1)} \quad \text{or} \quad 1 - \frac{6\sum d^2}{n^3 - 1}$$

To apply this statistical tool the respondents were divided into two groups A and B. In this study Group 'A' constitute of staff of Power Holding Company of Nigeria on management Cadre at Zonal office, while Group 'B' comprised of field Senior Staff in the various business units of Enugu Electricity Distribution Company.

### **Formular For Chi-Square ( $\chi^2$ )**

Chi-square is a statistical test commonly used to compare observed data with data we would expect to obtain according to a specified hypothesis. It is also used to test "goodness of fit" or test of independence.

### **Data Analysis And Interpretation**

A total of eighty (80) copies of questionnaire were distributed to both groups A and B. This comprises of forty (40) copies of questionnaire to each group out of the total number administered, sixty-four (64) copies of questionnaire were received, this representing about

80% of the total number distributed, while 20% of the questionnaires were not received. This gave thirty-four (34) of the questionnaires received from group 'A' while thirty (30) were received from group 'B'. These represented about 43 and 37 percents respectively of the initial numbers of the questionnaire administered. The details of the distribution and collection are shown in table 4.1 below:

Table 4.1  
Distribution And Collection Of Question

RESPONDENTS	NUMBER OF QUESTIONNAIRES DISTRIBUTION	NUMBER OF QUESTIONNAIRE RECEIVED	PERCENTAGE %
Group A	40	34	43%
Group B	40	30	37%
<b>Total</b>	<b>80</b>	<b>64</b>	<b>80%</b>

Source: Research Data, 2013

At this point, the researcher decided to maintain equal number of respondents for both groups A and B. These gave sixty (60) or about 75% of the initial distributions. This decision was backed up by the use of purposive sampling technique. It is normally applied in study of organization, community, or some other clearly defined and relatively limited group. In purposive sampling, we usually would have one or more specific predefined groups we are seeking (Ezinwa, 2011).

Table 4.2  
Transmission Capacity

DESCRIPTION	PRE-NIPP	POST-NIPP	% INCREASE
330/132KV Cap (MVA)	6,008	11,500	73
132/33KV Cap (MVA)	7,805	11,118	42
132KV Line Length (KM)	6,227	7,036	13
330K Line Length (KM)	4,738	6,932	46

Source: Research Data, 2013

Average increase in transmission capacity from NIPP was 48%. (See table 4.2 above).

Table 4.3  
Distribution Capacity

DESCRIPTIONS	PRE-NIPP	POST-NIPP	% INCREASE
33KV Route Length (KM)	45,252	47,538	5
11KV Route Length (KM)	31,973	36,648	15
0.41KV Route Length (KM)	232,862	245,905	6
33/11KV Substations (MVA)	8,149	11,694	3
11/0.415KV Substations (MVA)	11,810	14,878	26
33/11KV Substations (NO)	32,000	84,170	163

Source: Research Data, 2013

Average increase in distribution capacity was 36.33%. (See table 4.3 above).

Table 4.4  
Frequency Table For Question One

RANKING	RESPONDENTS		TOTAL
	GROUP A	GROUP B	
(A) Greater Extent (5)	10	8	18
(B) Considerable Extent (4)	6	7	14
(C) Moderate Extent (3)	5	8	13
(D) Slight Extent (2)	6	7	12
(E)Not at all (1)	3	0	3
<b>TOTAL</b>	<b>30</b>	<b>30</b>	<b>60</b>

Source: Research Data, 2013

### Testing Of The Hypotheses

The purpose of testing the hypothesis is to enable us make decision about the assumptions stated at the beginning of the research study.

### Testing And Discussion Of Findings On

#### Hypotheses One

H<sub>0</sub>: There is no significant relationship between internal control measures and performance of Management in power sector reforms.

H<sub>1</sub>: There is significant relationship between internal control measures and performance of Management in power sector reforms.

### 4.5 Frequency Of Responses For Question One

RANKING	RESPONDENTS		TOTAL
	GROUP A	GROUP B	
(A) Greater Extent (5)	10	8	18
(B) Considerable Extent (4)	6	7	14
(C) Moderate Extent (3)	5	8	13
(D) Slight Extent (2)	6	7	12
(E)Not at all (1)	3	0	3
<b>TOTAL</b>	<b>30</b>	<b>30</b>	<b>60</b>

### 4.6 Computation Of The Spearman Rank Order Corelation Co-Efficient (R) From Responses (Ranking) On Question One.

S/NO OF RESPONDENTS	GROUP A RANKING	GROUP B RANKING	AB	A <sup>2</sup>	B <sup>2</sup>	D (A-B)	D <sup>2</sup>
1	5	5	25	25	25	0	0
2	4	4	16	16	16	0	0
3	5	4	15	9	25	1	1
4	5	4	20	25	16	1	1
5	4	3	12	16	9	1	1
6	3	2	6	9	4	1	1
7	5	5	25	25	25	0	0
8	3	4	16	16	16	-1	0
9	3	3	9	9	9	0	0
10	5	4	15	9	25	1	0

11	5	4	20	25	16	1	1
12	2	2	4	4	4	0	1
13	2	3	12	16	9	-1	1
14	5	5	25	25	25	0	0
15	3	2	6	4	9	1	1
16	1	2	4	4	4	-1	1
17	5	5	25	25	25	0	0
18	1	2	2	1	4	-1	1
19	3	4	16	16	16	-1	1
20	2	3	6	4	9	-1	1
21	5	5	25	25	25	0	0
22	4	5	20	16	25	0	0
23	2	2	4	4	4	0	1
24	4	5	20	16	25	0	0
25	5	5	25	25	25	0	0
26	4	3	12	9	16	1	1
27	4	5	15	9	25	-1	1
28	1	2	2	1	4	-1	1
29	4	3	8	4	16	1	1
30	2	3	3	1	9	-1	1
	<b>£A = 100</b>	<b>£B = 100</b>	<b>£AB = 405</b>	<b>£A<sup>2</sup> = 456</b>	<b>£B<sup>2</sup> = 456</b>	<b>£D = 0</b>	<b>£D<sup>2</sup> = 19</b>

To check whether our computation was correct, we had to sum the deviations and make sure that it is equal to Zero "0", ie Ed = 0.

The sum of the squared deviation  $Ed^2 = 19$

Therefore to compute for:

$$\begin{aligned}
 R &= 1 - \frac{6Ed^2}{n(n^2 - 1)} \\
 &= 1 - \frac{6 \times 19}{30(30^2 - 1)} \\
 &= 1 - \frac{114}{26999} \\
 &= 1 - 0.0042224 \\
 &= 0.9957776
 \end{aligned}$$

$$R = 0.99578$$

As we had stated in the beginning (R value of 0.99578) indicates a positive perfect correlation between the responses of the two groups A and B. To test whether to accept or reject the Null hypothesis we compute for Z – test statistics with formular:

$$\begin{aligned}
 Z &= R \sqrt{\frac{n-1}{30-1}} \\
 &= 0.99578 \sqrt{\frac{30-1}{30-1}}
 \end{aligned}$$

$$= 0.99578 (5.3852)$$

$$= 5.3625$$

Therefore, calculated Z – test value is 5.36.

From the Z - test at 0.05 level of significance the tabulated value or the critical value + 1.96 which is less than the computed value of 5.36. This therefore rejects the Null hypothesis since the value 5.36 falls outside the acceptance region for two tailed test.

### Testing Of Hypothesis Two

Ho: Sustainable power sector reforms would not enhance development of electricity in Nigeria.

H1: Sustainable power sector reforms would enhance development of electricity in Nigeria.

QUESTION TWO:

Do you agree that unbundle of NEPA would enhance power supply by Power Holding Company of Nigeria (PHCN) Plc?

Table 4.7

Responses From Question Two

OPTION	RESPONDENTS		TOTAL	PERCENTAGE
	GROUP A	GROUP B		
AGREED	23	24	47	78%
DISAGREED	7	6	13	22%
<b>Total</b>	<b>30</b>	<b>30</b>	<b>60</b>	<b>100%</b>

Descriptive statistics was used and all responses from respondents that fall under strongly agreed, agreed and undecided were grouped as AGREED (that is, 3.00 and above of Likert scale mean score), while responses under disagreed and strongly disagreed were classified as DISAGREED (that is, mean score below 3.00).

Table 4.8

Chi-Square Computation

S/N	O	E	O - E	(O - E) <sup>2</sup>	(O - E) <sup>2</sup> /E
1	23	23.5	-0.5	0.25	0.25/23=0.0109
2	24	23.5	0.5	0.25	0.25/24=0.0208
3	7	6.5	0.5	0.25	0.25/7=0.0357
4	6	6.5	-0.5	0.25	0.25/6=0.0417
<b>Total</b>			<b>Σd=0</b>		<b>χ<sup>2</sup> = 0.1091</b>

Source: Research Data, 2013

The result of the Chi-square test revealed P – value of 0.1091 > 0.05 and this supports null hypothesis that stated that sustainable power sector reform would not enhance development of electricity in Nigeria. This shows that no amount of reforms will be meaningful if the fight against corruption in private and public life is not won.

### **Summary Of Findings**

The following findings were made:

1. Our investigation revealed that the public office holders normally meddle with the affairs of Power Holding Company of Nigeria in terms of project funding and award of contracts. As part of the power sector reforms initiative. National Integrated Power Project (NIPP) was to assist in power generation in the country.
2. The challenges of power sector reforms are many. The challenges involve economic and social, technical, political issues and environmental factors. There are opportunities in power sector reforms because more jobs will be created.
3. There is need for project Monitoring. Projects are not properly evaluated and monitored because of fear of public office holders. Management is expected to ensure that projects are evaluated and monitored to achieve the desired result.

### **Conclusion**

In the underdeveloped and developing countries, electricity supply has remained through government vertically integrated monopoly. It is generally believed that this monopolistic structure has contributed to the underdevelopment, inefficient service delivery and poor financial capacity of the electricity sector characterized by unrealizable power supply/ low capacity utilization and availability factor, poor maintenance application, defective procurement processes, high technical losses which can be as high as 10 - 12% and non-technical losses (Obikwelu, 2008).

The sector is also affected by regulated and low tariff regime and low return on investment which has made the power sector less attractive. To reverse the ugly situation, the federal government approved the Electric Power Sector Reform Act, 2005. Like other developing countries, the driving force for the reform programme was aimed at attracting private sector participation due to shortage of government revenue for adequate investment in the sector. High population growth rate, unreliable population figures, ineffective demography, inadequate education, inadequate public health and transportation systems, underdeveloped agricultural sector as well as high debt level among others compete for the attention of fund derived mainly from oil revenue. This has resulted in inadequate funding of the power sector with its attendant fragile electricity system and unstable power supply.

### **Recommendations**

Based on the findings the researcher is disposed to make the following RECOMMENDATIONS for sustainable power sector reform in Nigeria:-

1. Funding the construction of power stations.
2. Eradication or minimization of corruption in Electricity Distribution Companies in Nigeria.
3. Protection of investors in Power Sector by Government.
4. Better customer orientation, discipline and accountability by staff and management of Electricity Distribution Companies in Nigeria.

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