



**TECHNOLOGY OPERATIONAL EFFICIENCY AND SERVICE DELIVERY IN THE PUBLIC SECTOR: NATIONAL
TRANSPORT AND SAFETY AUTHORITY IN KENYA**

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TRANSPORT AND SAFETY AUTHORITY IN KENYA**

Sawe, B.,^{1*} & Cheluget, J.²

^{1*} Master Candidate, The Management University of Africa [MUA], Kenya

²Ph.D, Senior Lecturer, The Management University of Africa [MUA], Kenya

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ABSTRACT

Technology operational efficiency practice as a business process is adopted by organizations to make the processes uniform and free of errors. It also helps increase speed of processing and in turn improves customer satisfaction since the product or service quality is predictable. Despite the efforts by the National Government to improve service delivery, adoption of technology operational efficiency has not been wholly effected. It was against this background that the study sought to find out the influence of technology operational efficiency on service delivery in the public sector, a case of National Transport and Safety Authority. The study employed descriptive research design and the population of this study was the 450 Staff member working at NTSA head offices in Nairobi County. Since the study population was large, the study adopted 20% of the population. Questionnaires were used to obtain important information about the population. Data collected was both quantitative and qualitative in nature. Descriptive statistical tools helped the researcher to describe the data and determine the extent used. Analysis was done quantitatively and qualitatively by use of descriptive statistics. This included percentages, mean and standard deviation which were presented using tables, bar charts to give a clear picture of the research findings. A simple regression model was used in determining the level of influence the independent variables had on dependent variable. The study concluded that operational efficiency has a significant effect on service delivery at National Transport and Safety Authority. Moving forward the NTSA management must ensure that all in house procured systems are user-friendly, programmers in this case programming ensure the systems they develop is subjected to tests in order to ascertain its operational efficiency and predict its ability to accommodate the ever growing demand with quality service delivery at NTSA.

Key Words: *Technology Operational Efficiency, Service Delivery*

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INTRODUCTION

Technology use is the process of having machines or IT systems taking over functions that were previously being undertaken by humans. Technology operational efficiency practice as business process is adopted by organizations to make the processes uniform and free of errors. It also helps increase speed of processing and in turn improves customer satisfaction since the product or service quality is predictable. In addition, technology adoption leads to reduced human resource related costs since fewer people are required to operate the systems as opposed to them carrying out the actual process (Mise 2016). Advances in technology and cloud computing success have sped up the growth of organisation processes from re-generation to automation. The goal is to automate as many manual processes as possible. There has been shown to be a great link between technology adoption and delivering high quality products and better customer service results in long-term customers who are generally happier. Performing tasks manually takes time and they are performed by human beings that are prone to error and inconsistency (Annette, 2014).

Governments in the majority of developing countries have poor reputations with respect to service delivery which, in many cases, involves repetitive and manual operations at government offices (Bassara, 2015). Low throughput coupled with traditional communication channels are expensive and require intensive human processing. Also, the lack of a single point of contact with the government has been identified as one of the key challenges facing service provision of traditional governments processes (Mansoor & Rohan, 2017).

Most developed countries are investing in digital government services, they include; Germany's Virtual labour market platform to reintegrate job seekers into the labour market; Singapore's SingPass single sign-on system, providing access to a whole range of government services, such as a citizen's electronic health record; the UK's 'digital by default' strategy; Korea's KONEPS online e-

procurement system, consolidating government procurement systems; India's Aadhaar, unique identity card; in response to this global push for digital government services, a growing number of GovTech start-ups are emerging. About 85% of this projects are a total success giving light to more of this projects being adapted (Arkes, 2019).

The public sector of Malaysia has undergone huge reforms from the development of the e-government (electronic government) with a purpose of enhancing delivery of services and performance quality to the citizenry, businesses and civil servants. Based on the strategic plan of IT (2011-2015) by the Malaysian Administrative Modernization and Management Planning Unit, the government of Malaysia has established a plan for economic transformation to incorporate quality economic execution by initiatives like the zero face-to-face delivery of services; paper-less government; inculcating interoperability and sharing of information ; cross-agency collaboration; government shared services; skills as well as internalization of ICT staff in the public sector. Nonetheless, several problems to the Malaysian e-government have surfaced and obstruct the accomplishment of the initiatives and happen to be standard, security and privacy, integration of data, maintenance of the legacy system, change of mindset, processes, and partnership amongst agencies (Morshidi & Hamid, 2018).

In Germany, there has been use of legislation towards supporting and encouraging different government sections to coordinate in delivering simpler services to the public. On 1/08/2013, a fresh e-government law was passed, that focuses on facilitating electronic communication with the administration and to allow local, state and federal governments to give efficient, user-friendly and simpler e-government services. Germany has gained influence through Danish experience on digitizing management of records, work administration and casework to 7 ministries and

looks forward to adopting a number of strategies on capacity building and training.

For purposes of overcoming the traditional government limitations, and to enhance quality in delivery of services, a number of governments in Africa, have begun shifting towards fresh methods of executing services offered by the government through applying technological processes, service flows, approaches to service delivery and service delivery philosophies (Valentina, 2014). For instance, the government of South Africa suggests a shift to e-government for purposes of enhancing delivery and accessibility of services offered by the government to the employees, businesses and citizens as well as other departments of the government 24 hours per day and 7 days per week through one government portal applying the contemporary Information and Communication Technologies (ICT) (Blessing et al., 2007).

Botswana have problems related to infrastructure which threaten the wide spread adoption of technology. Unreliable electricity supplies, lack of international network bandwidth and the fact that only a small portion of the population has access to computers and the Internet, are among the factors which negatively influence the adoption of technology in the country. In recognition of the importance of software, Nigerian government has recognized that Nigeria's local software industry needs to grow and be involved to make the required impact (Ajayi, 2015). In Uganda, Local developers have the benefit of producing mass-off-the-shelf software for sale with high chances of it being bought. They are however presented with a challenge of outcompeting imported services. Local developers must prove that their products are equal or even better than others, if they are to enjoy a decent cut of the market share. Another issue which has to be tackled is how to increase user knowledge of the complete functionalities of given software.

The report by world economic forum (2009-2010) showed that the players in ICT services were dominated by the developed countries. USA ranked

1st in 2005 which was an improvement as compared to 2004, Singapore 2nd position, dropped one place, UK moved two places compared to 2004, South Africa was in position 37, dropped 3 places, Uganda position 79, down 2 places, Nigeria position 90 from 86 in 2004 and Kenya was position 91 from 75 in 2004. Another report by Global Information Technology 2013 ranked Kenya number 92, this showed a decrease in the adoption of ICT services.

In Kenya the government released in 2009 what is referred to as Innovation in public service delivery in Kenya is expressed in the Kenya Vision 2030: Towards a Globally Competitive and Prosperous Kenya. The Kenya Vision 2030 document underscores science, technology and innovation as a means to foster global competitiveness for wealth creation, national prosperity and a high quality of life for its people. Specifically, the document states that the government will create and implement and Science Technology and Information (STI) policy framework to support Vision 2030. Further, Articles 10 and 232 of the Constitution of Kenya, 2010 emphasize service delivery that is responsive to the needs of the citizenry. This calls for creativity and innovation. The Government has therefore, made deliberate efforts since 2006 to create awareness and mainstream innovation in the Public Service. The Government then introduced results-oriented management in the year 2004, and designated performance contracting as one of the tools to improve service delivery.

Technological practices enable the streamlining of processes and procedures which creates an orderly work flow and prioritization of tasks which include offering responses to customers and reviewing ongoing support situations. Introduction of customer self-service resources, such as interactive knowledge bases and frequent asked questions will give customers the ability to solve certain problems and will provide answers to common questions without there being a live agent. Satisfaction of customers is a combination of the customer's expectation and the quality of the

service provided by the organization. Technology plays an important role in providing satisfaction to customers as it bridges the gap between the actual and expected quality. Technology also makes it possible to provide identical service to all kinds of customers regardless of place and time with no bias. Machines do not suffer from human traits such as fatigue or stress that result in bias.

A desirable public sector is the one that offers the citizen services which are of high quality and consistent with the needs of the citizens. It must also encourage growth by prudent use and management of the resource endowment with a critical focus on ways of alleviating poverty among its citizens. In the recent past, governments in various countries have redirected their attention to restructuring of the public sector in order to address problems of growing debt burdens and growing dissatisfaction of citizens. Performance contracting and performance based compensation have been used by various governments to bring about change in the public sector.

According to Shah (2005) public sector performance is dictated by its orientation. Accountability can be enforced by removing bureaucracies, rigidity and red tapes in the public sector thereby encouraging effectiveness and efficiency in service delivery leading satisfied citizens. After the completion of Economic Recovery Strategy for Wealth and Employment Creation (ERSWE) process in 2007, the government of Kenya (GoK) developed vision 2030 which runs from the year 2008 to 2030. The development agenda is to make Kenya a nation that is competitive globally and prosperous reflected by high standards of living by the year 2030. This is to be achieved by consistent agenda that identifies economic social and political system as the main pillar of Kenya's development.

Improving technology operational efficiency is a key concern for executives, and a goal for many technology initiatives and implementations (Mays, 2018). Operational efficiency means that by virtue of the goods or services are created or delivered faster, cheaper, better, with few defects, and so on.

Operational efficiency gains may be so great for a given application or system that this is the only requirement and justification for investment; however, user satisfaction is always important. As such, operational efficiency will need to involve factors such as streamlining processes, feedback from team members, technological innovation, and utilizing metrics. Continually enhancing these types of processes can lead to better operational efficiency and will keep a company geared toward innovation (Kim, 2018).

Statement of the Problem

Delivery of services has become a concern in the public sector (Wainwright, 2017). The authenticity of every public service borrows energy from the capability of reacting to the citizenry needs in a manner which is economically effective. An emerging agreement amongst experts in the public sector is, even though delivery of services public sector entails outputs and efficiency, it as well entails the success of results. The 2 main questions that are considered during delivery of services in the public sector entail: citizens obtaining what they want and in which optimal manner that the organizations in the public sector are deploying resources allocated to them. As a result of the increasing population in nations across the globe, an increase in demand for services and goods from the public sector has resulted, and as a result has challenged companies in the public sector to enhance delivery of services (Rye, & Kimberly, 2017).

The National Transport and Safety Authority, Kenya has not been able to fully accomplish its mandates. They haven't had the capacity of providing sufficient advice and recommending on issues linked to vehicle and road safety, enhance and execute measures for road safety and manage the road transport industry in accordance to the transport laws of Kenya (Mbuvi, 2016). Even though National Transport and Safety Authority, Kenya have their service delivery. Due to poor performance the service users remain dissatisfied

and demonstrate high complaint levels due to poor service (Gakuu, 2017).

Scholars and practitioners have become increasingly interested in technological practices in the public sector (Osborne & Brown 2011). A big number incorporate the concept that technology can lead to quality enhancement of the services offered by the public sector and also to enhance the capacity of solving problems in the government corporations in handling societal problems (De Vries et al, 2015). For example, Baldwin and Sabourin (2016) carried out a research on the effect of incorporation of advanced ICT on performance of firms in the manufacturing industry of Canada. The study concluded that the adoption of many of the ICTs was associated with greater growth in labour productivity and market share. Locally Gichoya (2005); Mokaya & Njuguna (2013); and Wangari (2011) discovered, adoption of ICT and e-government enhances the manner in which the government of Kenya communicates and relates to its citizenry.

Despite the efforts by the National Government to improve service delivery, adoption of technology operational efficiency practice has not been wholly effected. It is against this background that the study sought to find out the influence of technology operational efficiency on service delivery in the public sector; a case of National Transport and Safety Authority.

Objective of the Study

- To investigate the influence of technology operational efficiency on service delivery at National Transport and Safety Authority.

LITERATURE REVIEW

Strategic Alignment Theory

This theory was proposed by Corral, (2000), Galliers and Newell (2013). Strategic alignment theory enables an IT organization to successfully align business, technology and infrastructure to the business needs. The theory identifies that business success is dependent on the concurrence of

business strategy, IT strategy, organizational infrastructure, IT infrastructure and processes (Chen, 2018). Therefore, the strategic alignment is not an event but a process of continuous change. It is a key concern for business executives and is ranked among the most important issues faced by IT executives (Papp, 2017). However, despite the widespread acceptance that business and IT strategies should be aligned, the nature of alignment is inadequately clarified in the literature, Luftman (2014) conclude that there remains a need for research into ITSM processes associated with alignment. Critics of strategic alignment maintain that the implicit dominance of a structured strategy process is questionable in an era where uncertainty and flexibility predominate, and the articulation of the strategic intent is difficult (Ciborra, 2017).

Real life and real strategizing is 'messy' and human thinking and actions rarely follow strict modular concepts such as strategic alignments. A further debate concerns the measurement of alignment. Although alignment is a top management concern, no comprehensive model of the construct is commonly used. Reich and Benbasat (2016) contend that strategic alignment may be approached from a process or outcome perspective. Process perspective involves investigating planning activities, while outcome research involves realized benefits and strategies.

From the foregoing strategic alignments theory provides the conceptualization of the linkage/relationship between technological practices and service delivery. Luftman, (2014) affirm that research of process and outcome of strategic alignment would either examine frameworks, strategies, structures and planning methods, or would focus on actors, values, communication and understanding which falls under the technological practices discipline. Therefore, through strategic alignment firms identify the standards, practices and policies that can be aligned to provide optimal effect on IT service delivery and organizational performance.

Ciborra (2017) argues that management, through knowledge and understanding of alignment, can classify their strategy in terms of boxes and linear relationships, but back in the real world, they have difficulty in measuring those relationships or formulating processes to apply the alignment maps in practice. Measures that align everyone within the organisation, business goals and their respective departments, are needed to achieve strategic alignment, but there are no indicators as to what these measures might be. There is also disagreement as to whether strategic alignment should be viewed as an outcome or as a dynamic process.

Papp (2017) concurs that alignment is the key to achieving improved profitability from IT. For Papp, alignment considers strategic fit between strategy infrastructure, processes and fundamental integration between business and IT. Strategic alignment assists firms to understand the processes which enable or inhibit realization of business goals (Luftman, 2014). The enablers such as top management support for IT and leadership from the IT department enable an IT department to priorities workload and firm's resources well. In contrast, the inhibitors lead to poor workload prioritization, there is no close relationship between the IT department and the business, the IT department does not know the needs of its customers and it does not meet its commitments, resulting in little executive support for IT.

Weiss and Anderson, (2014) contend that one possible way to achieve alignment is for IT organizations to transform themselves into service providers. Being a service provider means using IT as a solution to business problems and running the IT department as a business function. ITSM practices provides a framework to effectively structure these capabilities, the relationship and interactions of the IT organization with business customers and users to ensure quality service and business value to the organization (Galup, 2019).

When an organisations advance to the IT service management stage, the IT function actively identify

the services its customers' needs and focus on planning and delivering those services that meet IT service delivery requirements (Shang & Lin, 2016). Thus, a study on technological practices and service delivery is well anchored on the strategic alignment theory by examining the suitable integration of technological practices and high impact practices that result in improved outcome on IT service delivery

Disruptive Innovation Theory

Disruptive Innovation Theory was pioneered by Easterby-Smith, Crossan and Nicolini (2000). The basis of this theory is that innovations change an existing market by enhancing accessibility, convenience, cost effectiveness and simplicity in a market where products and services are offered at a high price. Christensen (2017) contends, disruptive innovation is quite ideal in a market that is unattractive in which the fresh services and products defines the market differently afterwards. Kostoff, Boylan and Simons (2014) suggest that the route which is quite effective leading to the success entails using disruptive technologies to create fresh products and markets. In addition, understanding how the dynamics of disruptive technologies grow and whether managers can be able to respond effectively to take advantage of available opportunities.

Christensen, Baumann, Ruggles and Sadtler (2016), argue that firstly, companies focus on the lower end clients that the market has neglected through provision of services and goods which they are capable of buying in the market. Baumann, Ruggles and Sadtler (2016), believes that where disruptive innovation exists, a client is capable of affording a good or get a service which they weren't capable of affording there before because of lacking sufficient money. This might not be the case; there are factors that enable clients to afford products and services that were previously unaffordable to them for example government regulations, politics and competition in the market. Kostoff (2014), this theory goes on to assume that companies which sustain innovation specifically targets high-end

clients for purposes of enhancing performance, that may not be the position always, organizations that are quite innovative across the globe target every class of clients. This way, they can widen the scope of their market segments, increases sales and boost performance.

In this research, the theory will be used as a critical driver of innovation and service delivery in today's knowledge-based economy. In this regard, knowledge management will provide NTSA the strategies for obtaining, growing and sustaining human capital in organizations. This implies that successful implementation of the knowledge management processes in an organization ensures proper acquisition and growth of human capital which in turn improves performance and service delivery.

Empirical Review

Monga (2018) has analyzed the experiences of e-governance at the local, state and federal levels of government in India. The study found that e-governance has brought about a revolution in the quality of service delivery to the citizens by improving transparency in the administrative process, saving time due to single window service provisions, simplifying procedures, reducing corruption, improving office and record management and improving attitude and behavior of civil servants.

Alipour (2019) assessed the impacts of applying automation systems on productivity of personnel in Mazda Yadak Company. The outcomes demonstrated a robust direct relation between effectiveness and efficiency. Likewise, Taqi Zadeh (2016) assessed the effect of IT on effectiveness of an organization on organization of museums, libraries and documents center of Astan Quds Razavi. The outcomes showed that use of the IT systems has enhanced the company's effectiveness. Additionally, users of IT system that use such kind of tools in services provision to customers believed, the speed of executing activities, timely recovery of data and the pace to information accessibility had

dramatically improved in comparison to the span before the use of IT to a level that this enhancement has improved the effectiveness of the organization as a result of giving customers services that are of high quality.

Jahromi (2015) assessed the impact of IT in productivity of an organization from the managers' perspective in Kosar Financial Corporate situated in Belgium. Amongst the productivity components, procedures of work, speed of work and costs incurred in the organization were the chosen variables to assess the effect of IT on them. The outcomes showed that based on the case study managers, employment of IT tends to be successful towards increased work speed, enhanced practices of work, reduced costs incurred in the organization and elevating the general organizational productivity.

Researchers Busker and Ssweanyana (2017) from USA and Uganda respectively assessed the degree of ICT incorporation and application on 110 companies in the nation of Uganda. In regards to ICT contribution to the company, the research showed that a big number of participants agreed strongly that ICT gives increased efficiency, savings, enhanced delivery of services, low costs of transaction, and enhanced performance of market in which the company invests on ICT. The outcomes showed that incorporation and use of ICT by companies in developing nations follow a similar trend like those of developed nations and only vary in the degree of application and incorporation since there are different aspects like high cost of internet, software, hardware and ICT professional, that hinder governments to incorporate necessary policies towards addressing them.

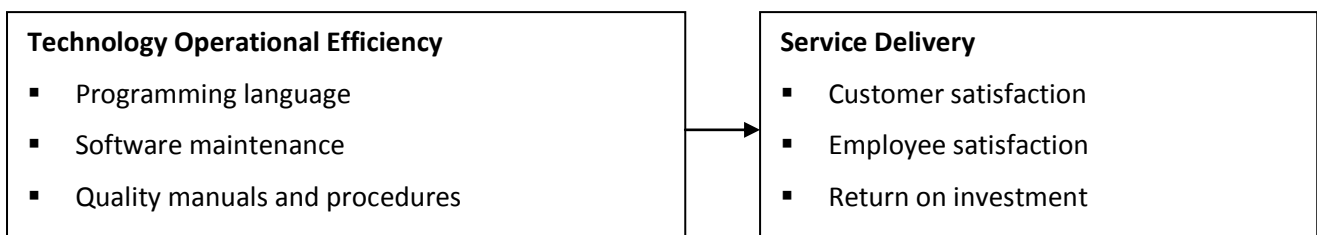
Nyandiere (2016), examined seventeen managers during his research on the rising role of IS on Higher Educational Institutions (HEIs) management in the nation of Kenya. The study found out that ICT as a tool should be at all basic functions at Strathmore University and that ICT should help organize and improve on Strathmore's efficiency especially management of admissions, finance, examinations

and library resources. The study further established that ICT is a tool for operations and management support, User departments were not happy with quality, reliability and accuracy of information provided by the current systems and that systems are poor in the areas of integration, security features. The study recommended that Strathmore University invests in an integrated academic management system to facilitate management of academic processes- registration, progression, lecturer management, fees payments and examinations.

In their study on Information systems implementation in state corporations Obara, Lelei & Borura (2015) noted that Parastatals in Kenya are adopting Information and Communication Technology in order improve transparency, efficiency and effectiveness in service delivery, through implementation of information systems. However, these parastatals are faced with implementation challenges. The study found that most state parastatals adopted several practices in their 24 Information systems implementation, there

is lack of detailed risk log and risk management procedures which are fundamental for successful Information systems. The study recommended that organizations should embrace good implementation standards, reduce bureaucracies, adopt transparent in Information procurement and need for the management to hire qualified IT staff to advice organizations as well as foresee the implementation process.

Wang and Liang (2017), case studies on the factors which have negative influence on technological systems improvement initiatives verified by analyzing the causal relationships among them, identified six factors that impact technological systems projects negatively. However, these studies did not provide the weighted scores on the technology effectiveness and concentrated only on technological practices. Overall, the findings were not conclusive, as they spread themselves over an array of barriers, further these studies failed to define the moderating effect of these enablers on technological systems effect on IT service delivery.



Independent Variable

Dependent Variable

Figure 1: Conceptual Framework

METHODOLOGY

The study employed descriptive research design for it portrays an accurate profile of situations (Cooper & Schindler, 2014). This is designed to describe the characteristics of a particular phenomenon in a situation. The population of this study comprised 450 Staff. The researcher adopted a stratified random sampling dividing population in groups or strata’s which are the various departments. Since the study population was large, the study adopted 20% of the population. The researcher interviewed

90 respondents who were picked randomly from all the departments.

Questionnaires were used to obtain important information about the population. The study used both primary and secondary data. Primary data is the information the researcher obtained from the field. Secondary data was collected from past published scholarly works. Data collected was both quantitative and qualitative in nature. Descriptive statistical tools helped the researcher to describe the data and determine the extent used. Analysis

was done quantitatively and qualitatively by use of descriptive statistics. A simple regression model was used in determining the level of influence the independent variable have on dependent variable as shown: $Y = \beta_0 + \beta_1 X_1 + \epsilon$

RESULTS

Technology Operational Efficiency

Participants were asked to indicate their level of agreement with the following statements that relate to technology adoption and operational efficiency.

Table 1: Statements that relate to technology adoption and operational efficiency

Statement	N	Min	Mix	Mean	Std Dev
Programming language usually affect the systems efficiency and service delivery	85	3.00	5.00	3.91	0.75
Software maintenance has been one area that have affected our systems efficiency in all departments.	85	2.00	5.00	4.18	0.68
There is adequate quality manuals and written procedures on the systems use	85	3.00	5.00	4.21	0.74
Low or no compatibility between new system and the existing systems.	85	3.00	5.00	4.16	0.74
There is insufficient required hardware to interact with the systems.	85	3.00	5.00	4.06	0.75
There is resistant to adapt to the new systems (not enough time to interact with the systems).	85	3.00	5.00	3.98	0.82

Results show that majority of the respondents agreed that there is adequate quality manuals and written procedures on the systems use (M=4.21 SD=0.74), software maintenance has been one area that have affected organizational systems efficiency in all departments (M=4.18 SD=0.68) and that low or no compatibility between new system and the existing systems (M= 4.16SD=0.74). These findings are in support of the research conclusion by Monga (2018) reliable ICT systems can help to reduce or eliminate duplications and delays in the workflow, as well as help firms speed automation of specific tasks.

Further the study established that there is insufficient required hardware to interact with the systems (M= 4.06 SD=0.75), there is resistant to adapt to the new systems (not enough time to interact with the systems). (M3.98= SD=0.82) and that programming language usually affect the systems efficiency and service delivery (M= 3.91 SD=0.75). These findings concur with research conclusion by Johnston (2015) periodically auditing system will help weed out utilities that are no

longer working properly. It will also help improve those that are working but could be more efficient.

Service Delivery

Respondents were asked to elaborate on how technology operational efficiency impacted on service delivery. Descriptive reports show that adoption of e-service's enhanced service utilization by the general public, on other words NTSA is currently in better in position to serve more people than times when services were rendered using traditional ways. Further ICT has enhanced efficiency, accountability, reliability, client trust and confidence, reduction in operational cost.

Respondents were asked to indicate their level of agreement with the following statements that seek to ascertain how technology operational efficiency impacted on service delivery.

Table 2: How technological practices impacted on service delivery

Statement	N	Min	Mix	Mean	Std Dev
Technology operational efficiency has resulted and has increased the speed of service delivery	85	3.00	5.0	4.36	0.63
Technology operational efficiency generates new processes at NTSA which has enhanced service delivery	85	2.00	5.0	4.02	0.79
Technology operational efficiency enhances efficient and effective customer service at NTSA	85	3.00	5.0	4.00	0.80

Results showed that majority of the respondents agreed that technology operational efficiency has resulted and has increased the speed of service delivery (M= 4.36 SD=0.63) technology operational efficiency generates new processes at NTSA which has enhanced service delivery (M= 4.02 SD=0.79) and that technology operational efficiency enhances efficient and effective customer service at

NTSA (M=4.00 SD=0.80). These findings concurred with research conclusion by Dedrick (2015) posited that profitability is affected by the investments in technological systems.

Regression Test

In this study, a univariate regression analysis was conducted.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.665 ^a	.442	.414	.55985

The coefficient of determination (R-Square) shows how operational efficiency influence service delivery at National Transport and Safety Authority. Findings show that the R-square for the model was 0.414. This implies that operational efficiency accounts for 41.4% of the variation in service delivery at National Transport and Safety Authority. Additionally, the coefficient suggests that other

factors account for 58.6% of the variation in service delivery at National Transport and Safety Authority. The ANOVA was generated to help evaluate whether the model was statistically significant in explaining the link between operational efficiency and service delivery at National Transport and Safety Authority.

Table 4: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.869	1	5.869	24.974	.000 ^b
	Residual	19.505	83	0.235		
	Total	25.374	84			

Source: Research data, (2020)

From the ANOVA statics, the study established the regression model had a significance level of 0.000% which is an indication that the data was ideal for making a conclusion on the population parameters as the value of significance (p-value) was less than 5%. The calculated value was greater than the critical value (24.974 > 3.956) an indication that

operational efficiency and technology budgeting all have a significant effect on service delivery at National Transport and Safety Authority. The significance value was less than 0.05 indicating that the model was significant.

In addition, the study used the coefficient table to determine the study model.

Table 5: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.470	.575		2.555	.013
Operational efficiency	.790	.171	.414	4.614	.000

The findings implied that holding the operational efficiency at constant, quality of service delivery at National Transport and Safety Authority would remain at 1.470. Additionally, unit change in Operational efficiency while holding the other factors constant would enhance the quality of service delivery at National Transport and Safety Authority by a factor 1of 0.790. These findings support the conclusion by Monga (2018) reliable ICT systems can help to reduce or eliminate duplications and delays in the workflow, as well as help firms speed automation of specific tasks.

CONCLUSIONS AND RECOMMENDATIONS

The study concludes that technology operational efficiency had a significant effect on service delivery at National Transport and Safety Authority. Although there is adequate quality manuals and written procedures on the systems use, it's regrettable that there is resistant to adapt to the new systems (not enough time to interact with the systems) and that software maintenance has been

one area that have affected organizational systems efficiency in all departments.

Moving forward the NTSA management must ensure that all in house procured systems are user-friendly. For quick interaction with the system to happen, vendors must customize their system and present then in the simplest and understandable ways. Programmers programming must ensure the systems they develop is hourly subjected to test in order to ascertain its operational efficiency and predict its ability to accommodate the ever growing demand with quality service delivery at NTSA.

Recommendations for Further Studies

The general objective of the study was establishing the influence of technology operational efficiency on service delivery in the public sector, in future similar studies should look effectiveness of current ICT policies in enhancing service delivery. Other studies may also explore on other factors accounting for 55.8% variation on service delivery at NTSA.

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