

DIGITAL SECURITY: THE ADMINISTRATIVE EFFICIENCY INDEX OF LOCAL GOVERNMENT AREA IN RIVERS STATE, NIGERIA

**IGANIBO, SOTONYE GBORIWARI¹, PROF. PATRICK NWINYOKPUGI¹
and PROF. DIDIA, J.U.D.²**

Email: sotonyeiganibo@gmail.com; nwinyokpugi.prtrick@ust.edu.ng

¹Department of Office and Information Management
Faculty of Management Sciences
Rivers State University, Port Harcourt, Nigeria.

²Department of Marketing, Faculty of Management Sciences, Rivers State University,
Nkpolu-Oroworukwo, Port Harcourt, Nigeria

ABSTRACT

This study examined the relationship between digital security and administrative efficiency of Local Government Area in Rivers State, Nigeria. The study adopted the quasi-experimental research design taken cognizance of the cross sectional survey approach. The study population comprised of the 23 Local Government Areas in Rivers State, Nigeria. The study adopted the census approach which covered all target Local Government Areas in Rivers State, Nigeria. However, the respondents derived from the respective local government area include 4 principal officers of the 23 Local Government Areas in Rivers State. Thus, the total respondent is 92 derived from the 23 Local Government Areas. Data collection for the study was done through the use of questionnaire and gathered data were analysed with simple descriptive and inferential statistics. The study hypotheses were tested using Pearson Product Moment Correlation Statistics and presented with the aid of Statistical Package for Social Sciences. The findings revealed significant positive relationship between digital security and administrative efficiency which include cost reduction, quality service delivery and waste minimization. Based on the findings, the study concluded that, there is a significant positive relationship between digital security and administrative efficiency. The study therefore, recommended that digital security be use as it is found to have significant positive relationship with the measures of administrative efficiency.

Key words: Digital security, administrative Efficiency, Cost Reduction, Quality Service Delivery, Waste Minimization

INTRODUCTION

The digitalization of the workplace today comes with a lot of challenges including the nature at which administrative work in all sector of the economy including local government area council activities are conducted. One of such challenges is the incessant attack on government facilities which threatening administrative efficiency. The goal and aim of every administrative procedure is to ensure organizational resources are utilized efficiently to serve the citizenry better. Moreover, Local government area in Nigeria and Rivers State in particular was created to compliments State Government in development of local areas under such established Local Government which fall under the public sector organization. As a non-profits venture, local government perform its activities through administration by utilizing the assign resources in their disposal in developing facilities for the betterment of the people. However, Local Government Area Council in Nigeria is always in the news not because they are administered right but because they are primary sources of local area development. It was from this reason that Igbokwe-Ibeto (2003) asserted that, Local government administration in Nigeria has come of age, not so much of because of its efficiency and effectiveness, but primarily because of its longevity and resilience of its relevance in the administration of the country. The expediency for the creation of local

government anywhere in the world stems from the need to facilitate development at the grassroots. As important as local government administration has been, there seems to be some constraints that have been infringing on its operations over the years. These challenges range from political but undue interference of federal and state governments, coupled with high rate of bribery and corruption to embezzlement and gross inadequacy of well-trained and qualified human resources among others (Akhakpe, Fatile & Igbokwe-Ibeto, 2012). As odd as this may sound, the little facilities that this crop of bad administrators may have developed in their respective local government area continue to be under attack by hoodlums who specialize in stealing government facilities and make the environment unconducive to other citizens. As a result of this, local government administrators are adopting digital security as a mean of curtaining this act that threatening the existence of their localities. Therefore, the aim of this study is to examine the relationship between digital security and administrative efficiency in Local Government Area in Rivers State, Nigeria.

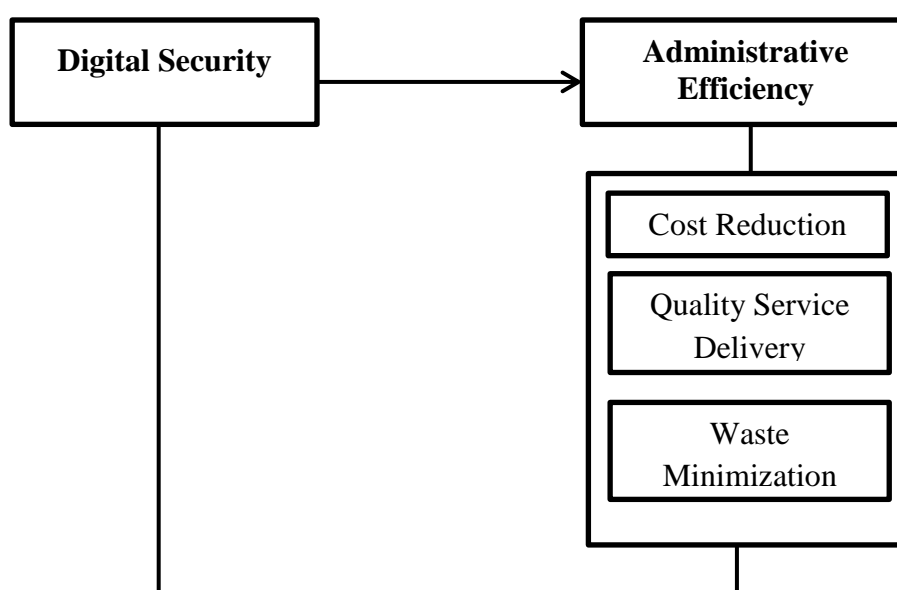


Fig.1: Conceptual framework for digital security and Administrative Efficiency

LITERATURE REVIEW

This study is situated in the diffusion of innovation theory. The theory was propounded by Rogers in 1962. The diffusion of innovation theory explained the involvement in the adoption of digital technologies and innovations in organizations. The theory also opined that all individuals and organizations will not adopt new or improved technologies at the same time and the time or point at which innovations are adopted will influence performance and efficiency. The two main assumptions of this theory are as follows: in a social system, there will always be a disparity in the level and time at which individuals and organizations within will adopt new ideas, techniques, and technology. The theory also postulates that organizations that adopt innovations early will naturally outperform late adopters and the laggards. This theory provided clarity in security concerns situation in our society today as all local government administrators may not adopt the use of digital security in securing their organizations.

Digital Security

The process of developing digital security has become a significant necessity in recent times. Alimardani (2020) posits that digital security is crucial for citizens and activists as they face increased surveillance, censorship, and repression. This is mainly because current cybercrime and attacks have made headlines that can jeopardize ordinary people's trust in sharing information online. Digital security is a collective term describing the details of the resources employed for protecting the online identity, data, and other assets. These tools might include web services, software, smart phones, SIM cards, secured personal devices, and biometrics (Grimm, Koehler, Lust, Saliba & Schierenbeck, 2020). Digital security is essential to trust in this digital age. Digital security, also known as cyber security or information security refers to the measures taken to protect digital information, systems, and networks from unauthorized access, use, disclosure, disruption, modification, or destruction. It encompasses a wide range of practices and technologies that aim to safeguard data and ensure privacy, integrity, and availability of digital assets. Within this environment, digital security is the policy and framework that proved the essential and practical principles to address without restricting use, the openness of digital technology, and dynamic nature without inhibiting the potential to foster innovation to the social technologies (Buja, 2021). Lawson and Kim (2022) provide a comprehensive overview of digital security practices and techniques. The authors define digital security as “the protection of digital information against unauthorized access, use disclosure, disruption, modification, or destruction.

The primary purpose is to secure the online and digital identity and presence of the individuals and information. The use of digital security measures has generated growing significantly since the online and digital presence of individuals is more important than their offline presence (Chaturvedi, Sharma, & Ahmed 2021). Digital security means protecting computer, mobile devices, tablets, and any other Internet-connected devices from intruders, which could be in the form of hacking, phishing, and more (Buja, 2021). Organizations are taking a growing interest in incorporating digital techniques for the growth and development of their services. In this regard, they have the role of undertaking the required measures to avoid the chances of risks and threats within their organizations in the longer term (Bosma, 2019). The use of digital security measures might be helpful for the organizations to manage and secure the digital and online identities of employees working for the organizations. The development of the overall digital security systems might be a long and complex process (Chen, Guo, Bai, Wang, Dong, Qian, Lu & Xing, 2021). Moreover, it is different for every organization. Digital security provides privacy in the organization that controls some personal information. Privacy and security are interrelated with each other. Privacy is associated with any kind of right which may control some personal information (Gaufman, 2021). Privacy can be maintained by using several privacy policies related to any organization (Buja, 2021). Digital security and privacy policy can be considered the priority of different public policies in the era of a data-dependent economy. Therefore, for us in this study looking at the various definitions of digital security *defined digital security as the use of digital security infrastructure in safeguarding government and organizational facilities including resources against theft.*

Administrative Efficiency

The word administration is used all around us and in various ways. For example, the Oxford English Dictionary describes administration as follows: the process or activity of running a business, organization; etc. the management of public affairs, government; the action of dispensing, giving, or applying something (Oxford Dictionaries, 2010). Over the decades, scholars have discussed the topic of efficiency along two major distinctions; also, it has always been subject to how the duties of government are defined. At one point in time, it was just to increase output; afterward, it was defined along pure business lines; and later on,

an element of value was added to cover the expectations of citizens as the most significant part of public goods and services. Schachter (2007) finds efficiency as an intrinsic value in public administration pointing out that its definition is debated among scholars of the field. Efficiency is the ability to do things well, successfully, and without waste. Efficiency has long played a central role in the terrain of public administration values and there is a growing demand that public organizations promote efficiency in the delivery of public goods and services to the citizens. Mihaiu, Opreana and Cristescu (2010) define efficiency as the relationship between the outcome effects, or output and the efforts made or input. Efficiency in this regard, can be achieved under the conditions of maximizing the results of an action in relation to the resources used, and it is calculated by comparing the effects obtained in their efforts. According to them, the outcome effects must be viewed not only in terms of economic but also in terms of social effects resulting from implementing a program.

Administrative efficiency is a common concept used on a daily basis by all economic agents. However, there is no precise and a universally acceptable definition of the term. It has a variety of meanings attached to it. Nonetheless, there is still a common reference point by all users of the concept. It is used mainly in reference to governmental actions that are geared to serve the interest and ensure the well-being of the citizenry through proper management of both human and material resources. Therefore, administrative efficiency is the key to positive administrative changes (Armstrong & Bulmer, 2018). Administrative efficiency is the judicious utilization of local government resources, proper conduct and management of governmental affairs at the local government level to facilitate administrative effectiveness (Irfan, 2017). Administrative efficiency can be interpreted as the efficiency of the gathering, processing and communicating of information (Jung, 2022).

Administrative efficiency connotes complying with due process, responsiveness to local needs, transparency, accountability and adhering to budget provisions (Longe & Durosaro, 2017). Administrative efficiency also looks at the systematic progress and well-organized administration (Payne & Pheysey, 1971 cited in Peter & Kavitha, 2020). They also posited that administrative efficiency in terms of the organizational structure, show how works are well organized and progress systematically and how information is gathered, processed and communicated. For Marudas (2004) cited in Grizzle (2015), administrative efficiency is seen as program expenses, i.e., expenses for administrative purposes in relations to the total expenses. Administrative efficiency is the capacity of an organization, institution, or business to produce desired results with a minimum expenditure of energy, time, money, personnel, and material (Ducat & Kumar, 2015). Administrative efficiency can be interpreted as the efficiency of the gathering, processing and communicating of information (Heindl, 2017). Payne & Pheysey (1971) measured administrative efficiency by looking at the extent to which work is well organized and progresses systematically. It is obvious therefore, that a result oriented public sector in terms of delivering public services and improve value for public funds is the defining characteristic of administrative efficiency. Notably, most government in developing world have lack in efficient and effective administrative mechanisms to meet the citizen demands.

Cost Reduction

The growth of any organization is largely determined by how well it can manage its costs. This is partly because to be able to maximize profit, cost must be reduced to the barest minimum. Cost reduction has become a vital tool for organizations to constantly stay ahead

of the increased (Alireza & Mahdi, 2019). Indeed, even organizations that are gainful can profit by implementing cost-lesening techniques to make considerably higher overall revenue on its items or administrations. According to Ogunnaike (2018) the effective and efficient management of cost is not only necessary to meet the profit objective of the organization but also the going concern status of the entity. The concept of continuously searching for new ways and avenue of reducing cost needs to be constantly promoted at all levels of an organization, which signifies that the enterprise has a strategic approach to this issue (Figar & Ivanoic, 2015). Low production costs have become one of the primary ways that organizations compete in a global economy, hence, cost reduction must continually be in the minds of managers of organizations (McWatters, Morse & Zimmerman, 2010). Chartered Institute of Management Accountants (CIMA), London defined cost reduction as the achievement of real and permanent reduction in the unit cost of goods manufactured or services rendered without damaging the ability of the product to serve the purpose for which it was intended. According to Gaurav, Jain, Kapoor and Nateriya (2018), cost reduction is "the way toward searching for, finding and expelling baseless costs from a business to build the benefit without negatively affecting item quality". Cost reduction is a planned approach to reduce expenditure. It is a continuous process of examining critically all elements of cost and each aspect of the business with a view to improving business efficiency (Tepper, 2017). Asaolu and Nassar (2007) define cost reduction as the term used for planned and positive approach to the improvement of efficiency. It can be viewed in many ways, such as increasing productivity, and elimination of waste. Lucey (1996) refers to cost reduction as a concept which has the aim of reducing cost from a previously accepted norm or standard without reducing the effectiveness or performance of the project or services. Cost reduction is successful when cost is minimized and considered in total for the entire entity.

Cost reduction is a planned positive approach to reduce expenditure. ACCA Study Text (n.d.) defines cost reduction as the reduction in unit cost of goods or services without impairing suitability for the use intended. Cost reduction is a corrective function. It starts when cost control ends and considers that no cost is at its optimum level. According to Adeniyi (2015) cost reduction starts with an assumption that current cost levels or planned cost levels are too high despite the fact that cost control may be good and organization experiencing high efficiency levels. The general idea is to reduce unnecessary "bad" costs so that the business can redirect funds into good spending that enables better productivity. More specifically, cost reduction aims to: Consolidate purchasing across the organization, optimizing procurement when multiple departments or teams need the same resources; Reduce waste by eliminating spending on products, vendors, or processes that aren't "pulling their weight." Optimize your workflows to cut down on redundancies, increasing efficiency and lowering operational costs; utilize technology to monitor business operations and scan for cost reduction opportunities.

Cost reduction does not involve a onetime practice. It involves the manner of mind, pattern, and philosophy. Minimizing of cost is essentially a real function of cost consciousness on the part of individuals involved. Hence, the principle way of establishing cost consciousness is to minimize cost at all the levels and highlighting the role and responsibility of every employee in every part of the organisation. Like any other business strategy, cost reduction is never static. It needs to be reviewed and updated regularly to evaluate new savings opportunities as they come up.

Quality Service Delivery

Many definitions have attempted to describe what constitutes quality service delivery. Higher-quality service indicates that quality can be defined only by customers and that it

occurs when a service organization provides service that satisfies the customer's needs (Metters, King-Metters & Pullman, 2013). Thus, simply speaking, quality service is defined as the satisfaction of customer expectations. However, quality service is a complex construct which has multi-dimensions or multi-facet characteristics. To verify the dimensions of quality service, a considerable number of researches have been reported during the last twenty-five years (Lee, 2010a). Specifically, Grönroos's (1984) cited in Ghotbabadi, Feiz and Baharun, (2015) two-dimensional model can be described as follows: technical quality is "what a customer receives," and functional quality is "how a service is provided or delivered." On the other hand, Parasuraman et al. (1985) cited in Yarimoglu (2014) conducted researches in several industry sectors to develop and refine SERVQUAL, a multiple-item instrument to quantify customers' global assessment of a company's service quality. Their scale involved expectations-perceptions gap scores along five dimensions: reliability, responsiveness, assurance, empathy, and tangibles (Metters *et al.*, 2013). Yarimoglu (2014) defined perceived service quality as the consumer's judgment about the superiority or excellence of a product, and confirmed the five-dimension model. However, Cronin and Taylor (1992) and Teas (1993) cited in Teas & DeCarlo (2004) argued that performance measures as perceived quality is superior to the "perceptions-minus-expectations" measures. Hence, many previous studies revealed that service quality can be described as a form of attitude that is related but not equivalent to satisfaction, which results from the comparison of expectations with performance (Parasuraman *et al.*, 1988 cited Yarimoglu, 2014; Bolton & Drew, 1991 cited in Lemon & Verhoef, 2016; Cronin & Taylor, 1992 cited in Teas & DeCarlo, 2004; Lee, 2010). In addition, other conceptual and empirical studies suggest that service quality is comprised of service product, service environment, and service delivery (Rust & Oliver, 1994) or interaction quality, physical environment quality, and outcome quality (Brady & Cronin, 2001; Lee, 2011).

Quality service delivery is another major measure of administrative efficiency in local government. It refers to delivering services of high quality in a bid to create and provide value to people (Grönroos & Ravald, 2011). Simply put, it is the extent to which services in the local governments are effectively being rendered to people or other stakeholders. Through the provision of quality service delivery, employees, and indeed the whole local government can achieve increased customer satisfaction (Zeithaml & Bitner, 2010 cited in Yadav & Rai, 2019). In order to provide quality service delivery, there is need for local government to create value through successful implementation of their administrative functions (Parasuraman, Berry & Zeithaml, 2015). Quality service can be described as the result from customer comparisons between their expectations about the service they will use and their perceptions about the service organization. That means that if the perceptions would be higher than the expectations the service will be considered excellent, if the expectations equal the perceptions the service is considered good and if the expectations are not met the service will be considered bad.

Patently, continuous improvement of service procedures contributes to the optimization of quality service delivery and enhances the organization's standards of service. However, a great number of normative studies demonstrate that the effectiveness of the quality service delivery influences positively and significantly peoples' perception of the quality of the service that they receive (e.g. Hensel, 2019; Kingman-Brundage & Shostack, 2018). Chang (2018) posits that quality service delivery should be generally approached from the customer's point of view because they may have different values, different ground of assessment, and different circumstances. Parasuraman, Zeithaml and Berry (1990) cited in Phuong and Dai Trang, (2018) mention that quality service delivery is an extrinsically perceived attribution based on the customer's experience about the service that the customer

perceived through the service encounter. According to the work of Kumra (2018), quality service is not only involved in the final product and service, but also involved in the production and delivery process, thus employee involvement in process redesign and commitment is important to produce final products or services.

Waste Minimization: Waste minimization in the context of administrative efficiency is the act of reducing the level of waste or wastages in the production of goods or services. It also refers to the systematic approach of reducing or eliminating unnecessary activities, resources, or processes that do not contribute to the overall effectiveness and performance of administrative operations (Wilson, Rodic, Cowing & Velis, 2017). Waste or wastages refers to the less than maximum use of resources in the production process or service delivery (Zeb-Obipi, 2015). He argues that organizations embrace waste minimization because with fewer mistakes, fewer delays and better use of machine, time, and materials, performance will improve and wastages will be minimized. Prajogo (2006) defined waste minimization as a practice or process through which the quantity of generated waste is reduced with the main objective of producing the least of unwanted by-products through the optimal use of raw materials, water and energy, that reduced the amount of waste entering the environment. Roscoe, Subramanian, Jabbour and Chong (2019) posit that waste minimization refers to the practice of reducing the amount of waste generated in various processes, systems, or activities. It involves the systematic reduction, elimination, or prevention of waste generation at its source, with the goal of conserving resources, minimizing environmental impacts, and improving overall efficiency. Armstrong (2012) opines that waste minimization helps firms to evaluate its administrative efficiency in the business. In order to achieve waste minimization, local government often creates policies and regulations that promote waste reduction and diversion. These may include implementing recycling programs, encouraging residents and businesses to adopt sustainable waste management practices and establishing infrastructure for separate collection of recycle materials. Waste minimization in local government administration also extends to patterning with other stakeholders, including businesses, non-profit organizations, and educational institutions (Akinbile, Musa & Ogunsanya, 2021). Collaboration with these stakeholders helps to develop innovative solutions, such as promoting circular economy practices, incentivizing waste reduction in commercial sectors, and supporting research and development of sustainable waste management technologies. Overall, waste minimization in local government administration is about embracing a holistic and environmentally conscious approach to efficiently managing waste within a community by reducing waste generation, promoting recycling, and fostering sustainable practices. Waste minimization in this context can be defined as the organization's ability in reducing idle capacity, excess items and quality failure (Zeb-Obipi, 2015).

METHODS

The study adopted the quasi-experimental research design taken cognizance of the cross sectional survey approach. The above research design is correlational and it helps researchers to determine the degree to which variables are related. The population of the study comprised of 23 Local Government Area in Rivers State, Nigeria. The study adopted the census approach which covered the entire target Local Government Area, Nigeria. However, the respondents derived from the respective Local Government Area in Rivers State, Nigeria which includes Head of Local Government Area, Head of Personnel Management, Director of works and Treasurer. Thus, the total respondent is 92 derived from the 23 Local Government Areas. Data collection for the study was done through the use of questionnaire and retrieved after three weeks. Gathered data were analysed with simple descriptive and inferential statistical tool. The study hypotheses were tested using Pearson Product Moment Correlation Statistics and presented with the aid of Statistical Package for Social Sciences to

establish the relationship between the predictor and the measures of the criterion variable. In testing the study hypothesis our confidence interval was set at 95% and at 0.5 level of significance (two tailed) to test the statistical significance of the collected data in this study. Below is the Pearson’s Product Moment Correlation Coefficient formula.

$$r = \frac{n \sum xy - \sum x \sum y}{\sqrt{\left(n \sum x^2 - \sum x^2 \right) \left(n \sum y^2 - (\sum y)^2 \right)}}$$

Table 1: Correlations of Digital Security and Cost Reduction

		Digital Security	Cost Reduction
Digital Security	Pearson Correlation	1	.875**
	Sig. (2-tailed)		.003.
	N	73	73
Cost Reduction	Pearson Correlation	.875**	1
	Sig. (2-tailed)	.003	
	N	73	73

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

Source: SPSS Output

Table 1 above revealed that there is a very strong positive relationship between digital security and cost reduction at 0.875 at a significance level of 0.03 which is less than the chosen alpha level of 0.05 for the hypothesis. The correlation is only statistically significant at 0.01 level of significance. Therefore, with a correlation of 0.875, we reject the null hypothesis and however accept the alternative hypothesis. This implies that there is a positive relationship between digital security and cost reduction of local governments in Rivers State.

Table 2: Correlations of Digital Security and Quality Service Delivery

		Digital Security	Quality Service Delivery
Digital Security	Pearson Correlation	1	.765
	Sig. (2-tailed)		.003
	N	73	73
Quality Service Delivery	Pearson Correlation	.765	1
	Sig. (2-tailed)	.003	
	N	73	73

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

Source: SPSS Output 2023

Table 2 above revealed that there is a very strong positive relationship between digital security and quality service delivery at 0.765 at a significance level of 0.03 which is less than the chosen alpha level of 0.05 for the hypothesis. The correlation is only statistically significant at 0.01 level of significant. Therefore, with a correlation of 0.765, we reject the null hypothesis and however accept the alternative hypothesis. This implies that there is a positive relationship between digital security and quality service delivery of local governments in Rivers State.

Table 3: Correlations of Digital Security and Waste Minimization

		Digital Security	Waste Minimization
Digital Security	Pearson Correlation	1	.705
	Sig. (2-tailed)		.003
	N	73	73
Waste Minimization	Pearson Correlation	.705	1
	Sig. (2-tailed)	.003	
	N	73	73

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

Source: SPSS Output

Table 3 above revealed that there is a very strong positive relationship between digital security and waste minimization at 0.705 at a significance level of 0.03 which is less than the chosen alpha level of 0.05 for the hypothesis. The correlation is only statistically significant at 0.01 level of significant. Therefore, with a correlation of 0.705, we reject the null hypothesis and however accept the alternative hypothesis. This implies that there is a positive relationship between digital security and waste minimization of local governments in Rivers State.

DISCUSSION OF FINDINGS

The study results in table 1, 2 and 3 revealed that digital security is positively correlated with administrative efficiency measures of local governments in Rivers State with the coefficient value of 0.875 with cost reduction, 0.765 with quality service delivery and 0.705 with waste minimization at a p-value of $0.003 < 0.5$. This implies that the more local government adopts digital security gadgets in this digital age in carrying out their functions, the more they perform better. Such gadgets include but not limited to CCTV and Fingerprint Scanner. This finding is in tandem with the findings of Anamarija et al. (2019) who posits that workplace digitalization improves job satisfaction, work/life balance, and promotes more worker autonomy. This is done by changing from analogue to digital in the workplace thereby making work pleasurable and easing stress on the part of the workers. It also makes the workers feel secured in the workplace. A secured environment helps in making the employees feel comfortable. There should be digital security in the workplace of the staff (Krumm, 2000). As human beings, employees feel happy when their basic needs are being met by their organization because it enhances the staff performance. One of such basic need is security (Samganakkan, 2010). One of the most salient ways an organization can show how much they love their employees is by ensuring that their employees are satisfied, comfortable and secured. However, this finding is also in tandem with the findings of Grimm et al. (2020) that digital security in the workplace makes the employees not to exhibit certain behaviours during work hours. This is true because with the presence of CCTV, employees cannot abandon their work or exhibit certain behaviours that are not acceptable in the workplace. This will make them focus on their work thereby increasing administrative efficiency in the workplace. Also, Hunter (2019) opined that digital security such as CCTV is very important in monitoring the activities of the employees.

CONCLUSION

The study findings revealed that there is a strong positive significant relationship between digital security and measures of administrative efficiency which are cost reduction, quality service delivery and waste minimization of Local Government Areas in Rivers State, Nigeria. Therefore, the study concluded that there is a significant positive relationship between digital security and administrative efficiency of Local Government Area in Rivers State, Nigeria.

RECOMMENDATIONS

Based on the study findings, the study therefore, recommended thus:

- i. Local Government in Rivers State should adopt digital security as it reduced cost of administration.
- ii. Principal Officers of Local Government Area should adopt digital security as it enhances quality service delivery.
- iii. Local Government Area in Rivers State should ensure the utilization of digital security as it protects the council against theft, leading to waste minimization.

REFERENCES

- Alimardani, M. (2020). Digital security in non-democratic regimes: Access, ethics, and agency. In Z. Tufekci, & M. Gomez (Eds), *Engineering Digital trust: The case of Iran*. Oxford University Press.

- Akhakpe, I. Fatile, J.O & Igbokwe-Ibeto, C.J. (2012). Local government and the challenges of community and rural development in Nigeria: The wayforward. *International Journal of Asian Social Science*, 2(6), 648 – 665.
- Al-Rahmi, W. M., Alzahrani, A. I., Yahaya, N., Alalwan, N., & Kamin, Y. B. (2020). Digital communication: Information and communication technology (ICT) usage for education sustainability. *Sustainability*, 12(12), 5052.
- Armstrong, K. A., & Bulmer, S. (2018). *The United Kingdom: between political controversy and administrative efficiency*. In *Fifteen into one?* (388-410). Manchester University Press
- Alireza, A. S., & Mahdi, A. (2019). Target and kaizen costing. *International Journal of Social, Behavioural, Educational, Economic, Business and Industrial engineering*, 6(2), 171 – 185.
- Armstrong, M. (2012). *Armstrong's Handbook of Human Resources Management Practice*. London: Kogan Page.
- Asaolu, T. O., & Nassar, M. L. (2007). *Essentials of management accounting & financial management*. (2nded) Ile-Ife, Nigeria: Cedar Productions.
- Akinbile, C. O., Musa, S. M., & Ogunsanya, A. A. (2021). Strategies for waste minimization in Nigerian construction industry for improved project delivery. *Journal of Fatehpur Sikri, India*, 1(1), 20 - 31.
- Buja, A. G. (2021). Cyber security features for national e-learning policy. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(5), 1729-1735.
- Bosma, E. (2019). *Multi-sited ethnography of digital security technologies. Secrecy and methods in security research: A guide to qualitative fieldwork*. Routledge.
- Chen, Z., Guo, Y., Bai, D., Wang, J., Dong, Y., Qian, S., Lu, T. & Xing, H., (2021). Research on cyber security defence and protection in power industry. In *Journal of Physics: Conference Series*.1769(1), 012-040.
- Castells, M. (2020). *The rise of the network society. (Information age. economy, society and culture, 1.)* Wiley-Blackwell.
- Chaturvedi, M., Sharma, S., & Ahmed, G. (2021). March study of baseline cyber security for various application domains. In IOP conference series: *Materials Science and Engineering*. 1099(1), 021 – 051.
- Figar, N., & Ivanovic, V. (2015). Cost reduction strategy: process and effects. *Journal of Current Research*, 12(1), 15-26.
- Grizzle, C. (2015). Efficiency, stability and the decision to give to nonprofit arts and cultural organizations in the United States. *International Journal of Nonprofit and Voluntary Sector Marketing*, 20(3), 226-237.
- Gaurav, H. Y., Jain, K. R., Kapoor, M., & Nateriya, R. (2018). Cost reduction in different disciplines. *International Journal of Current Research*, 5(10),2821-2825.
- Ghotbabadi, A. R., Feiz, S., & Baharun, R. (2015). Service quality measurements: A review. *International Journal of Academic Research in business and social sciences*, 5(2), 267 – 277.
- Gronroos, C., & Ravald, A. (2011). Service as business Logic: Implications for value creation and marketing. *Journal of Service Management*, 22(1), 5-22.
- Grimm, J., Koehler, K., Lust, E.M., Saliba, I. & Schierenbeck, I., (2020). *Safer field research in the social sciences: A guide to human and digital security in hostile environments*. Sage.

- Gaufman, E., (2021). *Cybercrime and punishment: Security, information, war, and the future of Rernet*. Palgrave Macmillan.
- Irfan, M. I. M. (2017). The role of E-Governance in administrative efficiency and combating corruption: Case of Sri Lanka. *Global Journal of Management and Business Research*, 17(2), 39-50.
- Igbokwe-Ibeto, C.J. (2003). *The effectiveness of local government in rural development in Nigeria: A study of Ngor Okpala L.G.C of Imo State*, An Unpublished (B.PA) Project Ambrose Alli University Ekpoma, Edo State.
- Jung, S. M. (2022). Participatory budgeting and government efficiency: Evidence from municipal governments in South Korea. *International Review of Administrative Sciences*, 88(4), 1105-1123.
- Köffer, S. (2015). Designing the digital workplace of the future—what scholars recommend to practitioners.
- Kumra, R. (2018). Service quality in rural tourism: A perspective approach. Conference on tourism in India-challenges ahead, India, 424-431
- Khare, V., Singla, A. (January 27, 2022). A review on the advancements in chemical examination of composition of latent fingerprint residues. *Egyptian Journal of Forensic Sciences*. 12 (1), 2090 - 5939
- Longe, R. S., & Durosaro, D. O. (2017). Analysis of international efficiency of secondary education in Nigeria: A case Study of Edo State. *AJEM*, 2(2), 107-114.
- Lee, H. S. (2011). Measuring the quality of fast-food service in Korea. *Information: An International Interdisciplinary Journal*, 14(1), 115-126
- Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80(6), 69-96.
- Lawson, C., & Kim, P. (2022). *Digital security and forensic*. CRC Press
- Mihaiu, D. M., Opreana, A., & Cristescu, M. P. (2010). Efficiency, effectiveness and performance of the public sector. *Romanian Journal of Economic Forecasting*. 4.132 – 147.
- Metters, R., King-Metters, K., & Pullman, M. (2013). *Successful service operations management*. Thomson South-Western.
- Oxford Dictionaries. (2010). Administration. Retrieved February 22, 2023, from Oxford Dictionaries:<http://oxforddictionaries.com/definition/administration?q=adminISTRATION>
- Ogunnaike, M. W. (2018). Cost management and profitability in manufacturing companies (Undergraduate Thesis). Covenant University, Ota, Ogun State, Nigeria.
- Peter, M., & Kavitha, D. S. F. (2020). A study on fairness perceptions of work wife balance initiatives. *International Journal of Management (IJM)*, 11(2), 34 – 40.
- Payne, R. L., & Pheysey, D. C. (1971). Stern's organizational climate index: A reconceptualization and application to business organizations. *Organizational Behaviour and Performance*, 6, 77-98.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L., (2015). A conceptual model of services quality and its implications for future research. *Journal of Marketing*, 49(3), 41-50.
- Phuong, N. N. D., & Dai Trang, T. T. (2018). Repurchase intention: The effect of service quality, system quality, information quality, and customer satisfaction as mediating role: a PLS approach of m-commerce ride hailing service in Vietnam. *Marketing and Branding Research*, 5(2), 78 – 93.

- Prajogo, G. (2006). Achieving superior innovation-based performance outcomes in SMEs through innovation resource–capability complementarity. *Industrial Marketing Management*, 40(8), 1285-1293.
- Rust, R. T., & Oliver, R. L. (1994). Service quality: insights and managerial implications from the frontier. In R. T. Rust, & R. L. Oliver (Eds.), *Service quality: New directions in theory and practice* (pp. 1-19). Thousand Oaks, CA: Sage Publication. <http://dx.doi.org/10.4135/9781452229102.n1>
- Roscoe, S., Subramanian, N., Jabbour, C. J., & Chong, T. (2019). Green human resource management and the enablers of green organizational culture: Enhancing a firm's environmental performance for sustainable development. *Business Strategy and the Environment*, 28(5), 737-749.
- Schwalbe, K. (2020). *Information technology project management*. Cengage Learning
- Schaeffer, M., & Yilmaz, S. (2008). Strengthening local government budgeting and accountability. World Bank Policy Research Working Paper No. 4767. Washington, DC: World Bank. Available online: <https://ssrn.com/abstract=1297806> (accessed on 5 March 2023).
- Tepper, D. (2017, February 1). What is the reason for price increase of a product? Retrieved October 25, 2022, from Quora: <https://www.quora.com/What-is-the-reason-for-price-increase-of-a-product>.
- Urbach, N., & Röglinger, M. (2019). *Introduction to digitalization cases: How organizations rethink their business for the digital age*. In *digital cases*. Springer International Publishing, pp. 1-12.
- Warren, L. (2020). The impact of electronic communication on administrative efficiency in higher institutions. *Journal of Higher Education Administration*, 23(2), 56-71.
- Wilson, D. C., Rodic, L., Cowing, M. J., Velis, C. A. (2017). Integrated sustainable waste management in developing countries. *Journal Proceedings of the Institution of Civil Engineers-Waste and Resource Management*, 170(2), 51-61.
- Yarimoglu, E. K. (2014). A review on dimensions of service quality models. *Journal of Marketing Management*, 2(2), 79-93.
- Yadav, M. K., & Rai, A. K. (2019). An assessment of the mediating effect of customer satisfaction on the relationship between service quality and customer loyalty. *IUP Journal of Marketing Management*, 18(3), 7-23.
- Zeb-Obipi, (2015) Corporate Productivity Performance: A harmonist framework: *International Journal of Business and General Management*, 4(4) 19-25