

Empirical Examination of e-Government in Developing Countries and its Value in Kenya's Public Service

Kennedy Okong'o and Michael Kyobe

University of Cape Town, South Africa

oknken001@myuct.ac.za

Michael.Kyobe@uct.ac.za

Abstract: In the last two decades, Information Communication Technologies (ICTs) have become a strategic tool of management in developing countries. In specific, Electronic Government enhances governance in the public sector; e-Government being the use of ICTs in public service. Though information systems as a discipline presents some research on the value of ICTs in the private sector, the focus on the public sector is comparatively thin. Informed by the model of public value management, the paper sought to identify the dimensions of the public value of e-Government. Thus, a framework was adapted and tested on data collected in a survey of 340 public service officers in Kenya. Through structural equation modeling, an e-Government public value model was generated, and this formed the main contribution of the paper. At a theoretical level, the model demonstrated cognizance of e-governance multi-faceted nature, and as such may inform the development of full-bodied policies to drive efficiency in public service delivery. The model may aid in elucidation of the drivers which inform the use, or fear of use of e-government infrastructure. In addition, at a methodological level, the paper suggests the place of mixed methods in information systems research. This aids in understanding the unique qualitative and quantitative measures of perception of public value of e-Government. In this regard, the estimated model shows the magnitude of influence of e-Government on various dimensions of public values. In practice, these present a suitable reference to guide the formulation and restructuring of e-Governance policies and strategies in the developing countries. Though the paper presents a positivistic evidence, it is imprecise on whether the evident values enhance or deteriorate public service quality; thus, possible future research is suggested.

Keywords: Developing Countries, e-Government, Information System, Kenya, Public Value Management, Structural Equations Modeling

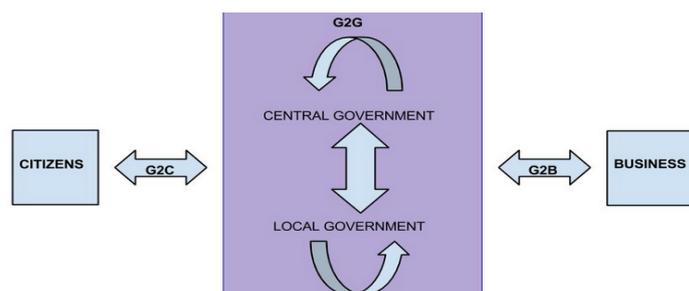
1. Introduction

In developing countries, a substantial growth in the deployment of ICTs is evident (Meyer et al., 2015). This is due to the realisation that ICT driven public sector reforms improve service delivery (Bwalya & Healy, 2010). Though e-Government has the capacity to re-invent the public sector (Wirtz & Nitzsche, 2013), there is a shortage of value research on e-Government from a developing country's perspective (Karunasena & Deng, 2012). This is despite the fact that developing countries' have inefficient administrative systems (Yeboah-Assiamah et al., 2016). Hence the need to match the investments in e-Government with certain facets of public values desired by citizens, for a simple reason that the public sector performance is evaluated in terms of resulting public value (Moullin, 2017). This has informed the African public sector reforms of the 1980s (Basu et al., 2012). Olum (2011) observes that most African countries such as Uganda and Zambia have since undertaken reforms seeking to make governments leaner and functionally decentralized (Mutahaba & Kiragu, 2002; Islam, 2015). For instance, in an attempt to improve the efficiency in Kenya's public service, a raft of reforms have been undertaken (Kilelo et al., 2015). However, the sector has continued to experience increased corruption and -red tape- bureaucracies (Kilelo et al., 2015). Cognizant of Moore (1995)'s argument that the nature of public value must match the citizens' desires, Rose et al (2015) contend that research has been slow in exploring such values provisional upon e-Government. Thus the research focus was majorly aimed at identifying within the literature, the nature of public values, and then hypothesizing its dimensions in the light of e-government potential. In a confirmatory manner, this was tested using data collected in Kenya's public service to obtain a validated e-Government public value model, which may guide policy in the application of public sector ICTs.

2. Literature Review and Theoretical Background

2.1 E-Government

First used in the United States (Heeks & Bailur, 2007), e-government entails the use of ICTs in the public service. Bashar et al (2011) argue that the traditional public sector is inefficient and bureaucratic. Figure 1 presents a diagrammatic model of an e-government, whose intention is to transform governance using ICTs:-



Source: (Singhal, 2015)

Figure 1: E-governance model: Transforming governance using a digital platform

It is evident that e-Government conceptions have evolved from a technical to a social artifacts perspective (Upström, 2017). In addition to delivering government information over the internet (Gudavalli et al., 2014), it does transform relations (Adejuwon, 2012). Decisions of government are taken and implemented over a digital platform (Misuraca et al., 2011), in a convenient, transparent and inexpensive manner (Sangita & Dash, 2005). Given Africa’s continued investment in e-government, e-governance has sprung up with varying conspicuousness (Amagoh, 2015). For example, informed by the need to improve efficiency and optimize information flow in the public sector (Nyanjom, 2011), Kenya introduced an order of devolved governance in 2010. This decentralized certain national functions to regional governments. However, in general, Africa’s public sector grapples with the inefficient and manual processes (Amagoh, 2015), despite the opportunities that e-Governance presents.

2.2 Public Sector

In this paper ‘public sector’ encompasses publicly funded entities (World Bank, 2012). European colonies that form the majority in Africa simply derived a 'westminster-whitehall' model of public governance for their own entities (Olum, 2011). The model was characterized by a strict hierarchical bureaucracy (Hughes, 1998), centralized powers with myriad dysfunctions (Guma, 2012). This has prompted the interest to modernize public sector (Olaiya, 2016). Hence, e-government has featured as a transformative enabler (Sundberg & Larsson, 2017). In Kenya, investments in e-governance have been informed by a need to re-engineer performance in the public sector (Ondego & Moturi, 2016).

2.3 E-Governance in Kenya’s Public Sector

Kenya has been used as an empirical setting to understand the theoretical view in this paper. It is a prime ICT hub in Africa (World Bank, 2015) and as such, has witnessed technology exuberance (Kizza, 2013). The country’s critical test now is to implement the devolved governance structure (World Bank, 2016), which Ondego & Moturi (2016) observe that, applied properly, e-governance can enhance its efficiency, offer faster information flow and increased transparency in Kenya’s public service. This can re-invigorate the current management models that have gained negative connotations as being rigid in practice (Guma, 2013). Hence, the search for a more efficient model (Kelly, 2014). Indeed, in Kenya, despite some reforms, efficiency is still a challenge. The inefficiencies in the public sector still sore (Kilelo et al., 2015). Still, the government grapples to modernize the sector (Bwire, 2015). In all these, e-government has featured as having some capacity to re-engineer Kenya’s public service (Ondego & Moturi, 2016).

2.3.1 Towards e-Governance

In 1920s, British colonies in East Africa became linked through a common core network. However, upon attaining independence, Kenya created its own network through Kenya Post and Telecommunications Corporation as a monopoly ICT provider. However, to keep pace with globalization, Bowman (2010) points out that the idea to write a formal ICT policy came to the fore in 1980s and 90s. In 2002, ICT was positioned as a crosscutting pillar of economic progress in Kenya. This occasioned a new order that challenged the then information hegemony (Sihanya, 2012) upon ratifying a new constitution in 2010. The political implication is to improve information flow and efficiency in public service. This has re-emphasized the need to explore e-governance (*ibid*).

2.3.2 Towards Public Sector Reforms

The immediate post-colonial public service in Kenya was inherited from the colonial masters, the British. The structure was fraught with mistrust (Cohen, 1980). Since it was also racially constituted, *Kenyanisation* as a strategy was adopted to address the anomaly (Odhiambo-Mbai, 2003). Aimed at replacing the colonial masters with the Kenyans, it led to an inefficient expansion of the public service (Omolo, 2010). Following these consequences, the government embarked on a series of reforms. However, the reforms have achieved minimal results (Achoch et al., 2014) as service quality has deteriorated; while inefficiency and corruption have increased (Buuri, 2013). In parallel, the government has been exploring efforts to integrate ICTs in the operations of the public sector. This is guided by the e-Government strategy paper of 2004, whose objective is to enhance service delivery (Njuru, 2011). Though the strategy paper has been in place for over a decade, there have been limited technical and institutional structures to support its implementation. This has impeded service delivery (Omariba & Okebiro, 2015). Related to the strategy is an ICT Master Plan 2013-2017. Though the mission is not clearly articulated, it appears to pursue an all-inclusive access to public services. It proposes a 'citizen service portal' to drive customer centricity in public service. In this front, positioning e-government as a critical enabler in public service.

2.3.3 Theoretical Framework

In his seminal work on public value management, Moore (1995) contends that the generation of public value is a core role of government. The public sector managers respond to the value preferences of the public (O'Flynn & Alford, 2012), through collaboration, instead of competition (Engida & Bardill, 2013). Therefore, in line with the new constitutional order in Kenya (CoK, 2010), the theoretical perspective informs the public value generation. In this regard, there is a need to create public value through decentralizing public apparatus to a more efficient and a more collaborative structure (Sow & Razafimahefa, 2015). In this, Moore (1995) defines 'public value' as an equivalent of private sector' shareholder worth. Though Karunasena & Deng (2012) contend that such perspectives can be buttressed using e-government, research has had a skewed focus towards developed countries. Consequently, they propose a revised framework using Sri Lanka as an empirical setting. Due to the extant similarities between Sri-Lanka and Kenya in terms of context and the maturity of e-government (Biyagama, 2014), the framework presented in Figure 2 and used in the case of Sri Lanka, was adapted as a starting point to inform this research:



Figure 2: E-government conceptual framework

Adapted from Karunasena (2012)

Indeed, Karunasena's (2012) observes that Sri Lanka started its e-Government initiative in 2005 under the e-Sri Lanka national project. Kenya's e-Government strategy was launched in 2004. Sri Lanka, just as Kenya, has experienced a number of challenges in this front. These include ignorance, shortage of ICT infrastructure, inadequate ICT skills and inability to access E-government services in local languages (Karunasena et al., 2011). Still, just as is the case of Kenya, ICT has been positioned as a strategic enabler of economic progress. In the conceptual framework as presented, openness is seen as transparency in public administration (Jørgensen & Bozeman, 2007). Though efficiency refers to productivity, user-orientation entails customer centricity in service provision (Jørgensen & Bozeman, 2007). The public sector online services should be user friendly, comprehensive and non-technology savvy (Walther et al., 2016). There is an expectation of credibility in government information (Kearns, 2004). While the participatory democracy indicates a willingness to listen to

the public opinion to guide policy formulation (Jørgensen & Bozeman, 2007), there is need for equity. This protects the marginalized (Khetarpal, 2014). Thus, service offerings on e-government need to comply with the required standards (*ibid*). For instance, in terms of environmental sustainability, there is a need to control the depletion of non-renewable resources. E-government has this potential (Masud & Malik, 2012). All in all, Jørgensen & Bozeman (2007) acknowledge that the meanings of the classes of public value differ from setting to setting. Thus, people can define preferences and governments can enhance capacities to deliver them (Zhao et al., 2012). All these aspects combined form the framework that informed the design of the questionnaires to understand the public value preferences in Kenya’s public sector and further facilitated the analyses in the research.

3. Research Framework and Methodology

There are certain philosophical leanings that guide a researcher’s view of the world (Wahyuni, 2012). In this paper, the research problem is informed by the Moore’s public value management as a theoretical perspective. This aided in the identification of the nature and dimensions of the public value that result from the use of e-Government. In this paper, a value framework was hypothesized. Subsequently, this was tested on data collected in Kenya and validated through a path model using structural equations. It is thus evident that public values are a consequence of e-Government, which is considered an independent phenomenon and separate from the researcher. Accordingly, the paper adopts objectivism as an ontology (McManus et al., 2017), positivism as an epistemology and mixed methods as a methodology (*ibid*). This is because of the existence of a set of well-defined conceptions (e-Government and public value), laws of interaction of the units of interest (signifying the direction of correlation) and a boundary within which the theoretical model holds (public sector) (Dubin, 1978). Further, since the research sought generalizations, the research method is largely quantitative. This includes the use of standardized tests and closed ended questionnaires as presented in Table 3-

Table 3: Perceptions of e-Government

A. DEMOGRAPHICS

B.	PUBLIC VALUES OF e-GOVERNMENT	1	2	3	4	5
1	ICTs in government enhance <i>Quality of Public Information:</i>					
	1a) <i>Accurate information</i>					
	2b) <i>Up-to-date information</i>					
2	ICTs in government enhance <i>Delivery of Public Services:</i>					
	2a) <i>Online communication</i>					
	2b) <i>Online access to government documents</i>					
3	ICTs in government enhance <i>Citizen Focused Governance:</i>					
	3a) <i>User friendly web</i>					
	3b) <i>None technology savvy web</i>					
4	ICTs in government improve <i>Efficiency in Public Service:</i>					
	4a) <i>Data sharing</i>					
	4b) <i>Lean staffing</i>					
5	ICTs in government enhance <i>Openness in Public Sector:</i>					
	5a) <i>Online filing of complaints</i>					
	5b) <i>Online display of government data</i>					
6	ICTs in government improve <i>Responsiveness in Public Service:</i>					
	6a) <i>Online enquiries</i>					
	6b) <i>Online case tracking or follow-up</i>					
7	ICTs in government promotes <i>Equity in Public Service:</i>					
	7a) <i>Enables access by the marginalized</i>					

B.	PUBLIC VALUES OF e-GOVERNMENT	1	2	3	4	5
	7b) Supports people with special needs					
8	ICTs in government promotes <i>Citizen Trust in Public Sector</i> :					
	8a) Security in government information					
	8b) Credibility of information exchanged					
9	ICTs in government enhances <i>Democracy in Decision Making</i> :					
	9a) Information on upcoming public policies					
	9b) Online participation in policy making					
10	ICTs in government promotes <i>Environmental Sustainability</i> :					
	10a) Limits duplication of resources e.g. papers					
	10b) Enables recycling of consumables e.g. cartridges					
C.	ICT POLICY, e-GOVERNMENT STRATEGIES and PROJECTS					
	1) You are aware of the existence of a national ICT Policy for Kenya					
	2) You are aware of the existence of an e-Government Strategy for Kenya					
	3) You have been involved in public sector ICT policy debates in Kenya					

Drawing from Karunasena & Deng (2012), the existing e-Government value frameworks have skewed focus on developed countries with an inadequate consideration of the contexts and perspectives of developing countries. Thus, they propose a revised framework based on the latter' context. Due to the extant similarities between Sri-Lanka and Kenya in terms of e-Government maturity and context (Biyagamage, 2014), the framework items in Karunasena & Deng (2012) are used in study. Considering that public officers are the major executors and evaluators of public policy (Pourkiani et al., 2014), they were chosen as respondents. Noteworthy is that the questionnaires adopted a Likert scale on an intensity scale for obtaining people's perceptions (Likert, 1932). The sample size was chosen as informed by Yamane (1967):

Equation 3:1: Sample Size

$n = N / \{1 + N (e)^2\}$ where n is the size of the sample used, N is size of the population, and e is the precision level. Given the staff population in the public service ($\approx 175,510$) (GoK: PSC, 2014), the questionnaire targeted at least 333 respondents. The primary data was captured and analyzed using Predictive Analytics Software (PASW) version 20. PASW allows for methodical modeling. The survey responses were further subjected to advanced regression through Structural Equation Modeling (SEM). The *Analysis of a Moment Structures* (AMOS) as the analytical tool was selected to achieve this. SEM assumes a confirmatory approach (Byrne, 2010). Often, this is achieved through a path analysis (Kaplan, 2009). In Table 4 are model fit indices:

Table 4: Model Fit Indices

GoF Index	Value
χ^2 and, probability value (<i>P-value</i>)	Relatively minimal χ^2 , <i>P-value</i> > 0.05 (Byrne, 2010).
Normed Chi Square χ^2/df	Less than 2.0 (Hair et al., 2010)
Tucker-Lewis Index	Close to 0.95 (Byrne, 2010)
RMSEA	Less than 0.05 (Schumacker & Lomax, 2015)

4. Analysis

Firstly, a reliability test was conducted on the measured items. The overall score of Cronbach Alpha ($\alpha = 0.865$) was found to be reliable. $\alpha \geq 0.600$ is normally considered as acceptable (Tseng et al., 2006). In total, 340 respondents were interviewed across the eight key government ministries. According to Baruch (1999), this is an acceptable response rate, achieved through 'drop-&-pick' tactic (Ibeh et al., 2004). Using PASW 20, demographics was analyzed along age, cadre, education level, income level and the gender. Of the 340 staff, 65 percent were non-manager officers while 35 percent comprised manager level officers. Approximately 28 percent of the officers earn (\approx USD 200-300) per month. Officers earning above USD 300 were approximately 51 percent with only 4 percent earning a monthly income of USD 800 and above. Of the 340 officers in public

service, 51 percent were male while 49 percent were female. Though this is considered as almost balanced, women are still less. In the public service, 42 percent was aged between 31-40 years and 6 percent was under 20 years of age, majority of whom in the non-managerial roles. In terms of level of education, majority of the officers have secondary or primary level of education and as such are either clerical or support staff. Thus, the sample of respondents was considered representative of the population of interest.

4.1 Public Value Items of Measure

Following the descriptive analysis, inferential modeling was conducted. To note is that the research problem was of a confirmatory nature and therefore it was posited to confirm the hypothesized dimensions of public value that results following use of e-Government. The study adopted 20 indicator dimensions as appears in the adapted framework. These include: ‘accuracy and up-to- date information,’ ‘online communication and online access to government document,’ ‘user friendly web and none technology savvy web,’ ‘data sharing and lean staffing,’ ‘online filing of complaints and online display of government data,’ ‘online enquiries and online case tracking / follow up,’ ‘access by the marginalized,’ ‘security of government information and credibility of information exchanged,’ ‘providing information on upcoming public policies and online participation in policy making,’ and ‘limiting duplication of resources and enabling recycling of consumables.’ The ranking of the items of measure of public value are presented in Table 5:

Table 5: Public Value Ranking

Item	Mean
online communication	3.72
accurate information	3.69
online enquiries	3.61
limits duplication of resources	3.58
enables recycling of consumables	3.51
lean staffing	3.50
data sharing	3.48
up-to-date information	3.47
user friendly web	3.39
online access to government documents	3.36
supports people with special needs	3.32

Item	Mean
online filing of complaints	3.31
enables access by the marginalized	3.22
online case tracking / follow-up	3.09
security in government information	3.06
credibility of information exchanged	3.03
online display of government data	3.02
none technology savvy web	3.01
information on upcoming public policies	3.00
online participation in policy making	2.84
Total Averages	3.3105

Further, the awareness of the respondents on ICT policy and e-Government strategy were tested. While 64 percent of the respondents are aware of the existence of the national ICT policy, 62 percent are aware of the existence of e-Government strategy. Despite this, only 19 percent has been involved in public sector ICT policy debates. This is illustrated in Figure 3:

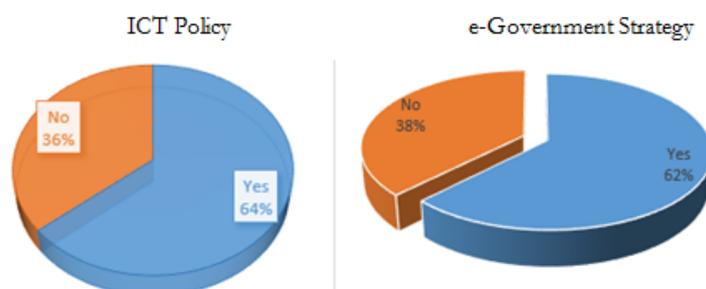


Figure 3: Awareness of Policy Instruments

4.2 Structural Model Analysis

Structural equation modeling offers a suitable approach to subject a hypothesized e-Government value model to a fitness test (Hair et al., 2010). Using AMOS for analysis, the Goodness of Fit (GoF) statistics are as follows:-

Table 6: Goodness of Fit Indices

Fitness Index	Condition for Good Model	Public Officers (N2= 340)
Chi Square	<i>Ho: Model fits the data if P-Values >0.05 CR or CMIN/DF <2</i>	121.916
Df		100
P-Values		0.067
CMIN/DF		1.219
Tucker-Lewis Index	> 0.95	0.985
RMSEA	< 0.06	0.025
RMSEA (Lower)		0.000
RMSEA (Upper)		0.040

In terms of validity the model fitted the sampled data ($P=0.067$), at 0.01 level of significance. This is due to the fact that χ^2 value with $P > 0.05$ was obtained and this is adequate for a model fit (Hair et al., 2010). In the path model, regression paths are shown using a single headed arrow in the hypothesized structural relationship in Figure 4:

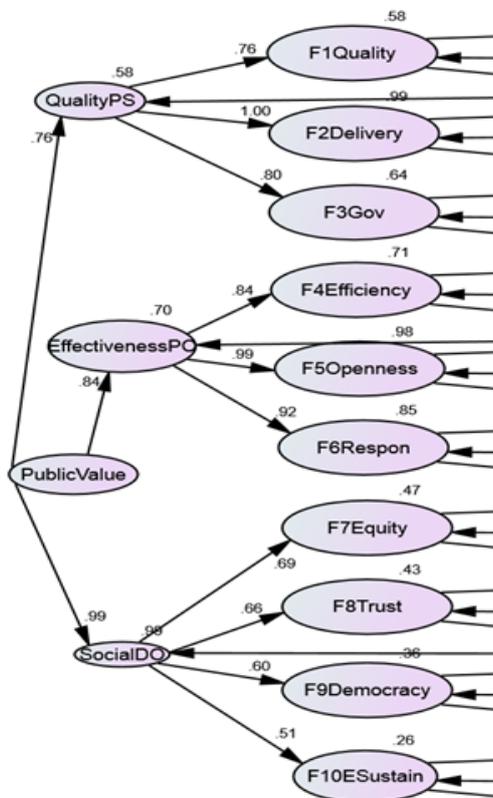


Figure 4: Path Model

In line with the conceptual framework, it is evident that the generated e-government public value model accounts for 58 percent of variances in quality of public information, 99 percent variances in the delivery of public services, 64 percent variances in citizen focused governance, 71 percent variances in efficiency in public service, 88 percent variances in openness in public service, 85 percent variances in responsiveness in public service, 47 percent variances in equity in public service, 43 percent variances in citizen trust in public service, 36 percent variances in democracy in decision making and 26 percent variances in environmental sustainability, all consequent upon use of e-Government in Kenya. The model fits the data with $P > 0.05$ (0.067), Tucker-Lewis index, also called the non-normed fit index or NNFI > 0.95 (0.985) and Critical Ratio, CR < 2 (1.219).

5. Discussion

Though a range of extant literature on the impacts of e-Government exists, much has largely focused on developed economies. In addition, the studies have been less extensive compared to the private sector even

as the value of use of public sector ICTs continues to be a subject of research and policy debate. In the research, the analysis demonstrated the existence of public values as a result of e-Government use. The respondents indicated online communication and accuracy of information as broad dimensions of e-government public value that are of greatest importance. These results reveal that the public sector considers as important improved interactions and enhanced efficiencies in public service. Indeed, Stoker's (2006) in his postulation argues for a need to change public sector to open systems where processes are more transparent, more accessible and present the much needed value for money. On the other hand, online policy participation is opined as less critical outcome of e-Government. Indeed, it's until 2010 that Kenya ratified a new constitutional order that challenged the information hegemony. The political implication continues to spur collaboration in policy making. However, despite the provisions, it seems a sizeable proportion of citizens is still ignorant or has no requisite capacity to engage the government in policy making (Murutu, 2014). In addition, limited skills and technological capacities present a barrier to this facilitative potential of e-Government (Amagoh, 2015). Further, socially desirable outcome (0.99) is seen as the most important reflector of public value of e-Government followed by effectiveness in public organizations (0.84) then least important is the quality of public service (0.76). These results lend credence to Lau (2005)'s contention that by minimizing public sector officers' informational advantage using e-Government, which can be used to the disadvantage of the public, the efforts aid in achieving a socially optimal point. This maximizes the total public value of e-Government. Additionally, 65 percent of those aged between 31 and 40 were aware of the existence of ICT policy. This percentage increases with age. This is similar to the awareness of the existence of the e-Government strategy. This is expected as senior public servants are the major evaluators and executors of such public policy (Pourkiani et al., 2014). In addition, a greater proportion of male than female is aware of the existence of the ICT policy, e-Government strategy and participate more in ICT policy debates. This further justifies the need for engendering ICTs as espoused in national ICT policy (2006). Indeed, the study found out that the interactions that the respondents have had with e-Government platforms or perceive as adding value to their wellbeing is majorly in the use of e-Procurement through Integrated Financial Management Information System (IFMIS), file tax returns, renewal of passport and driving licenses. This is what Stoker's (2006) public value model emphasizes as empowerment, collaboration and partnerships in creation of public values. This aligns the authority, operational and administrative capabilities to create public value (O'Flynn & Alford, 2012). Indeed, there is a dire need to shift to such a paradigm of access to information (Vyasa-Doorgapersad, 2011). Santos & Heeks (2003) propose a 'one-stop shop' to enhance delivery of the public services. E-government presents a solution to such bureaucratic stagnation (Bwalya & Healy, 2010). On the other hand, the research finds out that the downward side of e-Government includes lack of awareness on its potential, cyber insecurity, unfriendly user portals, and little consideration of access by persons living with special needs as well as those in the marginalized areas.

6. Conclusions

In the study, the participants acknowledged that there is public value in having information that pertains to governance. In addition, there is a need to have a mechanism for public input into policy making. However, there is need to have a facilitative mechanism to challenge the status quo. Indeed, making available and increasing the flow of information in a timely, relevant and credible manner constitutes a critical set of public value. This may aid in achieving a socially optimal point to maximize the total public value realizable to the public. Flowing from these, the study attempted to bridge some theoretical, methodological and practical gaps. The paper demonstrates an existence of a link between e-government value theory and the concept of public value. It demonstrates that public sector pursuit for public value may inform the practice of e-Governance in a developing country context. To the extent of the author's knowledge, no study has tested and estimated such an association of public value and e-Government using a robust structural equation models from a developing country perspective. In fact, Wright & Wallis (2015) argue that such an integrative analysis is an emergent method, and does expand the scope of studies on the domain of e-Government value research. Further, the paper has demonstrated that a frame of reference emerging from the model may be useful to policy makers to understand the critical variables that constitute a set of public value of e-Government. This comes with empirical evidence of factors that need a focus or refocus. Indeed, one strategic finding that may have some practical implication is that more strategic spending on e-Government may be associated with increased public value. This result can aid in addressing the concern in context, where Kenya's public service is threatening to cripple due to inefficiencies. In sum, the theories provided a lens through which the research problem was viewed from a number of vantage points; and this may improve the efficacy of policies in developing countries. However, for future research, there is a need to explore the impact that e-Government

may have on service quality as this may aid in comprehensively understanding the entire value system in public service.

References

- Achoch, E.O., Gakure, R.W. & Waititu, G.A., 2014. Influence of Leadership style on Transformation of Public Service reform initiatives in Kenya. *Prime Journal of Business Administration and Management (BAM)*, IV(2), pp.1389-96.
- Adejuwon, K.D., 2012. From e-Government to e-Governance: Whither African Public Administration? *Advances in Arts, Social Sciences and Education*, 2(1), pp.63-75.
- Amagoh, F., 2015. An Assessment of E-Government in a West African Country: The Case of Nigeria. *International Journal of Public Administration in the Digital Age*, 2(3), pp.80-99.
- Baruch, Y., 1999. Response Rate in Academic Studies-A Comparative Analysis. *Human Relations*, pp.421-38.
- Bashar, M.R., Rezaul, K.M. & Grout, V., 2011. E-Government vs. Ordinary Bureaucratic Government: A Comparative Study. In *The 4th International Conference on Internet Technologies and Applications*. Glyndwr, 2011.
- Basu, S. et al., 2012. Comparative Performance of Private and Public Healthcare Systems in Low- and Middle-Income Countries: A Systematic Review. *A Systematic Review*, 9(6).
- Biyagama, H., 2014. *Sri Lanka's e-government developments secure top spot in South Asia*. United Nations E-Government Survey 2014. New York: United Nations.
- Bowman, W., 2010. Governance, Technology and the Search for Modernity in Kenya. In *William and Mary Policy Review*. Clinton School of Public Service, University of Arkansas, 2010. Social Science Research Network.
- Buuri, J.M., 2013. Factors Affecting Implementation of Open Tendering Process in Public Institutions: A Case Study Of Jomo Kenyatta University Of Agriculture And Technology In Kenya. In *Proceedings Of First Shrd Annual Research Conference*. Nairobi, Kenya, 2013. Jomo Kenyatta University of Agriculture and Technology.
- Bwalya, K.J. & Healy, M., 2010. Harnessing e-Government Adoption in the SADC Region: a Conceptual Underpinning. *Electronic Journal of e-Government*, 8(1), pp.23-32.
- Bwire, V., 2015. *We Must See a Change in Public Service Delivery*. Opinion Piece. Nairobi: Capital FM Media Council of Kenya.
- Byrne, B.M., 2010. *Structural Equation Modeling With AMOS: Basic Concepts, Applications, and Programming*. Routledge.
- Cohen, R., 1980. *Hierarchy and Society: Anthropological Perspectives on Bureaucracy*. Institute for the Study of Human Issues.
- CoK, 2010. *Constitution of Kenya 2010*. [Online] Nairobi: Government Printers
- Dubin, R., 1978. *Theory Building*. 2nd ed. New York: Free Press.
- Engida, T.G. & Bardill, J., 2013. Reforms of the Public Sector in the light of the New Public Management: A cases of Sub-Saharan Africa. *Journal of Public Administration and Policy Research*, 5(1), pp.1-7.
- GoK: PSC, 2014. *Public Service Compliance with Values and Principles in Articles 10 and 232 of the Constitution*. Nairobi: Government of Kenya.
- Gudavalli, M., Kumar, D.D.S. & Raju, D.S.V., 2014. Securing E-Governance Services through Biometrics. *International Journal of Security and Its Applications*, 8(1), pp.103-12.
- Guma, P.K., 2012. Three Decades of Orthodox Approaches to Administrative Reform in Africa: The Ugandan Experience. *Institutions & Development e-Journal*, 10(22).
- Guma, P.K., 2013. Public-Sector Reform, E-Government and the Search for Excellence. *Electronic Journal of e-Government*, XI(2), pp.241-53.
- Hair, J.F., Black, W.C., Babin, B.J. & Anderson, R.E., 2010. *Multivariate Data Analysis*. 7th ed. Pearson.
- Heeks, R. & Bailur, S., 2007. *Analyzing e-government research: Perspectives, philosophies, theories, methods, and practice*. London: Government Information Quarterly.
- Hughes, O.E., 1998. *Public Management and Administration: An Introduction*. 2nd ed. Basingstoke: Macmillan.
- Ibeh, K.I.N., Brock, J.U. & Zhou, J., 2004. Drop and pick survey among industrial populations: conceptualisations and empirical evidence. *Industrial Marketing Management*, pp.155-65.
- Islam, F., 2015. New Public Management (NPM): A Dominating Paradigm in Public Sectors. *African Journal of Political Science and International Relations*, 9(4), pp.141-51.
- Jørgensen, T.B. & Bozeman, B., 2007. Public Values: An Inventory. *Administration & Society*, 39, pp.354-81.
- Kaplan, D., 2009. *Structural Equation Modeling : Foundations and Extensions*. 2nd ed. Madison: Sage.
- Karunasena, K., 2012. *An Investigation of the Public Value of e-Government in Sri Lanka*. PhD Thesis. Melbourne : RMIT University.
- Karunasena, K. & Deng, H., 2012. A Citizen-Oriented Approach for Evaluating the Performance of e-Government in Sri Lanka. *International Journal of Electronic Government Research*, 8(1), pp.43-63.
- Karunasena, K. & Deng, H., 2012. A Citizen-Oriented Approach for Evaluating the Performance of e-Government in Sri Lanka. *International Journal of Electronic Government Research*, 8(1), pp.43-63.
- Karunasena, K., Deng, H. & Singh, M., 2011. Measuring the public value of e-government: a case study from Sri Lanka. *Transforming Government: People, Process and Policy*, 5(1), pp.81-99.
- Kearns, I., 2004. Public Value and E-government. *Institute for Public Policy Research*.
- Kelly, R., 2014. *Corruption in Africa :Cultural, Economic and Political Factors which Impact Corruption and Potential Solutions*. Master Thesis. New Jersey: Rutgers, The State University of New Jersey.

- Khetarpal, A., 2014. Information and Communication Technology and Disability. *Review of Market Integration*, pp.96-113.
- Kilelo, H., Beru, M. & Nassiuma, B., 2015. Devolution and Public Sector Reforms in Kenya: Challenges and Opportunities. *International Journal of Innovative Research and Development*, 4(8), pp.199-204.
- Kizza, P.J.M., 2013. Africa's Indigenous Technologies Making Footprint on the World Stage. *International Journal of Computing and ICT Research*, VII(1), pp.6-11.
- Lau, E., 2005. *E-Government and the Drive for Growth and Equity*. Dubai School of Government: OECD E-Government project.
- Likert, R., 1932. A Technique for the Measurement of Attitudes. *Archives of Psychology, Vol 22 140*, 20(140), p.55.
- Masud, M.H. & Malik, N.A., 2012. A Strategic Model for Evaluating Energy Efficient ICT Infrastructures for Sustainable Environment. *Journal of Applied Sciences Research*, 8(9), pp.4842-53.
- McManus, P., Sue, M., Ragab, M. & Arisha, A., 2017. An Investigation in the Methodological Approaches used in Doctoral Business Research in Ireland. In *16th European Conference on Research Methodology for Business and Management Studies*. Dublin, 2017.
- Meyer, J., Lubbe, S., Seabelo, M. & Klopper, R., 2015. ICT Investment Effectiveness in South African Post Office. *The African Journal of Information Systems*, 7(3).
- Misuraca, G., Giuseppe, A. & Gianluigi, V., 2011. A Multi-Level Framework for ICT-Enabled Governance: Assessing the Non-Technical Dimensions of 'Government Openness'. *Electronic Journal of e-Government*, 9(2), pp.152-65. [Accessed 22 May 2014].
- Moore, M., 1995. *Creating Public Value: Strategic Management in Government*. London: Harvard University Press.
- Moullin, M., 2017. Improving and Evaluating Performance with the Public Sector Scorecard. *International Journal of Productivity and Performance Management*, pp.442-58.
- Murutu, J., 2014. *Enhancing Public Participation in County Governance*. Nairobi: Konrad-Adenauer-Stiftung.
- Mutahaba, G. & Kiragu, K., 2002. Lessons of International and African Perspective on Public Service Reform: Example from Five African Countries. *African Development*, 27(3-4), pp.48-75.
- Njuru, J.W., 2011. Implications of E-Government on Public Policy and Challenges of Adopting Technology: The case of Kenya. *Journal of Global Affairs and Public Policy*, 1(1)
- Nyanjom, O., 2011. 978-9966-029-03-4 *Devolution in Kenya's new Constitution*. Constitution Working Paper Series No. 4. Regional Office for East & Southern Africa, Nairobi: Society for International Development (SID).
- Odhiambo-Mbai, C., 2003. Public Service Accountability and Governance in Kenya Since Independence. *African Journal of Political Science*, VIII(1).
- O'Flynn, J. & Alford, J., 2012. *Rethinking Public Service Delivery: Managing with External Providers*. Palgrave Macmillan.
- Olaiya, T.A., 2016. Governance and Constitutional Issues in the Nigerian Local Governments. *Journal of Politics and Law*, 9(1), pp.21-34.
- Olum, Y., 2011. *Public Service Reform in Uganda (1989–2002): A Critical Appraisal*. Being a manuscript presented to AAPAM for publication. Kampala: Department of Political Science and Public Administration Makerere University.
- Omariba, B.Z. & Okebiro, O.J., 2015. Characterising e-Participation Levels in e-Governance. *International Journal of Scientific Research and Innovative Technology*, 2(1), pp.157-66.
- Omolo, J., 2010. ISBN: 9966-7391-5-7 *The Dynamics and Trends of Employment in Kenya*. IEA Research Paper Series 1 / 2010. Nairobi: The Institute of Economic Affairs The Institute of Economic Affairs.
- Ondego, B. & Moturi, C., 2016. Evaluation of the Implementation of the e-Citizen in Kenya. *International Journal of Applied Information Systems*, 10(4), pp.13-21.
- Pourkiani, M., Salajeghe, S. & Nasirabadi, F., 2014. Pathology of Policy Making towards the Improvement of Public Sector Management: Case study: Public Service Management Law. *Research Journal of Recent Sciences*, 3(6), pp.132-41.
- Rose, J., Persson, J.S., Heeager, L.T. & Irani, Z., 2015. Managing e-Government: Value Positions and Relationships. *Information Systems Journal*, 25(5), pp.531–71.
- Sangita, S.N. & Dash, B.C., 2005. *Electronic Governance and Service Delivery in India: Theory and Practice*. Bangalore: Development Administration Unit Institute for Social and Economic Change.
- Santos, R. & Heeks, R., 2003. *ICTs and Intra-Governmental Structures at Local, Regional and Central Levels: Updating Conventional Ideas*. IDPM, University of Manchester, UK.
- Schumacker, R.E. & Lomax, R.G., 2015. *A Beginner's Guide to Structural Equation Modeling*. Routledge.
- Sihanya, B., 2012. Constitutional implementation in Kenya, 2010-2015: Challenges and Prospects. *FES Kenya Occasional Paper*, No. 5.
- Singhal, A., 2015. Achieving the Vision of Digital India through e- Governance. *Make a Change : A Small Change can Make a Big Difference*.
- Sow, M. & Razafimahefa, I.F., 2015. Fiscal Decentralization and the Efficiency of Public Service Delivery. *IMF Working Paper*, 15(59).
- Stoker, G., 2006. Public Value Management: A New Narrative for Networked Governance? *The American Review of Public Administration*, 36, pp.41-57.
- Sundberg, L. & Larsson, A., 2017. The Impact of Formal Decision Processes on e-Government Projects. *Journal of Administrative Sciences*, pp.1-12.
- Tseng, W.-T., Dornyei, Z. & Schimtt, N., 2006. A New Approach to Assessing Strategic Learning: The Case of Self-Regulation in Vocabulary Acquisition. *Applied Linguistics*, 27(1), pp.78–102.

- Uppström, E., 2017. *Designing, Theorizing and Reflecting on Information Systems Artefact and Value Co-creation in E-government*. Stockholm: Stockholm University.
- Vyas-Doorgapersad, S., 2011. Paradigm shift from New Public Administration to New Public Management: theory and practice in Africa. *The Journal for Transdisciplinary Research in Southern Africa*, 7(2), pp.235-50.
- Wahyuni, D., 2012. The Research Design Maze: Understanding Paradigms, Cases, Methods and Methodologies. *Journal of Applied Management Accounting Research*, 10(1), pp.69-80.
- Walther, F., Vogt, S. & Kabst, R., 2016. A Strategic Foresight about Future Public Service Developments from the Citizens' Perspective. *International Journal of Public Administration in the Digital Age*, 3(1), pp.19-42.
- Wirtz, P.D.B.W. & Nitzsche, P., 2013. Local level E-government in international comparison. *Journal of Public Administration and Governance*, III(3), pp.64-93.
- World Bank, 2012. *The World Bank's Approach to Public Sector Management 2011-2020: "Better Results from Public Sector Institutions"*. Washington: World Bank.
- World Bank, 2015. *Kenya GDP and Economic Data*. Global Finance.
- World Bank, 2016. *Kenya : Overview*. [Online] Washington: World Bank
- Wright, B. & Wallis, S.E., 2015. Using Integrative Propositional Analysis for Evaluating Entrepreneurship Theories. *Sage*, pp.1-9.
- Yamane, T., 1967. *Yamane, Taro*. 2nd ed. New York: Harper and Row.
- Yeboah-Assiamah, E., Asamoah, K., Bawole, N. & Musah-Surugu, I., 2016. A socio-cultural approach to public sector corruption in Africa: key pointers for reflection. *Journal of Public Affairs*.
- Zhao, F., Scavarda, A.J. & Waxin, M.-F., 2012. Key issues and challenges in e-government development: An integrative case study of the number one eCity in the Arab world. *Information Technology & People*, 25(4), pp.395 - 422.