

INFLUENCE OF ELECTRONIC COMMERCE ON PUBLIC SERVICE DELIVERY AMONG STATE AGENCIES IN KENYA

^{1*} Kenneth Goga Riany, PhD Candidate, ^{2*} Dr. Susan Were, PhD,
³Dr. Allan Njogu Kihara, PhD

¹Jomo Kenyatta University of Agriculture and Technology (JKUAT), Kenya

²JKUAT, Kenya

³JKUAT, Kenya

CITATION: Goga, R., K., Were, S., & Kihara, A., N. (2019). Influence of Electronic Commerce on the public Service Delivery by the State Agencies in Kenya. *Journal*.....

Abstract: This study sought to establish the influence of Electronic Commerce on the public service delivery by the state agencies in Kenya. Public service delivery has been declining over time with the level of public satisfaction growing at a very minimal rate. This is despite the commitment by the Kenyan government to enhance public service delivery through increased funding and the introduction of E-Government strategies among them E-Commerce. This study therefore drove the purpose for the study. The study also sought to analyse the moderating effect of strategy execution on the relationship between E-Commerce and public service delivery by the state agencies in Kenya. The study was informed by New Public Management (NPM), Technology Diffusion Theory and the Contingency Theory. The study adopted a descriptive research design to collect data from the target population comprising of 4230 employees within the management cadre at 132 specific government state agencies incorporated entities outside the mainstream civil service established for purposes of public service delivery in Kenya; 62 Executive Agencies, 25 Independent Regulatory Bodies as well as 45 Research Institutions, Public Universities and Tertiary Education Institutions. Convenient sampling technique was used by the study to sample the respondents within the 132 specific government state agencies. Taro Yamane formula was applied to calculate the sample size of 365 employees and self-developed questionnaires were used to collect data from the sample. Data was analyzed using descriptive and inferential statistics. The study findings revealed that implementation of E-Commerce as an E-Government strategy had a significant effect on the public service delivery of state agencies in Kenya. The study concluded that implementation of E-Commerce practices such as having a high level of understanding of internal strengths, weaknesses, external opportunities and threats can lead to a significant improvement in the performance of public service delivery in Kenya. The study recommends that the state agencies through the management ought to uphold E-Commerce as a part of the E-Government strategies so as to enhance effective achievement of their mandate which is public service delivery.

Keywords: Electronic Commerce, E-Government Strategies, Strategy Execution, Public service delivery and State agencies.

1. INTRODUCTION

Background to the study:

In the current economic World, business strategy is taking new shape not only in private sector but also in the public sector. One of the major dimensions of strategy that modern businesses are focusing on is electronic based strategy which encompasses on use of Information Technology to streamline the organizational strategic management (Musty, Yahya, Effendi & Soemaryani, 2015). Government organizations and state agencies are also experiencing competition from their

private counterparts as well as increased dynamisms in the operating environment. This has seen most of the state agencies turn to electronic based governance strategies as a way of steering their success and achievement of the set goals. One of these strategies is the electronic commerce (Sarode, 2015). This is the process of conducting commercial activities via electronic media, and most commonly, the internet (Kinuthia & Akinnusi, 2014). Nath (2013) defined e-commerce as the buying and selling of goods and services over the World Wide Web or internet. It is apparent from the variety of definitions offered that the key attributes of e-commerce relate to all technology mediated exchanges between organizations and a third party, different forms of electronic media are engaged at some point to facilitate such exchanges (Litondo & Ntale, 2013).

Though an emerging technology, E-Commerce has proved that it is a key feature in economic development worldwide, it has been adapted as an E-Government strategy by many organizations and governments to operate dynamically by digitizing business processes such as procurement, billing and payment gateways, banking, electronic funds transfer (EFT), marketing as well as custom clearance systems (Detlor, Hupfer, Ruhi & Zhao, 2013). E-commerce has rapidly emerged into a modern global strategy with the advent of the Internet and its post-1994 commercialization (Vaithianathan, 2010). It is used to enhance transaction between stakeholders such as the public, customers, suppliers, businesses, employees, financial institutions and government regulators. E-Commerce has changed and is still changing the way organizations conduct business globally (Mazzarol, 2015)

Government performance is measured through service delivery and is therefore an essential function in the relationship between government and citizens (Patel, 2014). In the 21st century, the growing demand for accountability and efficient governance and provision of services have put under pressure on governments and public sector to deliver not only quality, but efficient and effective services (Kenenissa & Cho, 2017). Africa in particular, governments are trying to tackle the demand for efficient governance by re-engineering the processes of how government services are delivered to people.

Statement of the Problem

Public service delivery is a key government function that plays a significant role in economic growth and development. State agencies in Kenya have the major role to play in service delivery on behalf of the government. The coordination and effectiveness of these agencies therefore play a significant role in achieving the main government mandate. The recent data however shows a decline in citizen level of satisfaction with the government services (ACAL, 2014). Moreover, state agencies have been argued to have declined level of public service delivery with increased number of incomplete projects and poor public involvement. This is despite the continued funding of the agencies and commitment by the government to have a properly mainstreamed public sector that puts the members of the public at the core of every decision by the state agencies (GOK, 2018).

As a way of curbing the challenges in public service delivery, the Kenyan Government enacted and approved the Kenya E-Government Strategies such as E-Commerce in 2004 (Mungai, 2017). Despite these efforts, Kenya is currently ranked number 119 globally, retaining same ranking since 2012 as far as public service delivery is concerned (WB, 2018). However, focusing on the African countries ranking, Kenya declined from position 7 in 2012 (UN, 2012) to number 9 in 2014 (UN, 2014). According to E-Government Development Index Kenya was ranked at position 2 in East Africa after Rwanda (UN, 2014). Reports indicate that most government entities with E-Government strategies are not utilizing E-Government for an expansive extent of their transactions (Mungai, 2017). Not to mention E-Government in developing countries fail to meet many of their expected objectives and outcomes and, in some instances, fail to get off the ground entirely (Kozak, 2018; Porumbescu, 2016). Locally, there exists scant evidence on the role played by E-Commerce as one of the E-Government strategies on public service delivery. It is against this backdrop that this study sought to assess the influence of E-Commerce on the public service delivery in state agencies in Kenya.

Objectives of the Study

- i. To examine the influence of E-Commerce on the public service delivery among state agencies in Kenya
- ii. To analyze the moderating effect of strategy execution on the relationship between E-Commerce and public service delivery of state agencies in Kenya

Research Hypotheses

- i. H_{01} : E-Commerce does not significantly influence the public service delivery of state agencies in Kenya
- ii. H_{02} : There is no significant moderating effect of strategy execution on the relationship between E-Commerce and public service delivery of state agencies in Kenya

2. LITERATURE REVIEW

Theoretical Review

New Public Management (NPM) Theory

The theory was put forward by Hood (1991) in the 1980s and 1990s whilst arguing for the reconfiguration of the public sector along more cost efficient and effective lines (Sunday & Lawal, 2016). The NPM theory represents ideas; values and practices aimed at emulating private sector practices in the public sector and takes its intellectual foundations from public choice theory, which looks at government from the perception of markets, productivity, and from management methods to achieve productivity (Bourgon, 2017).

NPM theory provides a unique perspective for exploring additional insight into the public service delivery challenges in line with emerging governance dynamics. The rationale of leveraging E-Commerce is to ensure efficient public service delivery.

Technology Diffusion Theory

Proposed by Rogers (1962), the theory upholds the need for technology in any organizational setting in the modern business World. Diffusion entails five elements that is early adopters, innovators, late majority laggards and early majority. Rogers explains that over time an innovation or an idea acquires impetus therefore spreading by a social system which is specific. The theory positions that it is easier to implement innovations that show an improved advantage over that which is to be replaced, making it easier to adopt (Adegbola, 2018).

Technology Diffusion Theory contributes to the current study since its relevant in the revolution of E-commerce as part of E-Government and how it in turn affects Public Service Delivery. The theory provides tools, both quantitative and qualitative, for assessing the likely rate of diffusion of a technology, and additionally, identifies numerous factors that facilitate or hinder technology adoption and implementation.

Contingency Theory of Management

The theory was put forward by the theory was first proposed by Lawrence and Lorsch (1967) and upholds the need for proper management and decision making skills to conduct the organizational activities in a successful manner. As stated by Juma and Kimencu (2017), the theory draws its ideology on the fact that many situations direct managerial actions, that is, different circumstances call for different tactics.

According to Mitchell (2018), contingency theory underscores the fact that strategy execution is a risky affair, most of the strategic projects operate in fragile and dynamic environments that are uncertain and ever-changing; hence, the need for the strategists to devise and put into practice diverse management approaches (strategies), contingent on the prevailing circumstances. The theory supports the moderating variable “strategy execution” by pointing out that instead of leveraging on general principles that can be applicable to all situations, the theory attempts to identify contingency principles that prescribe actions to take in line with the predicament at hand.

Conceptual Framework

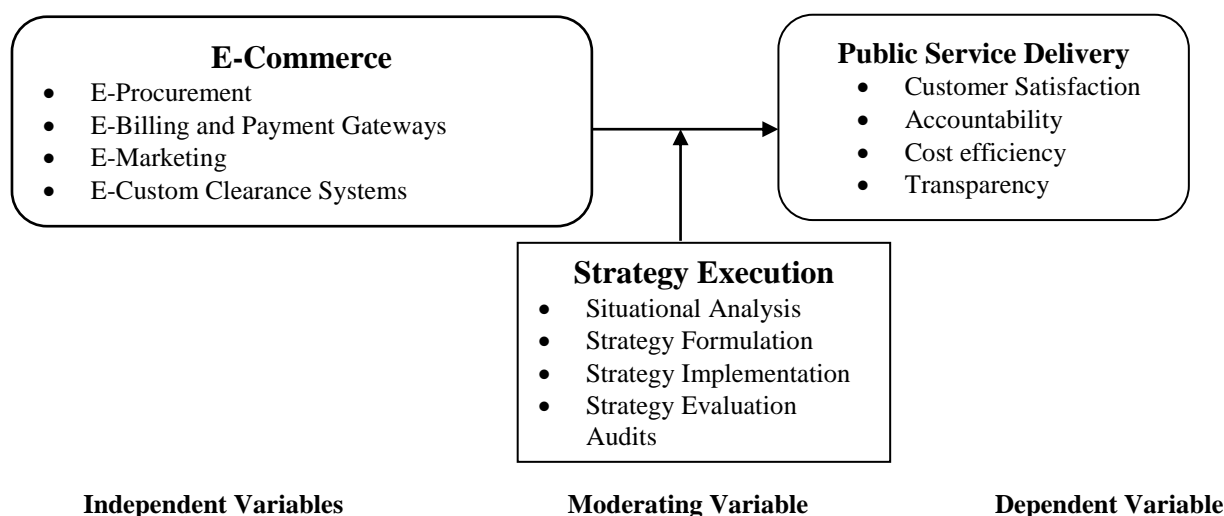


Figure 1: Conceptual Framework

Empirical Review

Anuj, Fayaz and Kapoor (2018) studied the impact of E-Commerce in the Indian economy. The study used descriptive and exploratory research design, referred to secondary data collection from numerous research papers on E-Commerce, data collected was represented via tables, graphs, pie charts as well as X-Y graphs and to determine relationship among indicators spearman rank co-relation and Pearson co- relation was used. The study noted a momentous growth of E-Commerce in India stating that E- Commerce is a great strategy for infrastructure development, increasing employment rates and thus impacts economic and social growth in India (Anuj *et al.*, 2018).

Siam and Hilman (2014) studied the relationship of strategy execution plan dimensions on organization performance of higher educational institution in Palestine. The study opted for a cross-sectional research design and adopted a simple random sampling technique to select 255 respondents from 13 universities and colleges from the list of the Palestinian higher education institutions. Data was analyzed using the partial least squares-structural equation model. The finding revealed that strategy execution plan dimensions significantly affect organizational performance as hypothesized and suggest that the higher education in Palestine can be enhanced through an effective strategy execution.

Anvari and Norouzi (2016) did an empirical study on the impact of E-Commerce, research and development on the economic development of 21 countries; Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, and United Kingdom. The study used panel data technique with Generalized Least Square Regression. Results showed that though E-Commerce, research and development had an effect on Gross Domestic Product E-Commerce was most significant and régimes need to embrace it.

Khan (2016) did a study on the benefits and challenges of E-Commerce in an emerging economy. The study was qualitative in nature and used secondary data collected from published books, journals, research papers, newspaper, internet and official statistical documents. The conclusion was that in Bangladesh E-Commerce has basically transformed business operations by breaking borders and offering innovative opportunities which strongly impacted the traditional business system and changing the life of people by making it easier.

Asiabugwa and Munyoki (2012) assessed the connection between E-Commerce strategy and the performance of Kenyan commercial banks. The study used a cross sectional design, targeted Kenyan commercial banks and data analysis was by measures of central tendency, dispersion and correlation analysis. The results depicted a strong relationship between E-Commerce strategy and performance of Kenyan commercial banks. The findings also indicated that the main factors fueling the adoption of E-Commerce in banks are client support service and the payment gateways.

Al-Khouri (2014) did a case study on strategy and execution from a perspective of lessons learned from the public sector. It was conducted at the Emirates Identity Authority (Emirates ID), one the most effective public institute in the United Arab Emirates and it attempted to examine how strategy impacted organizational performance. The research design was descriptive and interpretive case study and analyzed through qualitative methods. Data collection was via primary sources from social actors followed by secondary sources such as publications and technical documentation analysis. The study concluded that initially government strategies tend to have clear visions and outcomes yet, experience shows that many do not study their complexity and multifaceted nature at execution leading to huddles while articulating expectations, objectives, and key performance indicators hence face higher failure rates than those in the private sector.

Ndubai, Mbeche and Pokhariyal (2016) studied the factors influencing improvement in performance and delivery of public services in Kenya. The study considered 470 public institutions comprising of ministries, state corporations, local authorities and tertiary institutions. The study compiled performance appraisal results from 2004 to 2011 and cross-sectional survey design was used. By means of regression analysis, it was found that performance measurement of customer satisfaction was vital for enhancing in public service delivery and explained 73.6 % of improvement in service delivery.

3. RESEARCH METHODOLOGY

Research Design

The study adopted a descriptive research design which is defined by Babbie and Mouton (2012) as an attempt to describe what is happening in more detail, by filling in the missing parts and expanding understanding. The choice of descriptive study was informed by the fact that though a descriptive study is simple, easy to conduct and it enables one to capture all important aspects of a situation.

Target Population

The target population for the study was 4230 employees within the senior management cadre in 132 specific government state agencies incorporated entities outside the mainstream civil service established for purposes of public service delivery in Kenya comprising of 62 Executive Agencies, 25 Independent Regulatory Bodies as well as 45 Research Institutions, Public Universities and Tertiary Education Institutions.

Sampling

The study determined the sample size by use of a Yamane (1967) formula since it is simple to use; it is scientific and can be used in cases of large populations

$$n = \frac{N}{1 + N(e)^2}$$

Where

n = sample size

N = population size,

e = level of precision or margin of error at 5% (standard value of 0.05).

Thus, when this formula was applied to calculate the sample size from 4230 employees within the management cadre, the result was as follows;

$$\begin{aligned} n &= \frac{4,230}{1 + 4,230(0.05)^2} \\ &= \underline{\underline{365}} \end{aligned}$$

Data Collection Procedure

The study administered questionnaires containing open ended and closed ended questions to all respondents via drop and pick approach. The questionnaires also had a quantitative section utilizing both a nominal and a Likert-type scale format. Given that the study was to collect both primary and secondary data for this study secondary data was collected from published reference materials such as reports and journals.

Data Analysis

Data was analyzed using descriptive and inferential statistics. The study applied descriptive analyses as they are key in providing the foundation upon which correlational and experimental studies emerge. The inferential statistics was conducted by ANOVA, regression, B- coefficient and correlation analysis. ANOVA was performed to check on the goodness of fit of the model. To predict the influence of E-Commerce (as independent variables) on the public service delivery (as dependent variable) the study used regression analysis. The regression model for this study was:

$$Y = \alpha_0 + \beta_1 X_1 + \varepsilon$$

Where:

Y	-	Public service delivery
α_0	-	Is the constant
X_1	-	E-Commerce
β_1	-	Coefficients
ε	-	Error term

The model for the moderating effect was as follows; where X is the predictor and Z is the hypothesized moderator.

$$Y = a + B_1X + B_2Z + e$$

4. FINDINGS

Response Rate

The study surveyed 365 respondents drawn from various levels of management in state agencies out of which a response rate of 81.6% (298 respondents) was obtained. This was considered adequate for analysis and making conclusion and recommendations of the study.

Descriptive Analysis of the Study Variables

Electronic Commerce

The findings revealed that the state agencies in Kenya had to some extent Embraced E-Commerce in their operations. However, the agencies have not effectively integrated the aspects of E-Commerce including E-Procurement, E-Marketing, E-Billing and payment gateways as well as E-Custom clearance systems. The findings however revealed that adopting E-Commerce and putting the necessary measures to integrate the E-Commerce aspects puts the agencies in a better position to achieve their mandate. The findings concur with those by Mazzarol (2015) who found that through effective utilization of E-Commerce, modern business tend to enhance their efficiency and consistency in doing business thus achieving better results.

Wanjau, Macharia and Ayodo (2012) noted that every organization in the 21st century regardless of its size requires E-Commerce strategies such as E-Procurement and E-Marketing as a way of standing out from the competitors as well as gaining effective use of its resources through properly monitored and streamlined business processes. The findings also go hand in hand with the suggestions by Rogers (1962) in his technology diffusion theory that modern businesses ought to be tied to technology-based way of doing things as a way of gaining from the ever-changing technology. E-commerce in the same way helps the state agencies to align their operations to the ever-changing technology thus attaining efficiency and better service delivery.

Table 1: Level of Agreement with Statements on E-commerce

Measurement Aspect	Mean	Std. Dev.
We have effectively integrated electronic procurement in our department to promote efficiency and effectiveness	3.43	1.35
Integrity and accountability have been achieved in our agency as a result of use of E-Procurement	3.64	1.14
There has been full commitment by the management of our agency to integrate E-Procurement	3.55	1.28
E-billing and payment gateways have adequately been integrated in the agency	3.31	1.45
Appropriate systems and personnel have been put in place to enhance adoption of E-Billing and payment gateways	3.57	1.26
The adoption of E-Billing and payment gateways has improved delivery of services in the agency	3.73	1.07
The agency carries out most of its marketing activities through electronic means	3.81	0.98
Through E-Marketing we are able to reach more people hence achieve the best results	3.93	1.00
E-Marketing has enabled our agency to create more awareness on the government projects	3.61	1.11
The agency has effectively adopted electronic based custom clearance systems	3.68	1.11
Efficiency and effectiveness in custom clearance has increased with adoption of E-Custom Clearance systems	3.75	1.11
Accuracy and transparency have been enhanced through adoption of e-custom clearance systems	3.85	1.03

Strategy Execution

As the findings portray, the respondents indicated that their respective agencies did not effectively uphold the main aspects of strategic execution which include situational analysis, strategy formulation and strategy implementation. The respondents however agreed that strategy execution was a key driver to the success of E-commerce as an E-Government strategy although not properly done in their respective agencies. As outlined by Al-Khoury (2014), for a strategy to be

executed successfully, there ought to be proper involvement of the stakeholders through situational analysis so as to have their (stakeholders) incorporated.

Strategy execution process stands to steer the success of every strategy that an organization puts in place. Through effective means of executing a given strategy, the organization is able to streamline its operations towards the strategy and reap employees support on the same. The findings however show that strategy execution has not been effectively done in the state agencies surveyed. Siam and Hilman (2014) contemplate that coming up with strategy is one thing and seeing the successful execution of the strategy is another. This is to mean that as much as an organization upholds coming up with new strategies, there is equal need for the management to ensure the strategies are executed properly through which the expected results are achieved. The findings showed that strategy execution was recognized as a key aspect in steering adoption of E-Government strategies but it was not properly done by the surveyed state agencies. The findings gain support from the Lawrence and Lorsch's (1967) contingency theory of management that upholds the need for strategy execution for strategic decisions to be successful through proper strategy formulation, situational analysis, strategy implementation and evaluation.

Table 2: Level of agreement with Statements on Strategy Execution

Measurement Aspect	Mean	Std. Dev.
An all-inclusive strategic situation analysis is normally conducted as part of any E-Government strategy development	3.04	1.04
The strategic issues identified via strategic situational analysis are used to formulate the strategies and plans	2.23	0.89
Information is sought from both customers, employees and any other stakeholder during situational analysis process	2.03	0.90
During the strategy formulation process an assessment of strategic options is carried out, strategic plan developed or revised and well documented	2.03	0.97
The views of all the stakeholders are considered during formulation of any strategy in our agency	1.80	0.94
The strategy implementation/realization plan is in place, widely circulated and communicated among employees and other stakeholders	1.23	0.51
There is effective leadership, change management and resource allocation to enhance implementation of the strategy	1.26	0.50
Every phase of implementing strategies in our agency is keenly undertaken to minimize mistakes and ensure success of the strategy	1.25	0.50
There are adequate mainstreams and systems set aside to facilitate evaluation and monitoring of the implemented strategies	3.18	1.15
Strategy evaluation audits frameworks are frequently and effectively carried out within the agency	3.16	0.99
As a result of the evaluation audits carried out, some of the strategies, systems, policies, and goals were revised in line with approved remedial and corrective actions	3.40	1.02

Rate Public Service Delivery

The respondents were asked to rate the public service delivery in their respective agencies. As the findings in Figure 1 portray, 14.1% of the respondents indicated that the service delivery at their respective state agencies was poor, 20.1% indicated that the service delivery was good while 37.2% were not sure on whether the service delivery was good or not. On the same note, 25.2% of the respondents indicated that service delivery in their respective agencies was fair while 3.4% said that service delivery was excellent. The findings imply that public service delivery by most of state agencies surveyed was not satisfactory with only 48.7% at least rating the service delivery to be at a moderate level. As Kyohairwe (2018) contemplates, public service delivery in most of the state agencies in developing countries is not effectively attained as a result of inappropriate mainstreams of operations as well as lack of accountability and effective use of the resources.

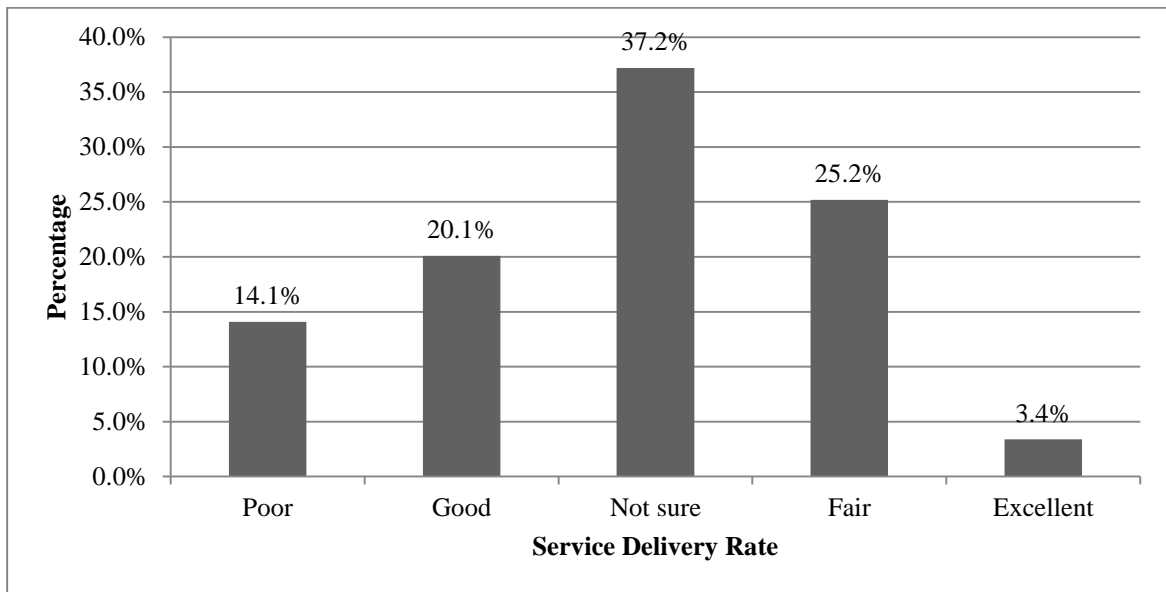


Figure 1: Rating Service Delivery at the State Agencies

Inferential Statistics

E-Commerce

H_{01} : E-Commerce does not significantly influence the public service delivery of state agencies in Kenya

$$Y = \beta_0 + \beta_1 X_1 + \epsilon$$

As the findings in Table 3 reveal, R square which is the coefficient of determination that tells the variation in the dependent variable due to changes in the independent variables is 0.692. This means that 69.2% variation in service delivery by the state agencies in Kenya was due to variations in E-Commerce, with 30.8% of variation in service delivery by the state agencies in Kenya being explained by other factors other than E-Commerce.

Table 3: Model Summary for E-Commerce

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.832 ^a	0.692	0.691	.8843

Predictors: (Constant), E-Commerce

Analysis of Variance (ANOVA) consists of calculations that provide information about levels of variability within a regression model and form a basis for tests of significance. The "F" column provides a statistic for testing the hypothesis that all $\beta \neq 0$ against the null hypothesis that $\beta = 0$ (Weisberg, 2005). From the findings in Table 4, the significance value is .0000 which is less than the standard P-value of 0.05 thus the model was statistically significant in predicting how E-Commerce influenced service delivery by state agencies in Kenya.

Table 4: ANOVA (Analysis of Variance) for E-Commerce

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	489.644	1	489.644	626.109	.0000 ^a
	Residual	218.190	207	1.0541		
	Total	707.834	208			

a. Predictors: (Constant), E-Commerce

b. Dependent Variable: Service Delivery

Based on the regression results shown on Table 5, holding Electronic Commerce constant at zero, service delivery by the state agencies in Kenya would be 6.431. A unit increase in E-Commerce would lead to a 0.680 increase in service delivery by the state agencies in Kenya. At 5% significance level, E-Commerce had a p=0.0004 which is less than the standard P-value of 0.05, and hence the study rejected the null hypothesis that *E-Commerce does not significantly influence the public service delivery of state agencies in Kenya.*

Table 5: Coefficient results for E-Commerce

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	6.431	.712		9.032	.0000
E-Commerce	0.680	.188	.645	3.617	.0004

a. Dependent Variable: Service Delivery

Moderating effect of Strategy Execution

The moderating influence of strategy execution on the relationship between E-Commerce and public service delivery was established in the study. The study used a moderated multiple regression models to assess the moderating effect of strategy execution.

H₀₂: Strategy execution has no significant moderating effect on the relationship between E-Commerce and Public service delivery in state corporations in Kenya

Table 6: Regression Coefficients for the Moderated Model

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.57	0.267		9.623	0.000
	E-C	0.24	0.066	0.278	3.659	0.000
2	(Constant)	1.479	0.38		3.892	0.000
	E-C	0.138	0.068	0.16	2.023	0.045
	S-E	0.25	0.065	0.229	3.878	0.000
3	(Constant)	3.247	0.615		5.281	0.000
	E-C	-0.012	0.082	-0.013	-0.141	0.888
	S-E	-0.122	0.125	-0.112	-0.975	0.331
	X ₁	0.01	0.012	0.076	0.827	0.410

a Dependent Variable: S-Delivery

Based on the outcome of the Regression Analysis shown in Table 5, the model therefore was

$$Y=2.57 + 0.24X_1+ 0.267..... (i)$$

Model two results that addition of the moderating variable to the initial model improved the model. This study established that in the joint model with E-Commerce had a significant influence on service delivery. The second was adopted as follows;

$$Y= \alpha_0 + \beta_1 X_1 * Z + \epsilon$$

α_0 is the constant

Z is the moderator (strategy execution) and ϵ is the error term.

Based on the Regression Analysis shown in Table 5, the model therefore became.

$$Y=1.479 + 0.138X_1 + 0.250*Z+0.38.....(ii)$$

This model implies that when all the E-Government strategies and Strategy execution are held constant except E-Commerce, service delivery will improve by 13.8%.

$$Y = \alpha_0 + \beta_1 X_1 + \beta_2 X_1 * Z + \epsilon$$

Where Y= Service delivery

α_0 is the constant

β_1 is the coefficient for the independent variable

X_1 - E-Commerce

Based on the outcome of the Regression analysis shown in table 5, the model therefore became;

$$Y = 3.247 - 0.012X_1 + 0.01X_1 * Z + 0.615 \dots \dots \dots (iii)$$

This model implies that when all other factors are held constant other than E-Commerce, a unit increase in E-Commerce will reduce service delivery by 1.2%, The interaction effect of E-Government strategies and strategy execution shows that when all variables are held constant other than interaction between E-Commerce and strategy execution, service delivery increases by 1%.

5. CONCLUSION

The study concluded that electronic commerce was a key aspect in promoting service delivery among the state agencies in Kenya. Through E-procurement and E-Billing, the state agencies are able to achieve transparency and effectiveness in procurement processes thus promoting service delivery. E-Marketing enabled the state agencies to reach more clients (citizens) in creating awareness on different government projects thus enhancing their satisfaction on the public services. Through E-Customer clearance systems, efficiency and timeliness were achieved and this streamlined the service delivery by the agencies.

The study concluded that strategy execution is a key moderating factor on the relationship between E-Government strategies and public service delivery by the state corporations in Kenya. Through situational analysis, strategy formulation and implementation, E-Commerce is strengthened to support public service delivery.

6. RECOMMENDATIONS

The study recommends that the government through the state agencies should embrace E-Commerce as a way of enhancing service delivery. Through adoption of E-procurement and E-billing, efficiency and openness in the procurement processes is achieved thus enabling effective service delivery. E-marketing on the other hand is essential in promoting awareness and making the members of the public aware of the government services and embracing them for better livelihoods. The management of state agencies should embrace strategy execution practices so as to enable success of E-Government strategies which are significant to enhanced public service delivery.

REFERENCES

- [1] ACAL Consulting (2014). *Citizens Satisfaction Survey 2014: The Citizen's Voice 2014: Rating Public Service Delivery by the Government of Kenya across Sectors, Evaluating Satisfaction with Public Service Delivery 2014*
- [2] Adegbite, O. E., Simintiras, A. C., Dwivedi, Y. K., & Ifie, K. (2018). Organisational Concepts and Theories of Adaptation. *In Organisational Adaptations* (pp. 27-48). Springer, Cham.
- [3] Adegbola, E. A. (2018). Strategic Marketing Practices and Environmental Perception of Customer Oriented Service in Nigeria Deposit Money Banks in Lagos State. *European Scientific Journal, ESJ, 14*(28), 292.
- [4] Al-Khouri, A. M. (2014). Strategy and execution: lessons learned from the public sector. *International Business Research, 7*(10), 61.
- [5] Anuj, K., Fayaz, F., & Kapoor, M. N (2018) Impact of E-Commerce in Indian Economy. *IOSR Journal of Business and Management (IOSR-JBM)*, Vol. 20(5), 59-71.
- [6] Anvari, R. D., & Norouzi, D. (2016). The impact of E-Commerce and R&D on economic development in some selected countries. *Procedia-Social and Behavioral Sciences, 229*, 354-362.

- [7] Asiabugwa, M.A., & Munyoki, J.M., (2012). Ecommerce strategy and performance of Commercial Banks in Kenya. *AIBUMA conference paper*, University of Nairobi.
- [8] Babbie, E & Mouton, J. 2012. *The practice of social research*. 14th edition. Cape Town: Oxford University Press
- [9] Bourgon, J. (2017). Rethinking, redefining and reinventing: serving the 21st century *International Review of Administrative Sciences*, 83 (4), 641-653.
- [10] Carlsson, L. (2017). Policy science at an impasse: A matter of conceptual stretching? *Politics & Policy*, 45(2), 148-168.
- [11] Detlor, B., Hupfer, M.E., Ruhi, U. and Zhao, L. (2013) 'Information quality and community municipal portal use', *Government Information Quarterly*, Vol. 30, No. 1, pp.23–32.
- [12] Juma, V., & Kimencu, L. (2017). "Enterprise Resource Planning System and Performance of State Corporations in Kenya. *International Journal of Current Aspects in Project Management (IJCAPM)*, Volume I, Issue I, October 2017, PP 1-12
- [13] Kelemba, J.K., Chepkilot, R. & Zakayo, C. (2017). Effect of Personal Attributes on Employee Performance in the Public Service in Kenya. *Journal of Management and Business Administration*, 2, 19-35.
- [14] Kenenissa, D., & Cho, Y. C. (2017). Evaluating e-government implementation in public service delivery. *Journal of Marketing Thought*, 4(1), 1-11.
- [15] Khan, M. (2013). E-government, GIS and good governance. *Public management*, 95(1), 18-23.
- [16] Kinuthia, J. N. K., & Akinnusi, D. M. (2014). The magnitude of barriers facing e-commerce businesses in Kenya. *Journal of Internet and Information Systems*, 4(1), 12–27.
- [17] Kneuer, M. (2013) Bereicherung oder Stressfaktor? Überlegungen zur Wirkung des Internets auf die Demokratie In Marianne Kneuer (ed) *Das Internet: Bereicherung oder Stressfaktor für die Demokratie?* Baden-Baden, Germany: Nomos: 7–33.
- [18] Kozak, D. (2018). Innovation in national e-governments. Estonia as a role model in the citizen-centric approach?
- [19] Kulkarni, V. (2017). Contingency Theory. *The International Encyclopedia of Organizational Communication*.
- [20] Kyohairwe, S. B. (2018). Unlocking Potential Initiatives for Retracing the Public Service Delivery in a Uganda's Case Amongst the African Countries. International Conference on Public Administration and Development Alternatives (IPADA).
- [21] Litondo, K. O. & Ntale, J. F. (2013). Determinants of mobile phone usage for e-commerce among micro and small enterprises in the informal sector of Kenya. *International Journal of Applied Science and Technology*, 3(6), 16–23.
- [22] Mazzarol, T. (2015). SMEs engagement with e-commerce, e-business and e-marketing. *Small Enterprise Research*, 1-12. doi: 10.1080/13215906.2015.1018400
- [23] Milakovich M. (2010), The Internet and increased citizen participation in government, *Journal of eDemocracy & Open Government*, 2(1), 1-9.
- [24] Mitchell, D. (2018). Strategic Implementation: An Illustration of Theory/Practice Disconnect in Public Administration. *Public Administration Quarterly*, 42(1).
- [25] Mungai, A. N. (2017). E-government strategy implementation and performance of the public sector in Kenya. *International Academic Journal of Human Resource and Business Administration*, 2(3), 301-338
- [26] Musty, B., Yahya, D. K., Effendi, N., & Soemaryani, I. (2015). Performance achievement as the impact of strategy, organizational competence, strategy execution and competitive advantage a study on private polytechnics in West Java, Indonesia. *International Journal of Scientific & Technology Research*, 4(8), 189-195.
- [27] Ndubai, R. E., Mbeche, I. M., & Pokhariyal, G. P. (2016). A Study of the Relationship among Performance Contracting, Measurement and Public Service Delivery in Kenya. *Open Access Library Journal*, 3(09), 1.

- [28] Patel, J. (2014). Improving public services in the age of transition: Prevailing practices and ethical dilemmas. *Journal of Politics & Governance*, 156.
- [29] Porumbescu, G. A. (2016). Placing the effect? Gleaning insights into the relationship between citizens' use of e-government and trust in government. *Public Management Review*, 18(10), 1504-1535.
- [30] Republic of Kenya, (2016). *Capacity Assessment and Rationalization Programme Report*. Nairobi: Government printer.
- [31] Rogers, E. M. (2010), *Diffusion of Innovations (4th ed.)*, New York, NY: Simon and Schuster.
- [32] Sarode, R. M. (2015). Future of E-Commerce in India Challenges & Opportunities. *International Journal of Applied Research*, 1(12), 646-650.
- [33] Siam, M., & Hilman, H. (2014). Relationship of Strategy Execution Plan Dimensions on Organization Performance of Higher Educational Institution in Palestine. *Asian Social Science*, 10(13), 131.
- [34] Sunday, O., & Lawal, T. (2016). Fiscal accountability, resource management and sustainable development in Nigeria. *International Journal of Academic Research in Business and Social Sciences*, 6(5), 29-40.
- [35] Vaithianathan, S. (2010). A review of e-commerce literature on India and research agenda for the future. *Electronic Commerce Research*, 10(1), 83-97. doi: 10.1007/s10660-010-9046-0
- [36] Wanjau, K., Macharia N, R., & Ayodo Eunice M A. (2012). Factors affecting adoption of electronic commerce among small medium enterprises in Kenya: Survey of tour and travel firms in Nairobi. *International Journal of Business, Humanities and Technology*, 2(4), 76-91.
- [37] World Bank (2012) World Development Report, New York: Oxford University Press.
- [38] Yamane, S. (1967). *Statistics, an introductory analysis: Determining sample size* (8nd ed), New York: Harper and Row.