

Information Communication Technology (ICT) and Organizational decision making of Federal Parastatals in Nigeria

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Abstract

The study investigated information communication technology (ICT) and organizational decision making of Federal Parastatals in Nigeria. Specifically, the study sought to: investigate the relationship between mobile phone communication technology and organizational decision making; identify the relationship between e-mail communication technology and organizational decision making and ascertain the relationship between video and web conferencing communication and organizational decision making. Research design for this study was descriptive survey. Study area was Enugu. The sample size of 323 respondents was drawn from population 5690 employees from selected federal Parastatals namely Federal character commission, Federal fire service, Federal housing authority, National Bureau of statistics. The instrument of data collection was questionnaire. The data analytical techniques were arithmetic mean, standard deviation and correlation statistics. The empirical results show that mobile phone communication has significant relationship with organizational decision making of Federal Parastatals in Nigeria (r-statistic = 0.761; P-value < Sig-value (0.05); e-mail communication has significant relationship between e-mail communication with organizational decision making of Federal Parastatals in Nigeria (r-statistic = 0.750; P-value < Sig-value (0.05) and video and web conferencing communication has significant relationship with organizational decision making of Federal Parastatals in Nigeria (r-statistic = 0.890; P-value < Sig-value (0.05). The study concluded that information communication technology (ICT) has positive and significant relationship with organizational decision making of Federal Parastatals in Nigeria. The study recommended that management of federal parastatals should increase training of employees in ICT utilization should be adequately carried out hence operational efficiency, quality service delivery, sustainable competitive advantage and improved performance will be the outmost benefits to be derived.

Keywords: ICT; Mobile phone communication; E-mail communication; Video and web conferencing communication; Organizational decision making

1. Introduction

The implementation of information and communication technology (ICT) in public sector organizations is vital for the socioeconomic development of an economy, especially in developing countries. It has viewed in the global context, as a means of enhancing quality service delivery, quick decision making and achieving efficiency in public administration (Nwakoby, Okoye & Chukwurah, 2021). Information Technology (IT) is clearly considered as a key growth area in this century, specifically, in a dynamic and highly competitive business environment which requires utilizing advanced IT tools to improve efficiency, cost effectiveness, and deliver high quality products and services to customers (Abdullahi, Umami & Bashir, 2019). IT is also considered as a tool of marketing, contacting customers and looking for possible customers, as well as presenting IT services as distinguished potential services for customers (Akintoye, 2021).

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Organisations are increasingly using information technology to develop solutions to public sector problems, to improve both the efficiency and effectiveness of the decision-making process, to enhance productivity and service quality, to achieve dynamic stability, and compete for new markets (Adegboyega, Aderemi, Oladimeji, Bolaji & Adebayo, 2022). One of the natural steps in the process of decision making that demands time and effort is the quest and collection of information. The use of ICT decreases the time required to gather information, and it improves access to new information. ICT tools like e-mail, mobile phones, social networks, video sharing, international television, and online management information systems provides information needed for organizational decision making much faster than before. At the same time these tools allow access to much more data than before in such a way that information flows and interconnectedness are greater in more widespread pattern. This is how ICT enhances the capability of the administrator to have more information in a faster way, minimizing the constraint of the limited amount of time and information administrator face when making decisions (Adan & Reuben, 2020).

Besides the progress in time efficiency, there is another important use of ICT in the decision making process: ICT helps to deal with the challenge of appropriate communication of decisions in organizational settings. Organizational communication must flow properly in the hierarchical structure, from the top to the bottom, vice versa and laterally. In this sense, Okeke, (2021) concluded that ICT provides information which had been only traditionally available to one or few levels to all the organization, achieving more effectiveness in the decentralization of decisions. These processes require time, but most of all accuracy, which can be improved by allowing subordinates to interact, and have immediate access to information and decisions made by senior and middle management using ICT.

1.1. Statement of the Problem

The development of Information and Communication Technologies (ICT) and the implication it portends for enhancing the administration of the public service, i.e., the agencies involved in providing public goods and services for and on behalf of a government, constitutes one of the major concerns in many countries and is at the forefront of political debate (Akintoye, 2021).

Public service of any country is a major pillar in determining the development and stability of such country. Information and communication technologies has transformed its system of administration and has been viewed in the global context, as a means for achieving good governance and for enhancing quality service delivery to the public (Teryima & Ayegba, 2019).

However, in spite of all the efforts aimed at repositioning public sector organizations in Nigeria for effective and efficient administration through information and communication technology, Nigeria Federal Parastatals remains inefficient in administration and its quality of services to the public are below expectation. There are still some lapses as regard the quality of its administrative services, performance of workers, inability to access information and communicate properly as a result of computer breakdown, poor networks, epileptic power supply, inadequate working facilities, staff lack of skills and interest to learn and use it, etc. Based on the above defects, the researcher deemed it fit to assess the relationship between information communication technology (ICT) and organizational decision making of Federal Parastatals in Nigeria.

Objective of the Study

The main purpose of this study is to investigate information communication technology (ICT) and organizational decision making of Federal Parastatals in Nigeria. Specifically, the study sought to:

- Investigate the relationship between mobile phone communication technology and organizational decision making of Federal Parastatals in Nigeria
- Identify the relationship between e-mail communication technology and organizational decision making of Federal Parastatals in Nigeria.
- Ascertain the relationship between video and web conferencing communication and organizational decision making of Federal Parastatals in Nigeria.

1.2. Conceptual Review

1.2.1. Information and communication technology

ICT is an umbrella term used to define a collection of telecommunication devices, computer hardware and software. According to Kessington, Susan and Rocky, (2018) ICT refers to software applications that captures, manipulates and allows access to information, hardware that helps run installed applications and telecommunication devices and

networks that facilitate transfer of information within an organization and beyond. Akintoye, (2021) defines Information Technology (IT) as the area of managing technology and spans a wide variety of areas that include processes, computer software, information systems, computer hardware, programming languages, and data constructs. ICT on the other hand refers to a wide range of computerized technologies that enables communication and the electronic capturing, processing, and transmission of information. These technologies include products and services such as desktop computers, laptops, hand-held devices, wired or wireless intranet, business productivity software, data storage and security, network security etc. Teryima and Ayegba, (2019) stated that ICT is a complex and heterogeneous set of goods, application and services used to produce, distribute, process and transform information. ICT is reliable to human resources and infrastructure which constitute the fundamental tools and means of assessing, planning, managing development and for achieving sustainable economic activities and growth.

1.2.2. Mobile phone communication

Mobile phone communication is the use of technology that allows us to communicate with others in different locations without the use of any physical connection (wires or cables). Mobile communication makes our life easier, and it saves time and effort. In mobile phone communications, high-frequency electromagnetic fields are used for wireless transmission of voice and data (Rufus & Akeem, 2017). Employees with mobile phones are available to make and receive calls wherever they are working. When other employees need important information or a quick decision, they can be confident of reaching the right person (Nwakoby, Okoye and Chukwurah, 2021). The ability to reach employees at any time makes an important contribution to customer service. When customers call, they can be confident of reaching their contact on the first attempt. This enables employees to deal quickly and effectively with inquiries, improving customer satisfaction. Mobile phones make it possible for employees to collaborate with colleagues and join meetings, even when they are away from the office (Abdullahi, Umami & Bashir, 2019). Smartphones have the facility to support teleconferences or video and Web conferences via the Internet. Mobile users can join project group meetings, sales conferences or management meetings and contribute as if they were present at the meeting. Mobile collaboration makes it easier to arrange meetings and maintain the momentum of projects.

1.2.3. E-mail Communication

Nowadays, it is common for people and organizations to work in different geographic locations, communicating via electronic media for producing projects, generating innovation, tackling complex organizational problems, proposing new organizational strategies, creating new services, and even managing projects and organizations (Okeke, 2021). 2017). E-mail is an important form of communication when it comes to covering large geographical areas with minimal growth in physical space, since it enables the virtual implementation of certain operations; moreover, it enables greater electronic interaction among employees (Olaoye, Olaofe-Obasesin & Akanni, 2019). Email has the advantage of being sent and received instantly, whether the recipient is a next door or thousands of miles away. Therefore, email streamlines communication, making it easier and faster to communicate important information and to receive status updates in real time. In addition, business emails enable businesses to direct their communication to predetermined audiences. The total number of business and consumer emails sent and received per day worldwide exceeded 293 billion in 2019 and is forecast to grow to over 347 billion by the end of 2023.

1.2.4. Video and Web Conferencing Communication

Web conferencing technology has been incorporated in many organizations in the world due to the benefits associated with it. Organizations which have adopted it in their operations have to a great deal gained competitive advantage. Video conferencing is an extremely convenient use of technology that allows users in various locations to hold face-to-face meetings. (Adegboyega, Aderemi, Oladimeji, Bolaji, & Adebayo, 2022) There are many ways to use video conferencing technology such as school or college classes, job training and interviews, academic or non-academic research conferences etc. Internet connectivity is used on the devices when connecting to everyone on the Internet using different platforms available such as Zoom, Microsoft Team, Google Meet, Cisco WebEx, GoTo Meeting, Skype for Businesses, ezTalks Meetings, Star Leaf, etc (Adan & Reuben, 2020).

1.2.5. Organizational decision making

A multifaceted subject, decision-making has various definitions. The process of making a decision is not a simple one. According to Onobrakpeya, Nana and Odus, (2018), “each phase in making a particular decision is itself a complex decision-making process”. Clarifying the concept of phases, Kessington, Susan and Rocky (2018) suggest that the process of decision-making is divided into phases, referred to as “problem solving” and “decision-making.” The “problem solving” phase includes selecting matters that need attention, setting goals, and arriving at and designing suitable action, while the “decision-making” phase entails evaluating and choosing from alternative actions (Nwakoby, Okoye & Chukwurah, 2021).

1.3. Theoretical Literature

1.3.1. Information and Communication Theory

Information and Communication Theory also referred to as information theory is sometimes referred to as the mathematical theory of communication. Its founder, Claude Shannon, is considered one of the greatest minds of the 20th century. Information theory is a mathematical theory that quantifies information and utilizes these quantities for modelling situations and solving optimality problems of communication and information storage. It deals with both theoretical and practical aspects of data compression and reliable transmission of information over noisy channels. The data source entropy gives a lower bound for the rate of data compression. Rates for reliable information transmission is bounded by the capacity of the given channel. The theory also includes a theoretical analysis of secrecy systems. Information theory has provided much guidance for the design of more reliable systems and has reshaped the boundaries between what is possible in communication and what is not.

1.3.2. Technology Acceptance Theory (TAT)

The most cited theory was the Technology Acceptance Model (TAM). Davis (1989) presented a theoretical model aiming to predict and explain ICT usage behaviour, that is, what causes Potential adopters to accept or reject the use of information technology. Theoretically, TAM is based on the Theory of Reasoned Action (TRA). In TAM, two theoretical constructs, perceived usefulness and perceived ease of use are the fundamental determinants of system use and predict attitudes toward the use of the system, that is, the user's willingness to use the system. Perceived usefulness refers to "the degree to which a person believes that using a particular system would enhance his or her job performance", and perceived ease of use refers to "the degree to which a person believes that using a particular system would be free of effort. Thus, TAT is based on both important perceptive factors as perceived usefulness and perceived ease of use. TAT is widely applied on the research of information technology.

1.3.3. Empirical Studies

The study here examined some concluded works of some scholars.

Adegboyega, Aderemi, Oladimeji, Bolaji and Adebayo, (2022) conducted a study to explore the impact of information and communication technology on Nigeria bottling company's organisational performance. Specifically, the study sought to determine impact of cloud computation on organisational performance in Nigeria bottling company and examine impact of internet access on organisational performance in Nigeria bottling company. The study used a descriptive survey research design. The sample size of 385 respondents was drawn from population of 3,746 NBC employees. The data collected was analyzed using multiple regression and correlation analysis. The studies demonstrated that information and communications technology (ICT) had a substantial impact on NBC's organisational performance. Furthermore, with an R² value of (0.743), internet access has a favorable impact on organisational performance, and factors statistically significant at the 95 percent confidence level and sig 0.000, there is a substantial association between cloud computing and organisational performance. The study recommended that there is adequate evidence to prove that ICT adoption has a substantial impact on NBC's organizational performance.

Nwakoby, Okoye and Chukwurah, (2021) examined influence of communication technology on administrative efficiency bomb-sighting Anambra State ministry of information and public enlightenment (2010-2019). The sample size of 232 was taken from population of 1242 staff of the Ministry. Instrument of data collection was structured questionnaire and method of data analysis was Chi-Square statistical tool. Results showed that information communication technology plays a significant role in accessing and managing information for timely decision making in the Ministry; that information communication technology helps in the storage and processing of data relevant for efficient administration in the Ministry; and that lack of staff with requisite skills is a challenge to the use of information communication technology for administrative efficiency in the Ministry. The study recommended that training and timely re-training of staff on information communication technology should be prioritized and encouraged so as to have enough staff with requisite skills and knowledge on the technical and operational know-how on the use of information communication technology to perform administrative works efficiently.

Akintoye, (2021) examined the effect of information and communication technology services in the private sector of Nigeria using a time series data covering 1983 to 2020. The data used for this study are secondary data sourced from the National Bureau of Statistics. ICT Services contribution to the Nigeria GDP is used as a proxy to ICT Services while Manufacturing, Trade and the Financial Sector contribution to GDP is used as a proxy for the private sector. The data were analyzed using Least Square Regression Model while the unit root test was conducted using the Augmented Dickey- Fuller test (ADF) for stationarity. The result shows that ICT Services in Nigeria do not have a significant effect on the Nigerian Private Sector. However, it shows a significant effect on the Financial Service sector. It, therefore,

recommends that other sectors of the Nigerian private sector like manufacturing should be supported through favourable policies on investment in ICT with less impact on their profit.

Teryima and Ayegba, (2019) conducted a study to explore the role of information communication technology (ICT) in enhancing productivity in local government administration in Benue State, Nigeria. The specific objective of this study is to ascertain the effectiveness of the role of Information Communication Technology (ICT) in enhancing productivity in the local government administration, in Benue State, Nigeria. The researcher adopted a quasi-experimental research design technique. The sample size of 240 staff of selected local government councils was taken from population 1029 of the study. The data analytical technique was Pearson chi-square test. The findings from the research revealed that Information Communication Technology (ICT) have played a positive role in areas of computerization of Internal Accounting, payroll operations, word processing and Budget planning and administration, job costing, scanning documentation and mapping, decision support, online training/learning, urban planning amongst others in the 23 local government areas of Benue State, Nigeria. The research recommended that local government administrators should make further investment in Information Communication Technology (ICT) a top priority as it is proven that it is a catalyst for development in areas of education, health, secretariat administration, proper financial reward keeping, politics, governance, culture, business and production.

Abdullahi, Umami and Bashir, (2019) determined the impact of information communication technology on organizational productivity in the Nigeria banking industry. Specifically, the study to determine the impact of software component on organizational productivity, examine the impact hardware component on organizational productivity and investigate the impact of network on organization productivity. Questionnaire was employed as a method of data collection of the study, while multiple regression analysis was used to test the hypotheses under study. The result of the study indicates that hardware component, software component and network have significant and positive impact on organizational productivity in the Nigeria banking industry. The study recommends that banks should acquire or make use of modernized and 21st century software, hardware, and network in order to increase organizational productivity and customer satisfaction which will eventually resulted to diversification of the organization.

2. Methodology

Research design for this study was descriptive survey. Study area was Enugu. The sample size of 323 respondents was drawn from population 5690 employees from selected federal Parastatals namely Federal character commission, Federal fire service, Federal housing authority, National Bureau of statistics. The instrument of data collection was questionnaire. The data analytical techniques were arithmetic mean, standard deviation and correlation statistics. The five point Likert Scale was used in analyzing the questionnaire. Any question item that does not have up to 3 or more is not statistically significant.

3. Result and discussion

Table 1 Comprehensive Demographic distribution of the Respondents

Title	Frequency	Percentage
Questionnaire Distribution		
Questionnaires Distributed	323	100%
Returned Questionnaires	290	89%
Not Returned Questionnaires	33	11%
Gender		
Female	164	56.6%
Male	126	43.4%
Age Bracket		
20-30 Years	90	31.0%
31-40 Years	126	43.4%
41-50 Years	71	24.5%

51Years – above	3	1.0%
Marital Status		
Married	205	70.7%
Single	58	20.0%
Widow/widower	24	8.3%
Divorce	3	1.0%
Educational Qualification		
OND/NCE/HND	54	18.6%
B.sc/B.Ed	236	81.4%

Sources: Field Survey, 2023

Three hundred and twenty-three (323) copies of questionnaire were designed and distributed to the respondents. Out of the 323 Questionnaires distributed, 290 (89%) were completed and returned while 33 (11%) were not returned. Therefore, 89 percent respondents were a good representation. The table showed the respondents profile in frequency and percentage distribution of gender, age bracket, marital status, and educational qualification.

3.1. Data Analysis

Question (1) what is the relationship between mobile phone communication technology and organizational decision making of Federal Parastatals in Nigeria

Table 2 The mean responses of respondents on what is the relationship between mobile phone communication technology and organizational decision making of Federal Parastatals in Nigeria

S/N	Question Items	SA 4 (%)	A 3 (%)	DA 2 (%)	SD 1 (%)	Total	Mean	SD
1	Cell phones for business needs we can have access to information about market trend and reduction to transportation cost.	99 396 (34)	119 357 (41)	42 84 (14)	30 30 (10)	290 867 100%	2.99	0.0287
2	Mobile phones make it possible for employees to collaborate with colleagues and join meetings, even when they are away from the office	120 480 (41)	78 234 (27)	62 124 (21)	30 30 (10)	290 868 100%	2.99	0.0917
3	Cell phones helps in passing quick information to different department and employees with mobile phones are available to make and receive calls wherever they are working.	123 419 (42)	101 303 (26)	56 112 (35)	10 10 (3)	290 844 100%	2.91	0.0389
4	Use of phones has made it possible for people to stay connected without the worry of time or place. Because it can be used to contact anybody any time anywhere.	190 760 (66)	50 150 (17)	26 52 (8)	24 24 (8)	290 986 100%	3.40	0.0528
5	Use of phone has given access to local as well as international level. Social networking sites have brought people even more closely.	100 400 (34)	140 420 (48)	26 52 (8)	24 24 (8)	290 896 100%	3.09	0.0109
	Grand Mean						3.08	0.0446

$$\text{Mean Score} = \frac{30*4+42*3+119*2+99*1}{290} = 2.010$$

This table shows that the respondents indicated their option on what is relationship between mobile phone communication technology and organizational decision making of Federal Parastatals in Nigeria. The respondents are in agreement with all the items. The study revealed that mobile phone communication has significant relationship with organizational decision making of Federal Parastatals in Nigeria since mobile phones make it possible for employees to collaborate with colleagues and join meetings, even when they are away from the office (Grand mean (3.08) is greater than cut-off mean (2.5)

Question (2) what is the relationship between e-mail communication and organizational decision making of Federal Parastatals in Nigeria.

Table 3 Mean responses of respondents on what is the relationship between e-mail communication and organizational decision making of Federal Parastatals in Nigeria

S/N	Question Items	SA 4 (%)	A 3 (%)	DA 2 (%)	SD 1 (%)	Total	Mean	SD
1	It enables the virtual implementation of certain operations; moreover, it enables greater electronic interaction among employees	101 404 (35)	144 432 (49)	30 60 (10)	15 15 (5)	290 911 100%	3.14	0.250
2	It allows sharing great volumes of information with customers, suppliers and employees very quickly	112 448 (37)	102 306 (35)	40 80 (14)	36 36 (12)	290 870 100%	3.00	0.293
3	E-mail is an important form of communication when it comes to covering large geographical areas with minimal growth in physical space	109 436 (38)	98 294 (34)	45 90 (16)	38 38 (13)	290 858 100%	2.96	0.2693
4	Email improves management processes by enhancing inter-departmental communication, which may significantly affect interdepartmental relations	112 448 (38)	98 294 (33)	50 100 (17)	30 30 (10)	290 872 100%	3.01	0.314
5	E-mail users are normally assigned to positions/tasks that depend on someone else to complete the necessary responses to fulfill assignments.	114 456 (39)	106 318 (36)	50 100 (17)	40 40 (14)	290 914 100%	3.15	0.306
	Grand Mean						3.05	0.291

This table shows that the respondents indicated their option on what is the relationship between e-mail communication and organizational decision making of Federal Parastatals in Nigeria. The respondents are in agreement with all the items. The study revealed that e-mail communication has significant relationship between e-mail communication with organizational decision making of Federal Parastatals in Nigeria since e-mail users are normally assigned to positions/tasks that depend on someone else to complete the necessary responses to fulfill assignments (grand mean (3.05) is greater than cut-off Mean (2.5).

Question (3) what is the relationship between video and web conferencing communication and organizational decision making of Federal Parastatals in Nigeria.

The below table shows that the respondents indicated their option on what is the relationship between video and web conferencing communication and organizational decision making of Federal Parastatals in Nigeria. The respondents are in agreement with all the items. The study revealed that video and web conferencing communication has significant relationship with organizational decision making of Federal Parastatals in Nigeria since It provides participants with audio, video, and chat space that helps them complete meeting successfully in a proper way (Grand mean (3.06) is greater than cut-off mean (2.5).

Table 4 Mean responses of respondents on what is the relationship between video and web conferencing communication and organizational decision making of Federal Parastatals in Nigeria

S/N	Question Items	SA 4 (%)	A 3 (%)	DA 2 (%)	SD 1 (%)	Total	Mean	SD
1	It allows sharing of presentations, documents, screens, etc. on a real-time basis	109 436 (38)	116 348 (40)	30 60 (10)	35 35 (12)	290 879 100%	3.03	0.427
2	Convenient to attend meetings at any location, including rural or remote locations.	111 444 (38)	90 270 31)	59 118 (20)	30 30 (10)	290 862 100%	2.97	0.147
3	It provides a place where two-way communication with teams or large participants is possible.	117 468 (32)	98 294 33)	40 80 (14)	30 30 (10)	290 872 100%	3.00	0.292
4	Reduction in travel costs and travel to the meeting place. A large number of participants can attend the meeting so that no physical space is required to gather in one place.	114 456 (39)	106 318 (36)	50 100 (17)	40 40 (14)	290 894 100%	3.15	0.306
5	It provides participants with audio, video, and chat space that helps them complete meeting successfully in a proper way	114 456 (52)	106 318 (41)	50 100 (17)	20 20 (6)	290 894 100%	3.15	0.562
Grand Mean							3.06	0.467

3.2. Test of Hypotheses

3.2.1. *Test of Hypothesis One: Mobile phone communication has no significant relationship with organizational decision making of Federal Parastatals in Nigeria.*

Table 5 Result of Correlation Analysis

Correlations		Mobile Communication	Phone	Organizational decision making
Mobile communication phone	Pearson Correlation	1		0.761**
	Sig. (2-tailed)			0.000
	N	290		290
Organizational decision making	Pearson Correlation	0.761**		1
	Sig. (2-tailed)	0.000		
	N	290		290

** . Correlation is significant at the 0.01 level (2-tailed).

In testing this hypothesis, mobile phone communication was tested relationship with organizational decision making. The result of the Pearson product correlation analysis showed the model to investigate the relationship between mobile phone communication technology and organizational decision making of Federal Parastatals in Nigeria. The empirical result showed that the Pearson product moment correlation analysis (r) was 0.761. The strength of relationship

between the two variables was high. However, we rejected the null hypothesis and concluded that mobile phone communication has significant relationship with organizational decision making of Federal Parastatals in Nigeria.

3.2.2. Test of Hypothesis Two: E-mail communication has no significant relationship with organizational decision making of Federal Parastatals in Nigeria.

Table 6 Result of Correlation Analysis

Correlations			
		E-mail communication	Organizational decision making
E-mail communication	Pearson Correlation	1	0.750**
	Sig. (2-tailed)		0.000
	N	290	290
Organizational decision making	Pearson Correlation	0.750**	1
	Sig. (2-tailed)	0.000	
	N	290	290

** . Correlation is significant at the 0.01 level (2-tailed).

In testing this hypothesis, e-mail communication technology was tested relationship with organizational decision making. The result of the Pearson product correlation analysis showed the model to investigate the relationship between e-mail communication technology and organizational decision making of Federal Parastatals in Nigeria. The empirical result showed that the Pearson product moment correlation analysis (r) was 0.750. The strength of relationship between the two variables was high. However, we rejected the null hypothesis and concluded that e-mail communication technology has significant relationship with organizational decision making of Federal Parastatals in Nigeria.

3.2.3. Test of Hypothesis Three: Video and web conferencing communication has no significant relationship with organizational decision making of Federal Parastatals in Nigeria.

Table 7 Result of Correlation Analysis

Correlations			
		Video and web conferencing communication	Organizational decision making
Video and web conferencing communication	Pearson Correlation	1	0.890
	Sig. (2-tailed)		0.000
	N	290	290
Organizational decision making	Pearson Correlation	0.890	1
	Sig. (2-tailed)	0.000	
	N	290	290

In testing this hypothesis, video and web conferencing communication was tested relationship with organizational decision making. The result of the Pearson product correlation analysis showed the model to investigate the relationship between video and web conferencing communication and organizational decision making of Federal Parastatals in Nigeria. The empirical result showed that the Pearson product moment correlation analysis (r) was 0.890. The strength of relationship between the two variables was high. However, we rejected the null hypothesis and concluded that video

and web conferencing communication has significant relationship with organizational decision making of Federal Parastatals in Nigeria.

3.3. Summary of Major Findings

The summary of major findings of the study is stipulated as follows:

- The study revealed that mobile phone communication has significant relationship with organizational decision making of Federal Parastatals in Nigeria since mobile phones make it possible for employees to collaborate with colleagues and join meetings, even when they are away from the office (r-statistic = 0.761; P-value < Sig-value (0.05).
- The study revealed that e-mail communication has significant relationship between e-mail communication with organizational decision making of Federal Parastatals in Nigeria since e-mail users are normally assigned to positions/tasks that depend on someone else to complete the necessary responses to fulfill assignments (r-statistic = 0.750; P-value < Sig-value (0.05).
- The study revealed that video and web conferencing communication has significant relationship with organizational decision making of Federal Parastatals in Nigeria since It provides participants with audio, video, and chat space that helps them complete meeting successfully in a proper way (r-statistic = 0.890; P-value < Sig-value (0.05).

4. Conclusion

The study concluded that information communication technology (ICT) has positive and significant relationship with organizational decision making of Federal Parastatals in Nigeria. It is good for federal parastatals to embrace/adopt information communication technology because of enormous benefits. These benefits includes; enhanced operational efficiency, quick organizational decision making, improved performance, improved quality of service delivery resulting to citizen satisfaction, increase in regional balance growth and to a greater extent will result to enhanced sustainable competitive advantage. It is therefore important that, problems militating against effective ICT adoption at federal parastatals ought to be given proper attention to addressing such adverse trends. The problems may include; inadequate power supply, inadequate awareness of ICT importance, unreliable telecommunication facilities, negative attitude of the government amongst others.

Recommendations

- Management of federal parastatals should made investment in Information and Communication Technology (ICT) a top priority hence it is proven that it is a catalyst/accelerator for development service of Federal character commission, Federal fire service, Federal housing authority, National Bureau of statistics. On this note, increase training of employees in ICT utilization should be adequately carried out hence operational efficiency, quality service delivery, sustainable competitive advantage and improved performance will be the outmost benefits to be derived.
- Government should revive the power sector and provide a stable power supply to enable the ICT system/units at the federal parastatals viable to facilitate optimal functioning. Alternatively, management of federal parastatals should make concerted efforts towards acquiring Maikano Generators to be installed at all their ICT centers to facilitate power generation while they wait for Federal government action as regard steady power supply.
- Management of federal parastatals should embrace the e-payment systems/transactions in order to enhance accuracy and reliability. Through this transparency and accountability will be derived in their accounting and financial systems of operations. Detection of irregularities and fraudulent acts can easily be made if this mechanism is adopted than the manual payment system in use presently.

Compliance with ethical standards

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Disclosure of conflict of interest

No conflict of interest among the authors.

References

- [1] Abdullahi, M. S., Umami, R. S. and Bashir, M. U. (2019) Impact of information communication technology on organizational productivity in the Nigeria banking industry: empirical evidence *Noble International Journal of Business and Management Research*; 3 (1); 01-09.
- [2] Adan, A. D. & Reuben, J. M. (2020). Effect of information communication technology innovation policy, training and skills on efficiency of service delivery in private laboratories in Kenya; *International Journal of Research and Innovation in Social Science*, 4 (9). 2454-6186.
- [3] Adegboyega, I. O., Aderemi, O. A.J., Oladimeji, A., Bolaji, H. B. and Adebayo, W. L. (2022) Analysis of the Impact of Information and Communication Technology on Nigeria Bottling Company's Organisational Performance; *ACTA UNIVERSITATIS DANUBIUS*; 18 (1); 22-31.
- [4] Akintoye, O. T. (2021) Effect of Information Communication and Technology Services on the Private Sector Practices: Evidence from the Nigerian Manufacturing, Trade and Financial Sectors; *Bingham International Journal of Accounting and Finance*: 2 (2); 160-172.
- [5] Akujor, C.E., Dozie, I.N.S. Onwuliri, C. O.E., Oluwasogo A. O. and Ugwoke, G.E.. Alozie, G. A. and Mejeha, I.M. (2019) Information and Communication Technology (ICT) As a Tool for the Achievement of Millennium Development Goals in Nigeria; *Advances in Science and Technology*; 3 (2); 138 – 145.
- [6] Kessington, O., Susan K. F. and Rocky J. D. (2018) Impact of information and communication technology in Nigerian small-to-medium-sized enterprises; *International Journal of Academic Accounting, Finance & Management Research*; 5 (3); 54-75.
- [7] Montazerolghaem, Ahmadreza; Yaghmaee, Mohammad; Leon-Garcia & Alberto (2020). Green Cloud Multimedia Networking: NFV/SDN Based Energy-Efficient Resource Allocation". *Transactions on Green Communications and Networking*. 4(3); 82-90.
- [8] Nwakoby, N. P., Okoye, N. J. and Chukwurah, D. C. (2021) Appraisal of communication technology and its administrative efficiency bombsighting Anambra state ministry of information and public enlightenment (2010-2019); *International Journal of Academic Accounting, Finance & Management Research*; 5 (3); 54-75.
- [9] Okeke, C. O. (2021). Effect of management information system on organizational performance in manufacturing firms. *Research Journal of Management Practice*. 1 (10), 82-90.
- [10] Olaoye, F.; Olaofe-Obasesin, M. & Akanni, W. (2019). Impact of information technology on corporate organisations performance in Nigeria. *International Journal of Engineering Applied Sciences and Technology*, 4 (8), 84-88.
- [11] Onobrakpeya, P.; Nana, A. & Odus, O. (2018). Improving service delivery through information and communication technology in the Nigerian manufacturing industry. *Apeejay-Journal of Management Sciences and Technology*, 5 (2), 61-84.
- [12] Rufus, A. I., & Akeem, L. B. (2017). Impact Analysis of Information Communication Technology (ICT) in Project Evaluation and Management in Nigeria. *Canadian Social Science*, 13 (7), 6-16.
- [13] Teryima, S. J. and Ayegba, S. (2019) The role of information communication technology (ICT) in enhancing productivity in local government administration in Benue State, Nigeria; *International Journal of Business and Economic Development*; 3 (1); 15-21.