Research Article

E-Governance Application; Improving the Administrative Efficiency of Public Sector in Rivers State, Nigeria

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Abstract:

The aim of the study is to examine the effect of e-governance on administrative efficiency of the public sector in Rivers State. Stratified random sampling technique was used to select 210 employees and convenient sampling technique was used to select 10 Rivers State Public Ministries. 5 research questions and 9 hypotheses guided the study. Null hypotheses were used to test the relationship between e-governance and Administrative Efficiency of the Public Sector in Rivers State. Structured questionnaire was used to collect the data while simple percentage, mode, mean and standard deviation were used to analyze the responses. 210 copies of answered questionnaires out of the 250 copies that were distributed were returned. Finding reveals that the application of e-governance ease document storage and retrieval, data security, and facilitates faster information dissemination thereby reducing delays. The descriptive statistics showed to a very high extent how E-Participation, E-Record, E-Communication and E-Procurement are effective tools in enhancing Administrative Efficiency of Public Sectors in Rivers State. The study therefore recommended that E-governance mechanism should be encouraged in the functioning of government agencies in Rivers State and Nigeria at large.)

Keywords: E-Governance, E-records, E-communication, E-Procurement and E-participation.

Introduction

It can be arguably said that Nigeria runs exclusive governance that basically alienates the vast majority of the populace from the processes of policy formulation and implementation. Political decision making was based on a narrow social stratum, usually consisting of aristocratic notables, while broad sections of the society were excluded. Prior to entering into the e-governance, the public services were delivered through the conventional way where connecting citizens was difficult and doorsteps services were ignored due to shortage of power supply, lack of IT skilled manpower and existence of bureaucratic style of governance. These create a gap between government and its main stakeholders or citizens. This situation results in a government incapable of establishing the efficiency of services. Poor performance of the public was attributed to orthodox manual means of delivering public services resulting to unethical and corrupts practices. The conventional practices take a lot of time, expose records to damages and unauthorized changes and create conducive working environment for the staff. The world has become a global village where every nation including Nigeria is striving to attain a high level of electronic governance. E-governance is a two way communication process which deals with the use of information and communication technology to deliver government services and ensuring the availability of such services to citizens. The application of e-governance has become an important mechanism in enhancing citizen's participation, monitoring and evaluating government projects, ensuring government accountability and transparency as well as transferring information from one sector to another (Palvia and Sharma, 2007). Sunday (2014) stated that e–governance has become a necessary political mechanism in evaluating government performances in many developed parts of the world. In fact, the use of information and communication technology in government businesses through promoting government's role in delivering services, public

Administration and promoting active participatory democracy has been gaining an impelling force in the global community (Heeks, 2002). In other words, governments throughout the globe are striving to identify ways to deliver public services more effectively through strategic objective of supporting and simplifying the governing processes for government, citizens, and businesses. According to UNESCO (2005) e-governance deals with the adoption of new leadership style, new methods of making decisions on policies and investment, new ways of making education available to citizens, new

2. Literature Review

The application of e-governance has become an important mechanism in enhancing citizen's participation, monitoring and evaluating government projects, ensuring government accountability and transparency as well as transferring information from one sector to another (Palvia and Sharma, 2007).Sunday (2014) stated that e–governance has become a necessary political mechanism in evaluating government performances in many developed parts of the world. In fact, the use of information and communication technology in government businesses through promoting government's role in delivering services, public administration and promoting active participatory democracy has been gaining an impelling force in the global community (Heeks, 2002). In other words, governments throughout the globe are striving to identify ways to deliver public services more effectively through strategic objective of supporting and simplifying the governing processes for government, citizens, and businesses. According to UNESCO (2005) e-governance deals with the adoption of new leadership style, new methods of making decisions on policies and investment, new ways of making education available to citizens, new ways of listening and attending to citizens as well as new ways of organizing and delivering information and services. Thus, assessing e-governance status and nature in any part of the world, requires analyzing several parameters and factors. According to Danfulani (2013), the scope of e-governance revolves around e-registration, e-participation, e-taxation, e-mobilization, e-education, e-service delivery, e-feedback, e-policing, e-debate, and the analysis of public financial statements. Thus, e-government is a network of organizations such as the government, non-profit organizations, and private institutions who work together to achieve a common goal. Backus (2001) views electronic-governance as the process of delivering government services and information to the public through devices which operates on electronics principles. Olufemi (2012) define e-Government as a

ways of listening and attending to citizens as well as new ways of organizing and delivering information and services. Thus, assessing e-governance status and nature in any part of the world, requires analyzing several parameters and factors. The term e-government refers to the use of IT by government agencies; it's a way which can transform relations with citizens, businesses and other arms of government. E-government is being regarded as powerful tool in the hands of government for reducing cost, enhancing revenues, improving delivery of public services.

government that provides innovative services on internet; in other words, it digitizes the activities of the government and provides information without geographical or time constraint 32 through information and communication technology. Harris (2000) opined that e-government can simplify and automate government process to the requirement of the citizens. Kehami (2009) E-Government is an Internet-worked government which links new technology with legal systems internally and in turn links such government information infrastructure externally with everything digital and with everybody – the tax payer, suppliers, business customers, voters and every other institution in the society. Abramson and Means (2001) – e-governance can be defined as the electronic interaction (transaction and information exchange) between the government, the public (citizens and businesses) and employees. This idea has brought many changes in the operation of e-government concerning with the people, government and private organizations. World Bank (2001) – e-government is the government owned or operated systems of information and communication technologies that transform relations with citizens, the private sector and/or other government agencies so as to promote citizens" empowerment, improve service delivery, strengthen accountability, increase transparency, and promote government efficiency. This highly modified method resulted in the working efficiency of e-government bodies. Adeyemo (2013) explains e-government as the transformation of public sector internal and external relationships through net-enabled operations, IT and communications, in order to improve Government service delivery; Constituency participation; society. Its utility improved to an appreciable degree in all public, private sectors and society. Electronic government refers to the use of information technologies to improve the efficiency, effectiveness, transparency and responsibility of public governments. Al Khouri (2011) introduces e-government as "a way for governments to use the most innovative information and communication technologies, particularly web-based internet applications,

to provide citizens and businesses with more convenient access to government information and services, to improve the quality of the services and to provide greater opportunities to participate in democratic institutions and processes. E-government presents a tremendous impetus to move forward in the 21st century with higher quality, cost-effective, government services and a better relationship between citizens and government".

Models of E-Governance: E-governance aims to enable the interaction between government and citizens (G2C), improve inter-agency relationships (G2G), and establish efficient relationship between the government and business enterprises (G2B), government and employees (G2E). **G2G (Government to Government):** Information and Communications Technology is used not only to restructure the governmental processes involved in the functioning of government entities but also to increase the flow of information and services between different entities. **G2C (Government to Citizens):** An interface is created between the government and citizens which enables the citizens to benefit from efficient delivery of the public services. This expands the availability and accessibility of public services and improves the quality of services. The primary purpose is to make government, citizen-friendly. **G2B (Government to Business):** Here, e-governance tools are used to aid the business community, providers of goods and services to seamlessly interact with the government. The objective is to cut red tape, save time, reduce operational costs and to create a more transparent business environment when dealing with the government. **G2E (Government to Employee):** It's the relationship between online tool, sources, and articles that help employees to maintain the communication with the government and their organizations. E-governance relationship with employees allows new learning technology as documents can be stored and shared with other colleagues online.(Kalsi, Kiran,&Vaidya, 2009)

E-Participation

According to the broad definition offered by Islam (2013), e-participation is the usage of ICT in order to enhance and deepen the political participation of citizens. The use of electronic technology in all public activities and societal processes, including participation in political opinion shaping, decision-making and the provision of public services (e-services) is able to strengthen constitutional principles and public engagement by individual citizens as well as interest groups. Ideally, this increased level of interaction between citizens and politicians can strengthen

democracy. Citizen participation in decision-making brings about sense of belonging and effective service delivery. It can be arguably said that Nigeria runs exclusive governance that basically alienates the vast majority of the populace from the processes of policy formulation, implementation and monitoring. Political decision making was based on a narrow social stratum, usually consisting of bourgeois and aristocratic notables, while broad sections of society were excluded. In short, politics at this early stage was as far as institutional arrangements, issues addressed and people involved in its shaping were concerned a remote affair for society at large. Gradually throughout the nineteenth century, and at an accelerated pace during the twentieth century, this distance between politics and society closed (Ahmad &Quarum, 2010). Most theories of democracy talk of the need for informed and aware citizens who can participate in democratic life, hold the state to account and exercise their rights and responsibilities effectively (Development Research Centre, 2010:7). Democracy as a way of organizing the state has come to be narrowly identified with territorially based competitive elections of political leadership for legislative and executive offices. Yet, increasingly, this mechanism of political representation seems ineffective in accomplishing the central ideals of democratic politics: facilitating active political involvement of the citizenry, forging political consensus through dialogue, devising and implementing public policies that ground a productive economy and healthy society, and, in more radical egalitarian versions of the democratic ideal, ensuring that all citizens benefit from the nation's wealth (Al Shehri& Drew, 2010).The advent of the information age and its acceleration effect on globalization are leading the world to a new economic order driven by information and knowledge based economies. In an increasingly globalized world, where information technology has become one of the key determinants of growth, many African countries are facing new challenges as a result of the emerging information age. Governments in recent years have primarily focused on improving citizen e-services rather than organizing government agency functions and services. An emerging focus is to link tools of ICT to the consolidation of back-end systems and processes in order to improve the seamlessness and the quality of service delivery and free up resources for additional service innovation.

E-Records

Electronic record implies the creation, use, maintenance and disposal of electronically created records for the purposes of providing evidence of business activities. Like

the maintenance of paper records, the maintenance of electronic records depends on their use. There are many types of storage media for electronic records, namely, magnetic media, optical disks, CD-ROM, and DVD. Magnetic media, commonly used for storage of state records, include hard disks, external drives, and magnetic tape. Currently, there are also USB memory sticks. Electronic records can either be stored in network-attached storage devices such as CD/DVD-ROM towers and in separate storage area networks. (Akther, Onishi&Kidokoro, 2007). Record management implies a series of activities which include the creation, distribution, use, maintenance and disposition of recorded information maintained as evidence of business transactions. The common strategies in electronic record includes (1) assigning unique identifiers to individual records, (2) protecting the records from unauthorized changes, and (3) maintaining audit trails which show how current records have evolved and the changes that have been effected. An effective electronic record management system ensures that the movement and location of records are controlled in a way that any record can be retrieved when needed and that there is an auditable trail of recordable transactions. Therefore, storage accommodation for the records should be clean, tidy and secure.(Al Tarawneh, 2010). This prevents the damage to the records and provides a safe working environment for the staff. Furthermore, there is a need for planning for disaster recovery through backup and migration to new platforms. Moreover, there should be archiving policies and procedures which meet the twofold aim of preserving important information and keeping it safe and confidential and at the same time making the information easily accessible when needed. Confidentiality and accessibility can concurrently be achieved through proper classification, labeling and indexing files and file naming. Without a proper classification system in place, a governmental body will not be able to obtain a disposal authority. This will prevent the timeouts disposal of records, which will in the long run have financial implications. Without a disposal authority in place all electronic records created will have to be migrated across changes in technology to enable them to be readable over a long period of time. Adding folders randomly increases the risk of duplication. This can cause confusion when one wants to locate these folders. Deleting folders is a disposal action, which should only be allocated to the records manager/systems administrator. Embedded filing happens for example when the user clicks the send button when sending e-mail and the user is automatically invited to file the message to the classification system in the repository.

Preferably, the records management software that is chosen should provide the same embedded facility for all documents that are created electronically. Classification is required in order for disposal instructions and retention periods to be allocated and classification links paper-based records to electronic equivalents. It is very important that the paper-based records and the electronic records be classified against the same filing plan. This will ensure that records on a given subject in all media are managed against the same retention rules and that all records on a given subject are retrieved comprehensively.(Athmay 2012).

E-Communication

Developments in the communications field indicates how the knowledge gaps between the information-poor and the information-rich have enlarged over time thereby excluding certain parts of the globe from enjoying the benefits of what is known as a Global Village. Aneke, (2011) stated that ICT is a computer systems, telecommunication, networks and multi-media application that augment knowledge for carrying out a given task which implies skills and processes essential for conducting business operations in a specific way. Kenova & Jonnason (2006) stated that ICT is an electronic means of information dissemination that improves an interaction between providers and users of information through application of information processing system. The input mechanism of its device can assist public organizations to arrive at a decision that can promote interpersonal relationship between them and the citizens. Information Technology (IT) is the automation of controls, processes, and information production using telecommunications, computers, software and ancillary tools such as automated teller machine and debit cards. According to Leer (2000), technology is revolutionizing how business is being conducted in the world. Furthermore, they stated that if introduction of IT does not deliver the intended return, there may be three possible casual factors. One is that the employees were not engaged in implementing the IT introduced by the organization. Two, the leaders were not successful in linking employees to the use of IT and lastly your firm system did not sufficiently support the IT. Islam & Khair (2012) stated that the strength and importance of these agglomeration and dispersion forces depend on many things, including notably the cost of communicating information across space. Knowledge spillovers, for instance, rely on the impact that distance plays in inhibiting efficient communication of ideas. The relevance of face to face communication indicates how remarkable

these distance effects can be. But the email, telephone and video conferencing, for instance, are all reducing these costs of communicating ideas from a distance. The major part of studies related to company's globalization also shows that the internet support the rapid growth of sales and solve problems related to the liability of newness, foreigners and the lack of resources. Portugal-Perez and Wilson have studied the effect of different types of infrastructure on the export performance of developing nations and showed that an ICT infrastructure is vital and that its effect on exports seems to be highly vital, the richer a country becomes.(Jeager, 2003).

E-procurement

This involves the use of internet, information networking systems, such as electronic media for the purchase and sale of supplies, work, and services between the government and other firms. E-procurement value chain consists e-Tendering, e-Auctioning, of indent management, e-Informing, vendor management, catalogue management, Purchase Order Integration, Order Status, Ship Notice, e-invoicing, e-payment, and contract management. Baily (2008) classifies e-procurement into the seven categories: the first is Web-based ERP (Enterprise Resource Planning)., E-MRO (Maintenance, Repair and Operations), E-sourcing, E-tendering ,E-reverse auctioning , E-informing ,and E-market site. According to Kumar, Mukerji, Irfan & Ajax (2007), the benefit of E-procurement include Price reduction in tendering, efficient for the finding and connecting of new sources, Lower Administration costs, Reduction in procurement staff and competitive advantage over competitors. A centralized department in the firm can oversee the coordination of all procurement activities for different branches and different offices worldwide can access the same documentation when required, this gives a distinct advantage over the much slower process of having to post documentation between offices. This extends the supply chain beyond geographical boundaries to a much wider group. It facilitates timely delivery and quality delivery of products and services, greater market access but also increased productivity. The research seeks to investigate the effects of e-procurement in the public sector.(Willie, 2011).

Methods

This is a descriptive type of research which purpose is to examine the relationship between electronic governance with administrative efficiency by the public sector in Rivers State. The population of the study consists of all principal officers of the Rivers State civil service ministries.To effectively carry out this research, two level of sampling technique were adopted. Convenient sampling was adopted in the selection of the ten (10) public ministries that were accessible, and were adopted from the population as the sample size. Simple random sampling was adopted to selectthe target population for this study which consists of all principal officers of public ministries in Rivers state of Nigeria ranging from Permanent Secretaries, Directors, Deputy Directors, Principal Executive Officers, Supervisors other Senior Officials from 10 selected government ministries.To obtain the criterion mean for scoring the respondents based on the 4-points Lykert scale, The Null hypotheses were tested using Spearman's Rank Order Correlation. For effective hypotheses testing, Statistical Package for Social Sciences (SPSS) was employed.
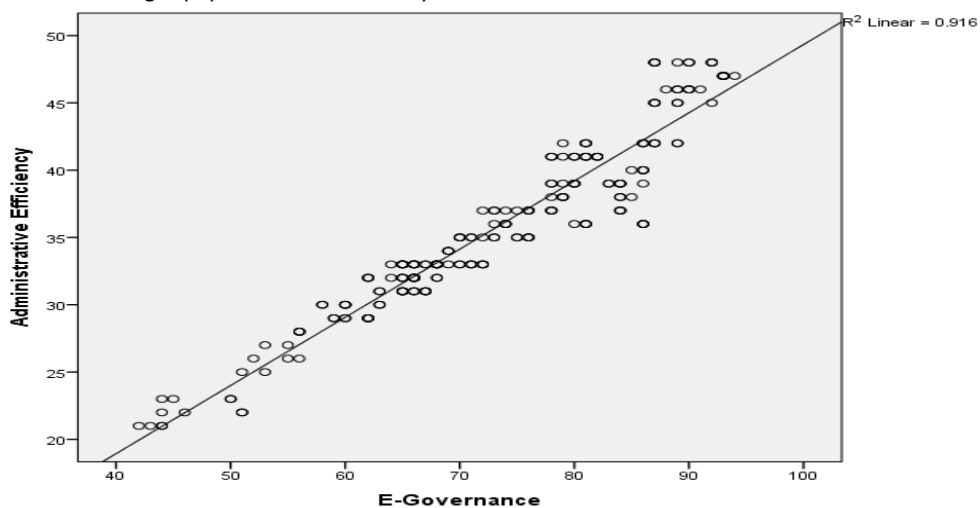

Figure 1: Linear Relationship between E-Governance and Administrative Efficiency

3.1 Bivariate Relationship between the independent variables and the dependent variable

This showed the relationship between the independent variable (E-Government) and the dependent variable (Administrative Efficiency).

Table 3.1: Relationship between E-Participation and Service Delivery

			E- Participation	Service Delivery
Spearman's rho	E-Participation	Correlation Coefficient	1.000	.615[**]
		Sig. (2-tailed)	.	.000
		N	210	210
	Service Delivery	Correlation Coefficient	.615[**]	1.000
		Sig. (2-tailed)	.000	.
		N	210	210
	**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Survey Research, 2019

Table 3.1 showed the Spearman's correlation coefficient; r = 0.615** and the probability Value *(PV)* = 0.000 < 0.05 (level of significance).This shows that there is a strong positive relationship between E-Participation and Service Delivery of Public Sectors in Rivers State. Therefore increasing E-Participation will also increase Service Delivery of Public Sectors in Rivers State. We therefore reject the Null hypothesis, and accept the Research hypothesis H_{A1}: which says that there is a positive relationship between E-Participation and Service Delivery of Public Sector in Rivers State.

Table 3.2: Relationship between E-Participation and Cost Reduction

			E-Participation	Cost Reduction
Spearman's rho	E-Participation	Correlation Coefficient	1.000	.455[**]
		Sig. (2-tailed)	.	.000
		N	210	210
	Cost Reduction	Correlation Coefficient	.455[**]	1.000
		Sig. (2-tailed)	.000	.
		N	210	210
	**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Research survey, 2019.

Table 3.2 showed the Spearman's correlation coefficient; r = 0.455** and the probability Value *(PV)* = 0.000 < 0.05 (level of significance).This shows that there is a positive relationship between E-Participation and Cost Reduction of Public Sectors in Rivers State. Therefore increasing E-Participation will also increase Cost Reduction of Public Sectors in Rivers State. We therefore reject the Null hypothesis, and accept the Research hypothesis H_{A2}: which says that there is a positive relationship between E-Participation and Cost Reduction of Public Sector in Rivers State.

Table 3.3: Relationship between E-Record and Service Delivery

			E-Record	Service Delivery
Spearman's rho	E-Record	Correlation Coefficient	1.000	.953**
		Sig. (2-tailed)	.	.000
		N	210	210
	Service Delivery	Correlation Coefficient	.953**	1.000
		Sig. (2-tailed)	.000	.
		N	210	210
**. Correlation is significant at the 0.01 level (2-tailed).				

Source: Research survey, 2019.

Table 3.3 showed the Spearman's correlation coefficient; r = 0.953** and the probability Value *(PV)* = 0.000 < 0.05 (level of significance).This shows that there is a strong positive relationship between E-Record and Service Delivery of Public Sectors in Rivers State. Therefore increasing E-Record will also increase Service Delivery of Public Sectors in Rivers State. We therefore reject the Null hypothesis, and accept the Research hypothesis H_{A3}: which says that there is a positive relationship between E-Record and Service Delivery of Public Sector in Rivers State.

Table 3.4: Relationship between E-Record and Cost Reduction

			E-Record	Cost Reduction
Spearman's rho	E-Record	Correlation Coefficient	1.000	.686**
		Sig. (2-tailed)	.	.000
		N	210	210
	Cost Reduction	Correlation Coefficient	.686**	1.000
		Sig. (2-tailed)	.000	.
		N	210	210
**. Correlation is significant at the 0.01 level (2-tailed).				

Source: Research survey 2019.

Table 3.4 showed the Spearman's correlation coefficient; r = 0.686** and the probability Value *(PV)* = 0.000 < 0.05 (level of significance).This shows that there is a strong positive relationship between E-Record and Cost Reduction of Public Sectors in Rivers State. Therefore increasing E-Record will also increase Cost Reduction of Public Sectors in Rivers State. We therefore reject the Null hypothesis, and accept the Research hypothesis $H_{A4:}$ which says that there is a strong positive relationship between E-Record and Cost Reduction of Public Sector in Rivers State.

Table 3.5: Relationship between E-Communication and Service Delivery

		E-Communication	Service Delivery
Spearman's rho	**E-Communication**		
	Correlation Coefficient	1.000	.671**
	Sig. (2-tailed)	.	.000
	N	210	210
	Service Delivery		
	Correlation Coefficient	.671**	1.000
	Sig. (2-tailed)	.000	.
	N	210	210
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Research survey, 2019.

Table 3.5 showed the Spearman's correlation coefficient; r = 0.671** and the probability Value *(PV)* = 0.000 < 0.05 (level of significance).This shows that there is a strong positive relationship between E-Communication and Service Delivery of Public Sectors in Rivers State. Therefore increasing E-Communication will also increase Service Delivery of Public Sectors in Rivers State. We therefore reject the Null hypothesis, and accept the Research hypothesis $H_{A5:}$ which says that there is a positive relationship between E-Communication and Service Delivery of Public Sector in Rivers State.

Table 3.5: Relationship between E-Communication and Cost Reduction

		E-Communication	Cost Reduction
Spearman's rho	**E-Communication**		
	Correlation Coefficient	1.000	.686**
	Sig. (2-tailed)	.	.000
	N	210	210
	Cost Reduction		
	Correlation Coefficient	.686**	1.000
	Sig. (2-tailed)	.000	.
	N	210	210
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Research survey, 2019

Table 3.5 showed the Spearman's correlation coefficient; r = 0.686** and the probability Value *(PV)* = 0.000 < 0.05 (level of significance).This shows that there is a strong positive relationship between E-Communication and Cost Reduction of Public Sectors in Rivers State. Therefore increasing E-Communication will also increase Reduction of Public Sectors in Rivers State. We therefore reject the Null hypothesis, and accept the Research hypothesis $H_{A6:}$ which says that there is a positive relationship between E-Communication and Cost Reduction of Public Sector in Rivers State.

Table 3.6: Relationship between E-Procurement and Service Delivery

			E-Procurement	Service Delivery
Spearman's rho	E-Procurement	Correlation Coefficient 1.000		.983**
		Sig. (2-tailed)	.	.000
		N	210	210
	Service Delivery	Correlation Coefficient .983**		1.000
		Sig. (2-tailed)	.000	.
		N	210	210
**. Correlation is significant at the 0.01 level (2-tailed).

Source: Research survey, 2019.

Table 3.6 showed the Spearman's correlation coefficient; r = 0.983** and the probability Value *(PV)* = 0.000 < 0.05 (level of significance).This shows that there is a strong positive relationship between E-Procurement and Service Delivery of Public Sectors in Rivers State. Therefore increasing E-Procurement will also increase Service Delivery of Public Sectors in Rivers State. We therefore reject the Null hypothesis, and accept the Research hypothesis $H_{A7:}$ which says that there is a positive relationship between E-Procurement and Service Delivery of Public Sector in Rivers State.

Table 3.7: Relationship between E-Procurement and Cost Reduction

			E-Procurement	Cost Reduction
Spearman's rho	E-Procurement	Correlation Coefficient 1.000		.680**
		Sig. (2-tailed)	.	.000
		N	210	210
	Cost Reduction	Correlation Coefficient .680**		1.000
		Sig. (2-tailed)	.000	.
		N	210	210
**. Correlation is significant at the 0.01 level (2-tailed).

Source: Research survey, 2019.

Table 3.7 showed the Spearman's correlation coefficient; r = 0.680** and the probability Value *(PV)* = 0.000 < 0.05 (level of significance).This shows that there is a strong positive relationship between E-Procurement and Cost Effectiveness of Public Sectors in Rivers State. Therefore increasing E-Procurement will also increase Cost Effectiveness of Public Sectors in Rivers State. We therefore reject the Null hypothesis, and accept the Research hypothesis $H_{A8:}$ which says that there is a positive relationship between E-Procurement and Cost Reduction of Public Sector in Rivers State.

Table 3.8: Moderating effect of Organizational Policy on E-Governance and Administrative Efficiency

Control Variables			E-Governance	Administrative Efficiency	Organizational Policy
-none-[a]	E-Governance	Correlation	1.000	.957	.820
		Significance (2-tailed)	.	.000	.000
		Df	0	208	208
	Administrative Efficiency	Correlation	.957	1.000	.915
		Significance (2-tailed)	.000	.	.000
		Df	208	0	208
	Organizational Policy	Correlation	.820	.915	1.000
		Significance (2-tailed)	.000	.000	.
		Df	208	208	0
Organizational Policy	E-Governance	Correlation	1.000	.897	
		Significance (2-tailed)	.	.000	
		Df	0	207	
	Administrative Efficiency	Correlation	.897	1.000	
		Significance (2-tailed)	.000	.	
		Df	207	0	

a. Cells contain zero-order (Pearson) correlations.

Source: Research survey, 2019

Table 3.8 showed that Organizational Policy positively moderate the outcome of E-Governance and Administrative of Public Sector in Rivers State. The Correlation Coefficient between Organizational Policy and E-Governance is (r = 0.820, PV = 0.000 < 0.05) Organizational Policy and Administrative Efficiency is (r = .915, PV = 0.000 < 0.05) respectively. We therefore reject the Null hypothesis, and accept the Research hypothesis H$_{A9:}$ which says that Organizational Policy strongly moderates E-Governance and Administrative Efficiency of Public Sectors in Rivers State.

4. Discussion of findings

The responses gathered showed to very high extent how E-Participation enhanced Administrative Efficiency of Public Sectors in Rivers State. The various mean obtained were all above the average of 2.50 for a 4-point Likert Scale. The Null Hypotheses tested between E-Participation and Administrative Efficiency is significant. E-Participation and Service Delivery correlation relationship is 0.615 and E-Participation and Cost Reduction is 0.455. These showed that there is a positive relationship between E-Participation and Administrative Efficiency of Public Sectors in Rivers State. This research is in line with the research of Garson (1999) which opined that entrepreneurs of medium and large scale enterprises agree that ICT is utilized to create enabling business environment. Results of the study emphasized that ICT have boosted production of goods and services in enterprises. From the study it is clear that ICT are not fully utilized in staff training by entrepreneurs of enterprises. The result of the study evidenced many barriers that prevent the utilization of ICT in business in South-East Zone, Nigeria.

The analysis also showed to a very high extent how E-Record enhanced Administrative Efficiency of Public Sectors in Rivers State as indicated by the mean scaled on 4-point Likert scale. The Null Hypotheses tested between E-Record and Administrative Efficiency is significant. E-Record and Service Delivery correlation relationship is 0.953 and E-Record and Cost Reduction is 0.686. These showed that there is a positive relationship between E-Record and Administrative Efficiency of Public Sectors in Rivers State. This research supports the work of Ahmed (2017). Proper management of E-record enhanced Administrative Efficiency in Organizations.

The Analysis also showed that E-Communication positively influence Administrative Efficiency of Public Sectors in Rivers State as indicated on the Likert Scale. Also the Null Hypotheses tested between E-Communication and Administrative Efficiency showed a positive relationship. E-Communication and Service Delivery positively correlate at 0.671 level of significant and E-Communication and Cost Reduction at 0.686 (positive relationship). The study reveals that entrepreneurs of medium and large scale

enterprises agree that ICT is utilized to create enabling business environment.

The result showed that E-Procurement is an effective tool in enhancing Administrative Efficiency of Public Sectors in Rivers State as it is supported by the respondents. The various mean obtained were all above the average of 2.50 for a 4-point Likert Scale. The Null Hypotheses tested between E-Procurement and Administrative Efficiency is significant. E-Procurement and Service Delivery correlates at 0.983 (very high positive relationship) and E-Procurement and Cost Reduction at 0.680 also high. These showed that there is a positive relationship between E-Procurement and Administrative Efficiency of Public Sectors in Rivers State. The study revealed that in the adoption of E-procurement in organizations, the cost benefits showed that organization would benefit more than cost (value would be achieved). E-procurement leads to value addition than cost addition.

5. Conclusion

The study revealed that e-governance is an effective tool in enhancing administrative efficiency. The descriptive statistics showed that E-Participation, E-Record, E-Communication and E-Procurement are effective tools in enhancing Administrative Efficiency of Public Sectors in Rivers State. The responses to the questionnaire items showed to a very high extent how e-governance enhance Administrative Efficiency of the Public Sectors in Rivers State. Findings also reveal that the application of e-governance eased document storage and retrieval, including data security, and facilitated faster information dissemination thereby reducing delays. E- governance remain the best in encouraging effective service delivery and administrative efficiency in government businesses and operations for Rivers State Public Sector but it has to contend with the challenges to the successful implementation of e-governance in the public sector. Application of e-governance eased document storage and retrieval, including data security, and facilitated faster information dissemination thereby reducing delays.

6. Recommendations

Based on the issues identified as some of the major challenges to e-governance implementation in Nigeria's public service, the following recommendations are advanced:

1. Government Ministries, Departments and Agencies should set up e-governance implementation committees who will work out modalities for effective implementation of the concept, with performance evaluation units, establish to evaluate the successes and failures in its targets as well as feedback mechanism to report implementation effectiveness. The Federal Government of Nigeria should establish Ministry of ICT Affairs to set up ICT implementation framework evaluation units in each of the Ministries and Parastatals, with the Permanent Secretaries as the head.

2. The government should also enact ICT laws that will make computer literacy a compulsory aspect for every public or civil servant both at the local, state and federal levels.

3. The policy should also include creation of ICT awareness with computer literacy programs among public servants. With the above done, the challenges will be reduced to a mere insignificant level as well as putting the country into the world map of e-governance high ranking list. The implementation of e-governance should be a must to all public service institutions as well.

4. Another factor to be considered is the Human element. This is important because no technology can drive itself, it is the human element that drives the technology so their willingness is critical to whether e-governance implementation in Nigeria's public service will succeed or not, and this is because they have the capacity to truncate whatever innovation and benefits e-governance promises to bring to bear. A reliable and strategic framework for e-governance operation is necessary. Government's Ministries, Departments and Agencies should set up e- governance implementation committees that will work out modalities for effective implementation, alongside the performance evaluation units established to assess the successes and failures in its targets as well as feedback mechanism to report implementation effectiveness.

5. There is the need for the government to come up with a regulatory policy, especially on the framework through legislation of e-governance and other ICT-related issues as it pertains to the operations strategies among the tiers of government. By so doing, the public service will be aware on the areas that need to be worked on, in order to actualize effective implementation of e-governance in Nigeria's public service. The government should also enact Information and Communication Technology (ICT) laws that will make computer literacy a compulsory aspect for every public or civil servant both at the local, state and federal levels. Such policies should also involve the adoption of effective ICT awareness with computer-related literacy training programs introduced in our primary, secondary and tertiary institutions.

REFERENCES:-

1. Adeyemo, A. B. (2013) E-government implementation in Nigeria: An assessment of Nigeria's global e-government ranking. *Journal of Internet and Information System*, *2 (1),* pp11-19.

2. Ahmad, F. and Quayum, M.J. (09 November 2010). Citizen-centric e-government. *The Daily Star*, page 9. http://www.thedailystar.net

3. Akther, M.S., Onishi, T. and Kidokoro, T. (2007). E-government in a developing country: citizen-centric approach for success. *Int. J. Electronic Governance*, 1(1): 38-51.

4. Al-Khouri, A.M. (2011). An innovative approach for e-government transformation. *International Journal of Managing Value and Supply Chains*, 2(1): 22-43.

5.   Alshehri, and Drew. (2010). Challenges of e-Government Services Adoption in Saudi Arabia from an e-Ready Citizen Perspective. *World Academy of Science, Engineering and Technology,* 66.

6.   Al-Tarawneh, K.A. (2012). Measuring e-service quality from the customers' perspective: an empirical study on banking services. *International Research Journal of Finance and Economics*, 91:123-137.

7.   Aneke, F (2013) Talking communications in Nigeria. Retrieved from www.dynamicexport.com.au.

8.   Athmay, A.A. (2012). Assessing the implementation of e-governance in Arab countries, *International Journal of Information Technology and Business management*, 5(1): 20-40.

9.   Danfulani, J (2013) E-governance: A weapon for the fight against corruption in Nigeria. Published by saharareport.com. *Definitions/framework and status around the world*. Computer society of India.

10.   Heeks, R. (2001). Understanding e-governance for development, i-government working paper series. *Institute for Development Policy and Management*, University of Manchester, No 11.

11.   Islam, M.Z. and Khair, R. (2012). Preparation of e-government in Bangladesh: An explanatory analysis. *JU Journal of International Technology,* 1: 19-26

12. Islam, R. (2003). Do more transparent governments govern better? World Bank Policy Research Working Paper No. 3077.

13. Jaeger, P.T. (2003). The endless wire: e-government as global phenomenon. *Government Information Quarterly*, 20(4): 323–331.

14. Kalsi, N.S., Kiran, R. and Vaidya, S.C. (2009). Effective e-governance for good governance in India, *International Review of Business Research Papers,* 5(1): 212-229.

15. Kenova, V. and Jonnason, P. (2006). *Quality online banking service*, Jonkoping University.

16. Kettani, D. (2009). Good governance and e-government: applying a formal outcome analysis methodology in a developing world context. *International Journal of Electronic Governance*, 5: 22-54.

17. Kumar, V., Mukerji, B., Irfan, B. and Ajax, P. (2007). Factors for successful e-government adoption: a conceptual framework. *The Electronic Journal of e-Government*, 5(1): 63-77.

18. Leer, A. (2000). *Welcome to the Wired World: Tune in to the Digital Future*. Pearson, Harlow /London.

19. Olufemi, F.J (2012) Electronic Governance: Myth or Opportunity for Nigerian Public Administration. International *Journal of Academic Research in Business and Social Sciences. vol.2. No.9*.

20. Palvia, S.C.J and Sharma S.S (2007) *E-government and E-governance:*

21. Sunday, O.J (2014) E-governance: An Imperative for sustainable grass root development in Nigeria*. Journal of Public Administration and Policy Research.Vol.6 (4)* pp77-89.

22. UNESCO (2005) E-Governance Capacity Building. http://portal.unesco.org.*United Nations Department of Economic and Social Affairs/Division Public*

United Nations E-government Survey (2008) From E-government to Connected Governance.*United Nations Department of Economic and Social Affairs/Division Public Administration and Development Management*. ST/ESA/SER.E/112/New York.

23. Willie, O.S (2011) *E-Governance and Capacity Building: Case Study of Local Government Areas in Ile Ife, Osun State of Nigeria*. National Centre for Technology Management (NACETEM) Obafemi Awolowo University Ile Ife.