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Rethinking Public Procurement System in Nigeria: The E-Procurement Option (A Study of Selected Local Government Areas in Southern Nigeria)

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ABSTRACT: *This study is on Rethinking Public Procurement System in Nigeria: The E-Procurement Option using Selected Local Government Areas in Southern Nigeria as the case study. Its objective is to ascertain if e-procurement can effectively bring about change in three critical areas of public procurement concerns, which includes; transparency, efficiency and compliance to public procurement policies. In this paper, survey approach was used and data was collected through a five point likert scale questionnaire. The statistical tool used for data analysis is the non-parametric chi-square test (χ^2), at 0.05 level of significance, using the 20.0 version of SPSS. The study covered a population of 71 persons, selected from two Local Government Areas each from the eleven states of south-east and south-south zone of Nigeria. However, using the Yaro Yamene's formular, the actual sample studied was 60 respondents. It is therefore the conclusion of this study that compliance to e-procurement is an acceptable model that can bring about the needed change in the Nigerian public procurement system. In line with the findings and conclusion, the researchers recommend that; There is need for the introduction of e-procurement system in Nigeria, thereby phasing out the current procurement approach especially at the local government areas and that adequate and continuous training of public procurement officers on modern changes in procurement policies and processes is advocated by the researchers.*

KEYWORDS: bureaupathology, efficiency, e-procurement, public procurement system

I. Introduction

All over the world, the essence of governance is to provide public goods and services to the largest number of people. Because government controls the common patrimony of the people, it behooves on the government to ensure the judicious use of these public resources. However, in the quest to provide essential public services, operators of government systems (civil/public servants) are challenged in the procurement process; this has created vices such as contract sum inflation (like seen in the recent budget padding saga in the Nigerian Federal House of Representatives), insider information and outright neglect of procurement laws and processes. In Nigeria today, it is no longer news to hear of over bloated recurrent expenditure in the annual budget. In fact in the most recent budget (the 2016 budget) which has just been passed by the national assembly into appropriation law, recurrent expenditure is said to have taken over 70% of the total budget. This may not be unconnected with expense padding and other fraudulent procurement processes that arbitrarily increase the cost of items beyond their market value. Moreover, some of the items included in the budget are never procured or at best they end up in private households (bureaupathology), this can be linked to poor procurement tracking system that can guarantee the integrity of the procurement process while enhancing good governance. A case in point is what is today known as DASUKIGATE, whereby a public government officer (former) in Nigeria is alleged to have diverted public funds meant for arm procurement to satisfy friends and personal political quest. This case mirrors the weakness in Nigeria's current public procurement process and therefore advocates the need for a rethink in the way and manner public procurement is done in Nigeria. The general objective of this paper therefore is to examine how e-procurement can enhance the effectiveness of public procurement process in Nigeria using selected Local Government Areas in southern Nigeria

i. Examine the contributions of e-procurement to the enhancing of transparency in public procurement process
ii. Examine the contributions of e-procurement to the enhancing of efficiency in the procurement process

iii. Examine the contributions of e-procurement to effective monitoring and compliance to public procurement laws in Nigeria

II. Hypotheses

The researchers raised the following hypotheses to serve as a guide to this study;

H_{O1}: e-procurement does not contribute significantly to the enhancement of transparency in public procurement process

H_{O2}: e-procurement does not contribute to the enhancement of efficiency in the procurement process

H_{O3}: e-procurement does not contribute significantly to effective monitoring and compliance to public procurement laws in Nigeria

III. Review of Related Literatures

Meaning of Public Procurement and e-procurement

is a comprehensive function which involves activities and processes for the purpose of attaining or acquiring products and services. In addition, procurement activities can cover up establishing fundamental requirements, negotiation of contracts, and sourcing activities including market research and supplier evaluation as well as purchasing activities required for the purpose of placing an order and receiving goods and services. The main goal of procurement is to receive the right product or service at the right and predefined time, at the specified location, with the right quality and at the right price carrying out the entire process of purchasing efficiently and effectively (Enporion 2005). According to Lyson, (1996) organizational procurement may be defined as that function responsible for obtaining by purchase, lease or other legal means, equipments, materials, supplies and services required by an undertaking for use in satisfying wants. The definition of the overall purchasing task is "to obtain materials, goods and services at the right quality, in the right quantity from the right source delivered to the right place at the right time at the right price, to achieve an organizational objective). In other words, Public Procurement is the process by which organizations acquire goods, works and services using public funds. It is a comprehensive process that runs from proper procurement planning, budget allocation, bids invitation, bids evaluation, award of contract, contract management, performance measurement, monitoring, auditing and reporting.

E-Procurement according to Presutti (2003) is an information technology-based procuring system that lies at the input end of the supply chain. Scholars see e-procurement as an emerging phenomenon in the business world that calls for a systematic analysis. Traditionally, e-procurement already has involved a number of communication mediums to support procurement processes between the different parties like the use of mail, phone, fax, EDI and more recently, email and the internet. As Hawking et al. (2004) claimed, e-procurement has involved the use of electronic technologies to streamline and enable the organizations procurement activities. There is no universal definition for e-procurement as Gunasekaran and Ngai (2008) claimed. Moon (2005) stated that e-procurement is described as a comprehensive process in which IT system has been used to establish agreements for the acquisition of products or services (contracting) or purchase products or services in exchange of payment(purchasing). E-procurement has various elements like electronic ordering, internet bidding, purchasing cards, reverse auctions and integrated automatic procurement systems. Davila et al. (2003) defined e-procurement technology as any technology designed to support the organizational acquisition of goods over the internet. It includes e-procurement software, B2B market exchanges and purchasing consortia. It is focused on automating workflows, consolidating and leveraging organizational spending power, and identifying new sourcing opportunities through the internet. Raghavan and Prabhu (2004) referred to the CIPS´s definition of e-procurement as the "electronic acquisition of goods and services including all processes from the identification of a need to purchase of products, to the payment for these purchases including post-contract/payment activities such as contract management, supplier management and development.

Common Public Procurement Principles

The Public Procurement Act identifies the following principles affecting the achievement of good procurement objectives.

- *Professionalism:* Professionalism is the discipline whereby educated, experienced and responsible procurement officers make informed decisions regarding procurement operations. It is in the recognition of this

fact that the Public Procurement Authority focuses its resources on the training, professional development, promotion and support for individuals that are engaged in public procurement to ensure adherence to professional and ethical standards (Adjei AB, 2006).

❖ *Transparency, Competitiveness and Fairness:* Transparency means that the same rules apply to all suppliers of goods, works and services and that these rules are publicized as the basis of procurement decisions prior to their use. Transparent procurement procedures can contribute to a more efficient allocation of resources through increased competition, higher quality procurement and budgetary savings for governments and thus for taxpayers. To avoid corruption in the public procurement systems there is the need to publish calls for tenders, notifying contract awards in the media, including the successful bidder's name and final price, and making award criteria more transparent and accountable. These are some of the basic principles of transparency in government procurement which directly affect corrupt practices (Evenett et al, 2005). This position has been collaborated by Barden (2006) when he opined that, government agencies can achieve transparency by strategizing through effective and efficient advertising; publicly opening bid documents; effective evaluation of bid documents; the publication of award results; fair and speedy protest and dispute resolution handling processes and the disclosure of signed contracts; and the use of independent evaluation methods, that are consistent with the terms of bid documents.

❖ *Value for Money in the Procurement Process*: This is the optimum combination of whole cost and quality of a product to meet the customer's requirements. It is reflected in the price of the item or service procured. It has to be noted that Value for Money (VFM) is a critical measure of the effectiveness of the procurement process, its outputs and outcomes. Achieving VFM requires a strategic and integrated approach to procurement. This, of course, has significant organizational and institutional implications. This in procurement function is an important test against which well functioned procurement management must be addressed to justify a procurement outcome as necessary conditions for best value, transparency and accountability in public procurement (World Bank, 2003). It is associated with deployment of resources for realization of some expected value in an economic, in efficient and effective manner. The concept of value for money concerns not only the acquisition price/cost but also takes into consideration efficiency and effectiveness of a procurement process.

❖ *Efficiency*: Efficient public procurement system is the one which operates in a timely manner, with a minimum bureaucracy, while being responsive to the needs of the ultimate users of the goods or facilities procured. Efficiency is defined narrowly in terms of value for money – the best quality at the lowest cost. In this view, efficiency is best secured through open competition, so procurement reform is seen as encouraging a more liberalized system. A broader definition of efficiency that considers development gains alongside cost and quality would ensure that procurement plays more of a role for poverty reduction (McDonald, 2008). To be efficient and effective in Public Procurement is to carry out procurement activities in a professional and transparent environment with a clear set of predefined rules to foster enhanced competition thus stimulating efficiency and innovation amongst bidders. According to Cloete (1998), efficiency in the public sector means satisfying the most essential needs of the community to the greatest possible extent using the limited resources that are available for this purpose. Thus, public entities should be represented by competent personnel capable of putting the Public Procurement Act into practice.

❖ *Accountability:* Accountability can be explained as the process of holding an individual or an organization fully responsible for all aspects of the procurement process over which they exert authority. The essence of accountability is to strengthen the perception of transparency and fairness. It reduces the incidence of corruption and help enforces the procurement framework.

❖ *Ethical Approach:* Ethics is concerned with moral principles and values which govern our beliefs, actions and decisions. Ethical approach implies exemplary approach to all procurement processes that cannot be questioned or criticized. The following are examples of conducts prohibited by most Public Procurement Code of Ethics:

i. Revealing confidential or "inside information" either directly or indirectly to any tenderer or prospective tenderer or discussing procurement with any tenderer or prospective tenderer outside the official rules and procedures for conducting procurements

ii. Favouring or discriminating against any tenderer or prospective tenderer in the drafting of technical specifications or standards or the evaluation of tenders or destroying, damaging, hiding, removing, or improperly changing any official procurement document

iii. Accepting or requesting money, travel, meals, entertainment, gifts, favours, discounts or anything of material value from tenderers or prospective tenderers or discussing or accepting future employment with a tenderer or prospective tenderer

iv. Requesting any other Public Servant or Government official representing the Procurement Entity in procurement to violate the public procurement rules or procedures.

❖ *Technology:* E-procurement can increase transparency and procedural efficiency without prejudice to competition (Hill, 2005). Hill argues that, not only because of its transparency, but also to improve efficiency. The benefits of e-procurement include: an increase in contract compliance, leveraging the procurement spend, increased involvement of staff, and lower processing costs. The lack of a corporate e-procurement system in public sector entities means they will find it difficult to analyze their expenditure on a macro-economic level (Staatscourant, 2008).

Benefits of E-Procurement

According to Eadie et al (2007), Organization which uses e-procurement has the following advantages: First, Price reduction in tendering: Empirical studies carried out Gebauer et al (1988) in the United States of America indicated that the two most important measures for the success of procurement processes are cost and time. In this method, there is no paperwork, postage fee and other costs associated with preparation and sending tender documents. It is also faster to send a document electronically as compared to the traditional method of sending tender documents through post office. It results to improved order tracking and tracing, for it is much easier to trace the orders and make necessary corrections in case an error is observed in the previous order.

Secondly, there is reduction in time to source materials: In Reduction in time has been proved as a relevant benefit by Knudsen (2003) posits that e-procurement is a rapid efficient method of finding and connecting new sources, being a lean channel for communication. A lot of time is spend on paper invoicing in terms of writing, filing and postal communication but while in e-procurement, staff have sufficient time to engage on strategic issues of procurement The time wasted in moving from one town or country to another to look for a potential supplier or buyer is greatly reduced since with a click of a button, you can readily get the information in the internet. By extension, E-procurement leads to reduction in maverick buying. Maverick buying is when staff buys from suppliers than those with whom a purchasing agreement has been negotiated. Thirdly, Lower Administration costs: in his research, Rankin (2006) argues that e-procurement results in reduction in paperwork and this leads to lower administration costs. Fourthly, Reduction in procurement staff: since most of the procurement process is done electronically, the number of staff needed to facilitate the process reduces. As Eadie et al (2007) noted, the reduction in staff is an important way of producing competitive advantage through reduced costs.

They further argued that since it is easier to communicate requirements in a quicker more accessible manner, it will result in a better understanding of requirements and due compliance besides allowing clients to gauge the state of the market by seeing how much interest is shown in the tender. Hawking et al, (2004), considered market intelligence and the decisions made on that intelligence as two separate drivers. They however state that since reliable procurement decisions cannot be made without market intelligence and each is reliant on the other for the purpose of this study these two are considered together as "Improved Market Intelligence and Enhanced Decision making". A reduced Operating and Inventory cost is also another benefit of e-procurement: This is from the fact that much if not all paperwork is eliminated.

Challenges of E-Procurement Adoption in the Public Sector

❖ *Lack of Employee Competency:* Governments in many countries are making conscious efforts to migrate their procurement activities towards E-procurement platforms; however, there remain a shortage of knowledge of the actual adoption of e-procurement experiences in the public sector (As-Saber & Rahim, 2011). To derive the accompanying benefits entailed in e-procurement adoption procurement staff must be competent enough to use the applications of software that offers the organization management skills to manage their activities. This technology is based on databases, which are easily reached on real time foundations. According to Banda (2009), many procurement entities do not have competent human resource critical to manage procurement processes. The absence of the right calibre of employees to bring about enforcement of quality standards, monitor e-procurement processes, determination of specifications, defining requirements, conducting supervisory roles eventually culminate to cause shortages in government budgets. Mbeche et al., (2014) argued that skills and knowledge of employees influence the future adoption of a new technology. They further argued that implementing e-procurement necessitates knowledgeable and skilled employees, therefore, the conspicuous lack of such personnel has attributed to delay in e-procurement adoption in most public institutions.

❖ *Inadequacy of Legal Framework:* Legal framework is a basis of any business transaction whether in Public sector or private businesses. It defines the obligations and responsibilities of the partners transacting business with the objectives of fulfilling each other's desired goals. Kheng and Al-Hawandeh (2002) found that the laws governing B2B commerce, crossing over to e-procurement, are still undeveloped. For instance, questions concerning the legality and force of e-mail contracts, role of electronic signatures, and application of copyright laws to electronically copied documents are still unresolved. Understanding the challenges and limitation of e-procurement adoption in the public sector is important due to complexities of government policies and bureaucracy. Without such understanding, government may not be able to achieve the benefits of e-procurement. This could assist in future planning and adoption of e-procurement.

❖ *Inadequate Technological Infrastructure:* Issues concerning information systems development and adoption are central to the e-procurement issue. Rajkumar (2001) identified systems integration as a critical success factor for e-procurement implementation, both with the customer's information infrastructure and in its links to suppliers. Technological infrastructure plays a key role in adoption of e-procurement without which integration of public procurement entities will not materialize.

❖ *Security of Procurement Transaction Data:* Individual end users and entire business units will naturally resist any change in business processes that poses uncertainty in security and privacy of their transactions. Organizations keep their business information secret as a protective mechanism to ward off competition and remain competitive in the business environment. Public sector organizations on the other hand have limits to the amount and nature of information to be shared with other third parties. The use of web technology has brought a myriad of data security challenges in internet transactions because of cyber crimes .The growth of internet has nevertheless brought serious challenges to business due to data hacking, internet fraud, Cyber vandalism, and virus and malware attacks (Huber et al. 2004).

❖ *Organizational culture and upper management support:* Davila et al (2003) points out that resistance to change, lack of a widely accepted solution and lack of leadership, which are cultural, are some of the biggest barriers to the introduction of e-procurement within the public sector. To counter this problem, Eadie (2007) points out that a cultural change needs to take place prior to adoption of an e-procurement system. People need to be appointed and backed with full senior management support in order to effect this change. Adequate sensitization on the system will greatly reduce the resistance to the change. As pointed out by Eadie (2007), it is the cultural change brought about by senior management support which can enable e-procurement to be successfully implemented.

❖ *Uncertainty as to the legal position of e-procurement:* Some organizations doubt whether electronically sent documents can be recognized by a third party as valid or legal.

❖ *Lack of IT infrastructure*: is also another challenge of e-procurement. This was evident in the research carried out by Wong and Sloan (2004) as quoted in Eadie et al (2007) who noted that most companies lacked the relevant technology to carry out e-procurement. The same sentiments are shared with Harrigan (2008) whose research found out that technological integration, data quality, system-to-system integration, and ICT/technical issues have been identified as major challenges for many organizations when implementing e-procurement.

❖ *Cost implications of the system:* Some organizations perceive the system is too expensive to implement. Budgeting and costs, change management, as well as need of training and resources Harrigan (2008). Therefore in their opinion, they would rather stick to their system. Furthermore, engaging suppliers in the process - especially smaller organizations - is also proving to be difficult given the level of investment expected in terms of providing catalogue information to buyers, and marketplaces using different technologies, platforms and business languages (OGC, 2002). As noted by Heywood (2002), sometimes e- Procurement results in large investments of time and money, without absolute certainty that its full potential will be achieved every time. Besides, there is also lack of technical expertise. Most organizations lack the expertise to operate the system if initiated. In their view, embracing e-procurement technology implies employing the necessary manpower to operate it. Lack of e-procurement knowledge / skilled personnel is another barrier hindering smooth implementation of e-procurement. The older generation that has not kept up to the advances in IT related issues. This makes them rely heavily on traditional forms and means of procurement. In fact, this forms the majority of those against change, especially when the change requires anything more that the training they already have. Therefore, as e-Procurement includes new technologies and changes in traditional procurement approaches, the need to train staff in procurement practices and the use of e-Procurement tools are critical to the success of an e-Procurement initiative (World Bank, 2003).

E-procurement Models

According to Davila et al. (2003), there are four specific models of e-procurement technologies which are e-procurement software, market exchange, B2B auctions and purchasing consortia.

i. E-procurement software: Any software application basing on the internet that enables staffs to purchase goods from approved electronic catalogues in accordance with company buying rules, while capturing necessary purchasing data in the process. It is automatically routed by the necessary approval processes and protocols that employee select a good for purchase from a supplier catalogue. This software investment may have several forms like purchase of a software package from a third party technology provider (e.g., CommerceOne), use of an e-procurement system included in an internet market exchange, subscription to e-procurement software hosted and supported by an ASP—application service provider or development of a proprietary in-house system.

ii. Internet market exchanges: A website which acts like a platform bringing multiple buyers and sellers all together in one central virtual market space and make it possible for them to deal with each other at a dynamic price determined in accordance with the rules of the exchanges.

iii. Internet B2B auctions: Events in which multiple buyers can place bids for purchasing goods or services at a website. There are several forms of e-auctions like the most popular two are the Dutch auction(where the sellers control the minimum bid and prices move upward from the mini- mum bid) and the reverse auction (where buyers post 'requests for quotations' and sellers bid the price down). A major benefit of auctions is that they enable organizational buyers to identify the best offer from an expanded base of potential suppliers from around the world. Sellers benefit by obtaining access to bid for business on a level playing field rather than attempting to obtain business based on networks of personal relationships. Auctions also provide sellers with a ready market for the anonymous sale of excess inventory.

iv. Internet purchasing consortia: It is an internet service which helps get many buyers together negotiates more aggressively with sellers to get discounts. Some organizations aggregate buying power for manufacturing inputs such as (FOB.com), while others work similarly for indirect goods such as (BizBuyer.com).

IV. Method

In this paper, survey approach was and data was collected through a five point likert scale questionnaire. The statistical tool used for data analysis is the non-parametric chi-square test at 0.05 level of significance, using the 20.0 version of the statistical package for social sciences (SPSS). Chi-square may be described thus: $\chi^2 = \sum (E-O)^2 / E$. The study covered a population of 71 persons, consisting of 22 senior procurement officers and 30 junior procurement officers selected from two Local Government Areas each from the eleven states of south-east and south-south zone of Nigeria, 19 procurement consultants selected from Awka, Calabar Enugu and Portharcourt were also involved in the population studied. Using the Yaro Yamene's formular, a sample of 60 respondents were drawn from the population and used for this study

V. Results and Discussions

In this section, we used the chi-square to test the three hypotheses stated in this study with the aid of SPSS version 20.00.

Hypothesis One

The null and alternative hypotheses are

H_0: e-procurement does not contribute significantly to the enhancement of transparency in public procurement process

H_1: e-procurement contributes significantly to the enhancement of transparency in public procurement process

Table 1: Responses on Research Question One

Questions	Responses					Total
	SA	A	D	SD	UD	
7	8	27	4	15	6	60
8	12	21	10	19	10	60
9	7	23	13	11	6	60
10	5	21	18	14	2	60
11	10	27	9	12	2	60
Total	40	109	52	71	28	300

From the output of the SPSS software analysis, we have the followings;

Table 2

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Question * Response	300	100.0%	0	0.0%	300	100.0%

Table 3

Question * Response Cross-tabulation

			Response					Total
			SA	A	U	D	SD	
Question	7	Count	8	27	4	15	6	60
		Expected Count	8.0	21.8	10.4	14.2	5.6	60.0
		% within Question	13.3%	45.0%	6.7%	25.0%	10.0%	100.0%
		% within Response	20.0%	24.8%	7.7%	21.1%	21.4%	20.0%
		% of Total	2.7%	9.0%	1.3%	5.0%	2.0%	20.0%
	8	Count	10	13	8	19	10	60
		Expected Count	8.0	21.8	10.4	14.2	5.6	60.0
		% within Question	16.7%	21.7%	13.3%	31.7%	16.7%	100.0%
		% within Response	25.0%	11.9%	15.4%	26.8%	35.7%	20.0%
		% of Total	3.3%	4.3%	2.7%	6.3%	3.3%	20.0%
	9	Count	7	23	13	11	6	60
		Expected Count	8.0	21.8	10.4	14.2	5.6	60.0
		% within Question	11.7%	38.3%	21.7%	18.3%	10.0%	100.0%
		% within Response	17.5%	21.1%	25.0%	15.5%	21.4%	20.0%
		% of Total	2.3%	7.7%	4.3%	3.7%	2.0%	20.0%
	10	Count	7	19	18	14	2	60
		Expected Count	8.0	21.8	10.4	14.2	5.6	60.0
		% within Question	11.7%	31.7%	30.0%	23.3%	3.3%	100.0%
		% within Response	17.5%	17.4%	34.6%	19.7%	7.1%	20.0%
		% of Total	2.3%	6.3%	6.0%	4.7%	0.7%	20.0%
	11	Count	8	27	9	12	4	60
		Expected Count	8.0	21.8	10.4	14.2	5.6	60.0
		% within Question	13.3%	45.0%	15.0%	20.0%	6.7%	100.0%
		% within Response	20.0%	24.8%	17.3%	16.9%	14.3%	20.0%
		% of Total	2.7%	9.0%	3.0%	4.0%	1.3%	20.0%
Total		Count	40	109	52	71	28	300
		Expected Count	40.0	109.0	52.0	71.0	28.0	300.0
		% within Question	13.3%	36.3%	17.3%	23.7%	9.3%	100.0%
		% within Response	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	13.3%	36.3%	17.3%	23.7%	9.3%	100.0%

Table 4

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.111[a]	16	.040
Likelihood Ratio	27.831	16	.033
Linear-by-Linear Association	1.390	1	.238
N of Valid Cases	300		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.60.

Decision: Since the p-value or sig. (0.040) < the alpha level (0.05), we reject the null hypothesis and conclude that e-procurement has significant contributions on public procurement system transparency

Hypothesis Two

The null and alternative hypotheses are

H_{O2}: e-procurement does not contribute to the enhancement of efficiency in the procurement process

H_1: e-procurement contributes to the enhancement of efficiency in the procurement process

Table 5 Responses on Research Question Two

Questions	Responses					Total
	SA	**A**	**D**	**SD**	**UD**	
12	8	27	4	15	6	60
13	12	21	10	19	10	60
14	7	23	13	11	6	60
15	5	21	18	14	2	60
Total	40	109	52	71	28	300

From the output of the SPSS software analysis, we have the followings;

Table 6

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Question * Response	240	99.6%	1	0.4%	241	100.0%

Table 7

Question * Response Crosstabulation

			Response					Total
			SA	A	U	D	SD	
Question	12	Count	16	29	7	8	0	60
		Expected Count	13.5	27.8	6.3	11.0	1.5	60.0
		% within Question	26.7%	48.3%	11.7%	13.3%	0.0%	100.0%
		% within Response	29.6%	26.1%	28.0%	18.2%	0.0%	25.0%
		% of Total	6.7%	12.1%	2.9%	3.3%	0.0%	25.0%
	13	Count	16	25	4	14	1	60
		Expected Count	13.5	27.8	6.3	11.0	1.5	60.0
		% within Question	26.7%	41.7%	6.7%	23.3%	1.7%	100.0%
		% within Response	29.6%	22.5%	16.0%	31.8%	16.7%	25.0%
		% of Total	6.7%	10.4%	1.7%	5.8%	0.4%	25.0%
	14	Count	16	25	4	10	5	60
		Expected Count	13.5	27.8	6.3	11.0	1.5	60.0
		% within Question	26.7%	41.7%	6.7%	16.7%	8.3%	100.0%
		% within Response	29.6%	22.5%	16.0%	22.7%	83.3%	25.0%
		% of Total	6.7%	10.4%	1.7%	4.2%	2.1%	25.0%
	15	Count	6	32	10	12	0	60
		Expected Count	13.5	27.8	6.3	11.0	1.5	60.0
		% within Question	10.0%	53.3%	16.7%	20.0%	0.0%	100.0%
		% within Response	11.1%	28.8%	40.0%	27.3%	0.0%	25.0%
		% of Total	2.5%	13.3%	4.2%	5.0%	0.0%	25.0%
Total		Count	54	111	25	44	6	240
		Expected Count	54.0	111.0	25.0	44.0	6.0	240.0
		% within Question	22.5%	46.2%	10.4%	18.3%	2.5%	100.0%
		% within Response	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	22.5%	46.2%	10.4%	18.3%	2.5%	100.0%

Table 8

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.919[a]	12	.021
Likelihood Ratio	24.733	12	.016
Linear-by-Linear Association	3.145	1	.076
N of Valid Cases	240		

a. 4 cells (20.0%) have expected count less than 5. The minimum expected count is 1.50.

Decision: Since the p-value or sig. (0.021) < the alpha level (0.05), we reject the null hypothesis and conclude that e-procurement has significant contributions on the efficiency of public procurement in Nigeria.

Hypothesis Three

The null and alternative hypotheses are

H_{O3}: e-procurement does not contribute significantly to effective monitoring and compliance to public procurement laws in Nigeria

H_1: e-procurement does not contribute significantly to effective monitoring and compliance to public procurement laws in Nigeria

Table 9 Responses on Research Question Three

Questions	Responds					Total
	SA	**A**	**D**	**SD**	**UD**	
16	9	36	1	14	0	60
17	22	23	0	11	4	60
18	11	29	3	11	6	60
19	7	30	5	18	0	60
20	10	28	6	12	4	60
Total	59	146	15	66	14	300

From the output of the SPSS software analysis, we have the followings;

Table 10

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Question * Response	300	100.0%	0	0.0%	300	100.0%

Table 11

Question * Response Crosstabulation

			Response					Total
			SA	A	U	D	SD	
Question	16	Count	9	36	1	14	0	60
		Expected Count	11.8	29.2	3.0	13.2	2.8	60.0
		% within Question	15.0%	60.0%	1.7%	23.3%	0.0%	100.0%
		% within Response	15.3%	24.7%	6.7%	21.2%	0.0%	20.0%
		% of Total	3.0%	12.0%	0.3%	4.7%	0.0%	20.0%
	17	Count	22	23	0	11	4	60
		Expected Count	11.8	29.2	3.0	13.2	2.8	60.0
		% within Question	36.7%	38.3%	0.0%	18.3%	6.7%	100.0%
		% within Response	37.3%	15.8%	0.0%	16.7%	28.6%	20.0%
		% of Total	7.3%	7.7%	0.0%	3.7%	1.3%	20.0%
	18	Count	11	29	3	11	6	60
		Expected Count	11.8	29.2	3.0	13.2	2.8	60.0
		% within Question	18.3%	48.3%	5.0%	18.3%	10.0%	100.0%
		% within Response	18.6%	19.9%	20.0%	16.7%	42.9%	20.0%
		% of Total	3.7%	9.7%	1.0%	3.7%	2.0%	20.0%
	19	Count	7	30	5	18	0	60
		Expected Count	11.8	29.2	3.0	13.2	2.8	60.0
		% within Question	11.7%	50.0%	8.3%	30.0%	0.0%	100.0%
		% within Response	11.9%	20.5%	33.3%	27.3%	0.0%	20.0%
		% of Total	2.3%	10.0%	1.7%	6.0%	0.0%	20.0%
	20	Count	10	28	6	12	4	60
		Expected Count	11.8	29.2	3.0	13.2	2.8	60.0
		% within Question	16.7%	46.7%	10.0%	20.0%	6.7%	100.0%
		% within Response	16.9%	19.2%	40.0%	18.2%	28.6%	20.0%
		% of Total	3.3%	9.3%	2.0%	4.0%	1.3%	20.0%
Total		Count	59	146	15	66	14	300
		Expected Count	59.0	146.0	15.0	66.0	14.0	300.0
		% within Question	19.7%	48.7%	5.0%	22.0%	4.7%	100.0%
		% within Response	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	19.7%	48.7%	5.0%	22.0%	4.7%	100.0%

Table 12

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	36.324[a]	16	.003
Likelihood Ratio	41.920	16	.000
Linear-by-Linear Association	2.587	1	.108
N of Valid Cases	300		

a. 10 cells (40.0%) have expected count less than 5. The minimum expected count is 2.80.

Decision: Since the p-value or sig. (0.003) < the alpha level (0.05), we reject the null hypothesis and conclude that e-procurement has significant contributions on public procurement policy compliance rate

VI. Conclusion and Recommendations

The drive to pluck loop holes in the Nigerian public procurement requires a paradigm shift from the traditional approach to world best practices. This is because the ability of the government to deliver its promises to the citizens is contingent on among other things, its ability to fix its priority and pursue a transparent and cost effective process. To this end, public procurement system must be restructured at the grass root level (LGAs), not just by establishing institutions but by adopting laws and models that can make them functional. It is therefore the conclusion of this study that compliance to e-procurement is an acceptable model that can bring about the needed change in the Nigerian public procurement system. In line with the findings and conclusion, the researchers recommend that;

i. There is need for the introduction of e-procurement system in Nigeria , thereby phasing out the current procurement approach especially at the local government areas

ii. Adequate and continuous training of public procurement officers on modern changes in procurement policies and processes is advocated by the researchers. This recommendation follows our findings that beyond executive rascality at the local government level, most public procurement officers at the local government level are not knowledgeable about the modern procurement models (e-procurement)

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