



# **THE EFFECT OF INFORMATION TECHNOLOGY GOVERNANCE ON SERVICE DELIVERY OF STATE CORPORATIONS IN KENYA**

**Kepha Nyakora Getembe** 

Postgraduate Student, Department of Management Science, University of Nairobi, Nairobi, Kenya

kgetembe@yahoo.com

**Peterson Obara Magutu**

Department of Management Science, University of Nairobi, Nairobi, Kenya

magutumop@uonbi.ac.ke

**Kate O. Litondo**

Department of Management Science, University of Nairobi, Nairobi, Kenya

klitondo@uonbi.ac.ke

## **Abstract**

*This study sought to investigate the effect of information technology governance on service delivery of state corporations in Kenya. The Diffusion of Innovation Theory was the theoretical anchorage of the study. The positivist orientation philosophy was utilized. The unit of analysis was 178 state corporations in Kenya. Primary data was collected using self-designed structured questionnaire and secondary data on service delivery was gathered from annual performance contracting reports. The study found a statistically significant effect of IT governance on service delivery of state corporations in Kenya. These results add value to existing knowledge in the area of service delivery of state corporations by determining the relevant factors that are important in defining service delivery of state corporations in Kenya. Based on study findings, the government of Kenya need to develop appropriate policies to support ITG applications and customised services for profitability and growth. The study suggests future studies which it deems important in contributing to future knowledge in research works like; market conditions, effect of customer trends, and political instability and government interference on service delivery of government entities.*

**Keywords:** Information Technology, Governance, Service Delivery, State Corporations, Kenya

## INTRODUCTION

Many organizations have integrated ITG in their overall management cadres and activities to achieve their strategic goals and objectives. The intensified use of IT in management processes requires clear guidelines in the use, implementation enforcement, monitoring and evaluation of ITG frameworks for quality outputs (Blitstein & Ron, 2012). This is because ITG largely contributes to improved decision-making processes on IT performance, risk management, strategic value creation and performance (Ali & Green, 2012). The top leadership plays critical role in ensuring ITG promotes competent acquiring, management and use of IT resources (Pang, 2014). ITG provides a roadmap on strategic IT-business by ensuring an effective evaluation, selection, prioritization, funding and implementation of IT investment for clear business benefits (De Haes & Van Grembergen, 2013).

Organizations are working hard to distinguish themselves by striving to offer satisfactory services to their clients promptly and timely. According to, Salihu and Khalil (2011) service delivery is a bundle of things offered to enhance value or utility to customers. Further, Chen and Tsou (2012) describe service delivery as the undertaking of public activities meant to benefit and meet the needs of the citizenry. The satisfactorily aspect of clients is an outcome of proper utilization of resources to offer timely, prompt and customized service, which forms a major policy in the managerial platform.

The study was conducted on state entities that are owned, financed and regulated by Kenya government (GoK, 2003). The corporations play a greater role in ensuring customized services that fosters livelihood of citizens; among others some of the services include energy, manufacturing, agriculture, transport, infrastructure, health and education (Muthaura, 2007). Apart from that the parastatals also are highly regarded as major contributors of employment, innovation, value addition and growth of the economy (Mirungu & Muoria, 2012). These crucial economic roles played by the state organizations in Kenya calls for effective application of corporate IT strategy, ITG and information quality for efficient service delivery. However, majority of state corporations lack adequate IT strategies, funds and incur untold losses due to inefficiencies in product and services provision, corruption and mismanagement of public resources (Mirungu & Muoria, 2012).

This study was anchored on diffusion of Innovation (DoI) Theory which explains the process through which anew idea penetrates through various parts of an organization over a particular period of time (Rogers, 2003). Organizations endeavor to offer superior and competitive services by using quality and user friendly technologies that will lead to value delivery and competitive positioning. Therefore there is needed to strategically align all the

components of innovation with IT and organizational processes to achieve service delivery improvements (Arvanitis, Loukis & Diamantopoulou, 2013).

### **Problem of Research**

Information technology governance is an integral part of organizational management put in place to ensure IT sustains and promotes organizational strategies and objectives (De Haes and Van Grembergen, 2013). This fundamental aim of strategic alignment is to ensure that ITG supports corporate governance objectives towards operational excellence and superior management processes (Blitstein & Ron, 2012). Firms need to integrate ITG frameworks and IT innovations to enhance service delivery practices and processes (McAfee & Brynjolffson, 2008). However, there is no clear link on ITG and service delivery and serious problems in organizational efficiency. Khodayari and Khodayari (2011) noted that service delivery remains crucial to every sector that is eager to remain in the competition arena. As a result of this, corporate governance leadership needs to consider IT governance and service delivery improvement mechanism to foster customer friendly environment.

Kenyan state corporations are established to meet some critical government responsibilities and designing policies on how to enhance service delivery to the public. Mulili and Wong (2011) noted that the major concern of citizens is poor performance and services rendered by the government owned organizations. This failure is attributed to using incompetent human resource, scarce IT resources, poor risk mitigation, corruption and mismanagement of funds, unfair promotions to flawed procurement procedures (Muthaura, 2007). Further, the potential of state corporations in Kenya in spurring the economy to greater levels has not been exploited since there are weak business models and strategies to enhance and implement quality products and services (Miring'u, & Muoria, 2012). Consequently, there is need for an integrative knowledge model on how the government will turn the state corporations into innovation centers of economic and financial buoyancy by ensuring citizenry services.

The debate on how IT governance can facilitate worthwhile service delivery is somehow not clear. Research performed by Pang, 2014; Wilkin and Campell (2010) advanced that organization design and deploy IT governance to support IT strategic planning, performance, value creation and organizational performance. While on the other hand, De Haes and Van Grembergen (2013); Jewer and Mackay (2012) in their studies also argued that IT governance enables organizations to identify and manage risks related with the use of IT. Besides that, Martin (2014); Yayla and Hu (2014) outlined that IT governance enables organizational management to generate and deploy IT to enhance administrative efficiency and competitive positioning. In the Kenyan context, studies conducted by Kashorda et al. (2007) and Magutu et

al. (2010) illustrate that many state corporations in Kenya have developed information systems to monitor and control service provision. Waruinge (2008) indicated that the government of Kenya has embraced Integrated Financial Management Information System to support the management, planning, budgeting of finances in public institution to curb fund misappropriation and embezzlement. Evidence conceptual and contextual studies on the existence of any relationship between information technology Governance and service delivery of state corporation in Kenya is missing and thus what the study focused to address.

### **Research Focus**

Empirical literatures have shown that organization with a good information technology governance framework generate valuable returns on their IT investment than their competitors (DeHaes & Grembergen, 2009). Further, Wilkin and Campell (2010) noted that organization design and deploy IT governance to enable them achieve laid down decisions on IT/business alignment. Further, Pang (2014) contends that with the emergence of globalization, firms felt the need to strategically embrace ITG to support IT strategic planning; performance, value creation and competitive advantage. Blitstein and Ron, (2012) further advanced that ITG is an integral part of organizational management put in place to ensure IT sustains and promotes organizational strategies and objectives. This fundamental aim of strategic alignment is to ensure that ITG supports corporate governance objectives towards operational excellence and superior management processes.

Firms need to integrate ITG frameworks and IT innovations to enhance service delivery practices and processes (McAfee & Brynjolffson, 2008). However, there is no clear link on ITG and service delivery and serious problems in organizational efficiency. De Haes and Van Grembergen (2013) argued that ITG on everyday business operations and processes supports decision-making processes on IT value creation and IT risks management. Jewer and McKay (2012) also contends that benefit optimization and risk minimization has made firms to invent mechanisms or rather procedures leading to decision making monitoring. This has made top management leadership to prioritize in IT governance in order to properly connect and sustain IT and organizational strategic goals and objectives. On service delivery improvements, Lee and Yang (2013) noted that new technologies and the top management support can hasten customized service delivery with little said how SD is influenced by ITG hence the need for further empirical studies to establish the relationship.

The specific research objectives will be to establish the effect of Information technology governance on service delivery of state corporations in Kenya.

This study took keen interest of this objective and thus presented a comprehensive conceptual model in Figure 1.

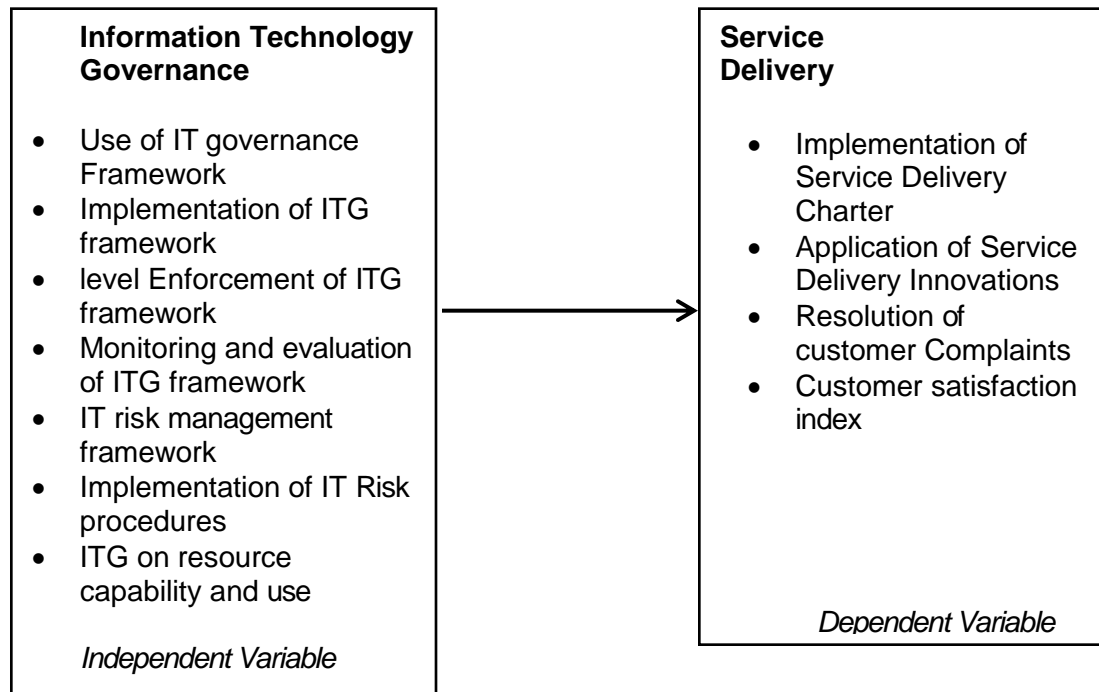


Figure 1: Conceptual Framework

The study objective sought to establish the effect of Information technology governance on service delivery of state corporations in Kenya. The results indicate that there is a significant and strong association between information technology governance and service delivery. The overall model was statistically significant suggesting that the influence of between information technology governance on service delivery was statistically significant.

## RESEARCH METHODOLOGY

### Research Philosophy

The study was embedded on the positivist orientation since only facts and data gained through observation and measurement was used to empirically and objectively analyze the relationships existing among the variables in question and the hypothesis drawn from the theories (Collins, 2010). Research associated with this particular school differentiates the researcher from the subjects as independent and cannot influence each other's outcome or results. The positivist orientation also enabled hypotheses testing,

acceptance or rejection based on the tested results. As opposed to epistemology approach that is concerned with theory building, positivism focusses on properties and relations of natural phenomenon as informed by sensory experience of reason and logic (Hjørland, 2005).

### **Research Design**

Descriptive technique was used to gather information about the subject of study at a given period of time (Mugenda & Mugenda, 2003). This design offered the researcher an opportunity to collect data across different SCs and empirically test the relationship of the constructs along its conceptualization. In view of the breath of the study, the design affords the researcher the opportunity to capture data on IT governance on service delivery of state corporations in Kenya. Thus, the design also enabled the researcher to establish if significant relationships among variables exist and the strength of these relationships (Creswell, 2013).

### **Population of the Study**

A census survey was conducted since complete information from all participants in the population was required (Parahoo 2014). The unit of analysis was 178 state corporations in Kenya corporations spread across the twenty ministries. They are classified into eight main operation classes based on their mandate and core functions. These include: Financial, Commercial, manufacturing, Regulatory, Public Universities, Training and Research, Service, Regional Development Authorities, Tertiary Education and Training. Taskforce on Parastatals Reform Report (2013) observed that due to the dynamism and environmental changes as influenced by the government decisions to review, merge or discontinue some state corporations, the number is likely to keep changing as new ones are created and others merged or discontinued altogether depending on their purpose, performance and government development agenda. One of the respondent from the SC will be either the chief executive officer (CEOs), IT, human resource officer or in charge corporate planning. A census survey was conducted in order to get complete information from all participants in the population used to inclusively obtain better coverage than sample surveys (Saunders et al., 2012). Thus, the study established and maintains a complete list of the primary unit of 178 state corporations in Kenya as indicated in table 1.

Table 1: Population Distribution

S/No	State Corporation Category	Corporations
1	Financial	18
2	Commercial & Manufacturing	34
3	Public Universities	32
4	Training and Research	14
5	Service Corporations	26
6	Regional Development	12
7	Tertiary Education & Training	11
8	Regulatory	31
<b>Total</b>		<b>178</b>

### Data Collection

The chronological mechanism of gathering and quantifying information on targeted variables in an established system to get complete and accurate picture of the area of research is termed as data collection (Bryman & Bell, 2011). Since the data collected enabled the researcher answer relevant questions and evaluate outcomes, both first hand and documented data was gathered because they reinforce each other (Saunders et al., 2012). Primary data was collected with the help of Research Assistants by drop and pick method through administering structured questionnaire that comprised of closed and open-ended questions self-designed in line with the research objectives, hypothesis, empirical literature and theories. This approach is best suited because of its ability to maximize the benefit of standard and descriptive data that the interviews generate (Saunders et al., 2012).

The questionnaire comprised of two sections on IT governance and secondary data on service delivery that was collected from annual performance contract reports and annual evaluation reports of SCs pertaining to service delivery on cycles of 2013/14, 2014/15, 2015/16, 2016/17 and 2017/18.

### Reliability Test

This test was done to determine the tool used in data collection provides stable and consistency results on trials made repeatedly under constant conditions (Huck, 2007). The Cronbach Alpha coefficient is an appropriate measure of internal consistency when making use of Likert scales and it normally falls in the range of zero and one (Robinson, 2009). However, no absolute rules exist for internal consistencies, nevertheless, most agree on a minimum internal consistency coefficient of .70 or should be equal to or above 0.60 (Straub et al., 2004).

Besides that, there are other four cut-off points for reliability: (0.90 and above) excellent, (0.7-0.9) high, (0.5-0.7) moderate and (0.5 and below) low reliability (Straub, Boudreau & Gefen, 2004). Reliability alone is not sufficient without conducting validity tests to ensure an instrument is both reliable and valid (Wilson, 2010).

### Validity Test

This test is conducted to determine to what extent data collected is the representation of the phenomenon of the study supposed to be measured (Ghuri & Gronhaug, 2005). Therefore, validity test depicts the level to which information gathered accurately measures what the researcher anticipates to measure (Field, 2005). It represents the argument that an instrument should yield results precisely to measure the intended objective by enabling the researcher to hit a bulls' eye of the objective in the interest of the population of the study in general (Mugenda & Mugenda, 2003).

Both construct validity and content validity will be used in adapting the measures for the variables in this study (Straub, Boudreau et al. 2004). The questionnaire was pre-tested to ascertain their relevance to the study in production of accurate results. Content validity will be done by testing and retesting the questionnaire that covered all the four main areas of the study. Construct validity on the other hand was attained through variable operationalization in line with the hypotheses that underpin the conceptual model of this study.

### Operationalization of Study Variables

Table 2: Operationalization of Study Variables

Variable	Operational Indicators	Operational Definition	Supporting Literature	Rating measure
<b>IT Governance</b>	Existence of IT governance framework	Presence of an ITG framework which state corporation can use to implement an ITG program	De Haes & Van Grembergen (2013)	5-point Likert type scale
	ITG level of implementation	This refers ITG is put into action in all levels through support of ITG frameworks.	Blitstein & Ron, (2012)	5-point Likert type scale
	Enforcement of ITG framework	This refers to policies and rules put in place to support use of ITG framework	Pang (2014)	5-point Likert type scale
	Monitoring and evaluation of ITG framework	These are rigorous routine tracking systems put in place to check on the usefulness of ITG on corporate objectives	Blitstein & Ron, 2012	5-point Likert type scale



Variable	Operational Indicators	Operational Definition	Supporting Literature	Rating measure
	Existence of IT risk management framework	The presence of strong and reliable IT risk management framework to assist in risk mitigation	De Haes & Van Grembergen (2013)	5-point Likert type scale
	Implementation of IT Risk management framework	This is how IT risk management framework is put into action in all management levels to support attainment of corporate overall objectives	De Haes & Van Grembergen (2013)	5-point Likert type scale
	ITG on resource capability and use	ITG support the generation, deployment and use of resources in corporate IT strategy success	Pang (2014)	5-point Likert type scale
<b>Service Delivery</b>	Customer satisfaction index	This a measure to what extent services offered meet and surpass customer expectation	Chen and Tsou (2012)	Ratio
	Implementation of Service Delivery Charter	This is putting into action what is documented on the customer service charter in all levels of management	Miremadi et al. (2011)	Ratio
	Application of Service delivery Innovation	Is the process of putting resources into innovative services that will enhance customer satisfaction	Ochieng (2010).	Ratio
	Resolution of customer Complaints	This is how state corporations handle customer complaints to avoid shattering growth and profitability of the SCs	Chen and Tsou (2012)	Ratio

### Diagnostic Tests

Since this study is a social science based, the probability of non-linear relationships is likely to be high, thus it is essential to test for linearity between the dependent and independent variables (Burns & Burns, 2008). The study will test for linear relationship using scatter plots that require an assumption of linearity of data taken from the outcome and independent. Saunders et al., (2012) indicated that since neither the numerical nor graphics can individually provide conclusive evidence of normality. Therefore, the study will establish normality of the data for each independent variable both numerically and graphically. Descriptive statistics were performed to present the data in more simpler and meaningful manner. Means, median, standard deviations, skewness and kurtosis for describing normality of the data are conducted.

Multi-collinearity was tested to establish the highly linearly related independent variables to reduce their individual's effects on the dependent variable. Thus, Condition Index (CI), Variance Inflation Factors (VIF) and tolerance shall be used to test for the unacceptable correlation. Small values for tolerance and large VIF values show the presence of multi-collinearity. The acceptable range of  $CI < 30$ ,  $VIF < 5$ , and tolerance  $> 0.2$  will be applied to test multi-collinearity (Bilge, Gulsen, Senay, and Savas, 2011). The study tested for homoscedasticity by use of Levene's test of homogeneity of variance at  $p < 0.05$  significance level. The violation of homoscedasticity is present when the size of the error term differs across values of an independent variable. Low heteroscedasticity has little effect on significance tests but high heteroscedasticity weakens and distorts the analysis thus increasing possibility of committing type I error (Jensen & Ramirez, 2012).

### Data Analysis

Both descriptive and inferential statistics were adopted to deduce the underlying features of the study variables (Saunders et al., 2012). Before running the regression analysis, composite score the dependent variable was computed. Thereafter a composite service delivery index (Y) was also be computed as follows:

First, the weights were assigned as follows based on the GoK, (2018) guidelines on performance contracting.

*Step 1:*  $Average_{1-4} = (achievement\ of\ Y1+Y2+Y3+Y4+Y5)/5$

Table 3: Service Delivery Composite Index

Service Delivery Criteria Category	Unit of measure	Weight	5 Year Achievements					Average
			2014	2015	2016	2017	2018	
Customer satisfaction index	%	0.3						<b>Av1</b>
Implementation of Service Delivery Charter	%	0.3						<b>Av2</b>
Application of Service delivery Innovation	%	0.2						<b>Av3</b>
Resolution of Public Complaints	%	0.2						<b>Av4</b>

*Step 2:* Multiply the weights with the averages for each Service Delivery Criteria Category i.e Customer satisfaction index ( $0.3 \cdot Av1$ ); Implementation of Citizens' Service Delivery Charter ( $0.3 \cdot Av2$ ); Application of Service delivery Innovation ( $0.2 \cdot Av3$ ); Resolution of Public Complaints ( $0.2 \cdot Av4$ ).

*Step3:* Composite Score =  $(0.3 \cdot Av1 + 0.3 \cdot Av2 + 0.2 \cdot Av3 + 0.2 \cdot Av4)$

After computing the composite score for the Service Delivery Index, inferential statistical tests will be conducted at 95 percent level of confidence to establish the relationship among the variables. This included Person's product moment coefficient correlation ( $r$ ), simple linear regression, hierarchical regression, stepwise multiple regression and multiple linear regression analysis. Simple regression method was used to establish effect of Information technology governance on service delivery of state corporations in Kenya

Table 4: Summary of Objectives, Hypotheses and Analytical Model

Objective	Hypothesis	Analytical model	Interpretation
To establish the effect of Information technology governance on service delivery of state corporations in Kenya;	$H_1$ : There is no significant effect of Information technology governance on service delivery of state corporations in Kenya;	Simple Regression analysis $W = \alpha + \beta_1 X_1 + \epsilon$ $W =$ Service Delivery $\alpha =$ constant (intercept) $\beta_1 =$ Coefficient parameters to be determined $X =$ IT governance (IT Strategic alignment, IT Value creation, IT risk management and Competitive advantage), $\epsilon =$ Error term	$R^2$ depicts model fitness and also explains the changes in dependent variable. $\beta_1$ : coefficient explaining the influence of a unit change in the ITG constructs and on service delivery P-value, F-ratio and t-statistic explains the significance of the model constructs.

## RESULTS

The state corporations that were studied manifested demographic profiles. The profile demographics that were considered in the study include category of State Corporation in terms of which sector it operates in, number of permanent and pensionable employees and year's organization has been in operation. These organization characteristics established in the study are given in subsequent sections.

Pre-testing for validity of the questionnaire initially involved a few respondents from the study population to improve the instrument. Randomly pilot testing eight managers from different departments of the firms to establish if the respondents could answer the responses carried out construct and criterion validity on the instrument. The final survey did not consider these pilot groups.

The study population comprised all 178 state corporations. These 178 institutions formed the target population for the study spread across the twenty ministries. The researcher distributed 178 questionnaires, out of which 120 responded positively by filling and returning the questionnaires. This represented an overall positive response rate of 67.4%. Table 5 and table 6 give results for the response rate.

Table 5: Distribution of the Response Rate

State Corporations Category	Target	Frequency	Percentage	Rank
Public Universities	32	28	23	1
Commercial & Manufacturing	34	24	20	2
Regulatory	31	21	18	3
Financial	18	13	11	4
Service Corporations	26	11	9	5
Tertiary Education & Training	11	9	8	6
Regional Development	12	6	5	7
Training and Research	14	8	7	8
<b>Total</b>	<b>178</b>	<b>120</b>	<b>100</b>	

Table 6: Response Rate

Category	Questionnaires distributed	Questionnaires filled & returned	Percentage
Respondents	178	120	67.4%

Such a high response rate of 67.4% for this study can be attributed to the use of introductory letters from the University explaining the purpose and nature of the study, as well as the use of trained research assistants who were equipped with skills on how to build rapport with respondents. Therefore, this study's response rate is considered good for survey research as recommended by Mugenda and Mugenda (2003) and Saunders et al. (2007) who suggested that a 50% response rate is adequate, 60% good and above 70% very good. Whereas according to Kamel & Lloyd (2015), a response rate of above 50 percent is acceptable for such studies. In this case, 67.4 % of the population of the study positively responded implying that most of the state owned entities are actively operational.

The number of years an organization has been in existence will determine its investment on the right corporate IT strategy and governance. The respondents were asked to indicate the duration their state corporation been in continuous operation since its establishment. The study findings are presented in Table 7.

Table 7: Number of Years in Operations

Years in Operations	Frequency (N)	Percentage (%)	Rank
50 years and above	28	23.3	1
41-50 years	20	16.7	2
31-40years	19	15.8	3
21-30 years	19	15.8	4
11-20 years	18	15.1	5
6-10 years	16	13.3	6
<b>Total</b>	<b>120</b>	<b>100</b>	

The results shows majority 71.6% of the state corporations have been in existence for 21- 50 years. This was followed by those having been in operation for 6 - 10 years and above at 28.4%. This implies that majority of the state corporations have been in existence for a long period and thus expected to understand the role of corporate IT strategy in enhancing service delivery.

The operationalization of information technology are cross cutting issues in all functional areas any organization since this is a support service that must be collectively addressed as a strategic concern for improved service delivery. The respondents were asked to indicate their area of operation in the state corporation and the results are presented in Table 8.

Table 8: Area of Operation in the State Corporation

Area of Operation	Frequency (N)	Percentage (%)	Rank
Customer Care Service Department	27	22.5	1
ICT Department	24	20.0	2
Finance and Accounting Department	22	18.3	3
Risk Management Department	18	15.0	4
Sales and Marketing	17	14.2	5
Operations Department	12	10.0	6
<b>Total</b>	<b>361</b>	<b>100</b>	

Results in Table 8 revealed that those who majorly respondent to the questionnaire were from customer care service department (22.5%), ICT department (20.0%), finance and accounting department (18.3%), risk management department (15.0%), sales and marketing (14.2%) and operations management department (10.0%). This implies that the objectives of the study could be well met since all the user departments were well represented. This is an indication that the respondents from all the departments have the diverse knowledge areas regarding the information quality and service delivery particularly in creating clear understanding about corporate IT strategy and how it helps enhance service delivery and therefore understanding of key concepts was important to the study.

Other than the functional areas of operation, the level of administrative authority is key in making and implementation strategic decisions in an organization. The respondents were asked to indicate their level of management authority in the state corporation and the results are presented in Table 9.

Table 9: Level of Management

Management Level	Frequency (N)	Percentage (%)	Rank
Middle Management	65	54.2	1
Top Management	32	26.7	2
Cadre Staff	23	19.2	3
<b>Total</b>	<b>120</b>	<b>100</b>	

Results in Table 9 revealed that majorly (80.9%) of the respondents were in middle and top management while 19.1% were cadre staff. This is line with strategic management thinking that it is the top and middle management that takes responsibility in the implementation of any corporate strategy especially the IT strategy and related governance issues. They also take responsibility in the service offering from their units.

This subsection presents the results of the tests for the second hypothesis of the study which was formulated from the second research objective that sought to establish the effect of information technology governance on service delivery of state corporations in Kenya. This objective was tested for through this hypothesis: H<sub>2</sub>: There is no significant effect of information technology governance on service delivery of state corporations in Kenya. Overall composite service delivery index was derived from the four perspectives of: implementation of service delivery charter, application of service delivery innovations, resolution of customer complaints and customer satisfactory index that were used to measure service delivery. The relevant results are presented in table 10.

Table 10: Variables Entered/Removed on Information Technology Governance on Service Delivery of State Corporations in Kenya

Model	Variables Entered	Variables Removed	Method
1	Information Technology Governance on Resource Capability/Use, IT Governance Framework, Implementation of IT Risk Management Framework, Enforcement of ITG Framework, IT risk management framework, IT Governance level of Implementation, Monitoring and Evaluation of ITG Framework <sup>b</sup>	Nil.	Enter

a. Dependent Variable: Service Delivery  
b. All requested variables entered.

From the findings on table 10, seven indicators of IT governance were included in the regression analysis testing the effect of information technology governance on service delivery

of state corporations in Kenya. Further the model goodness of fit using the adjusted  $R^2$  (coefficient of determinations) done in the next table.

Table 11: Model Goodness of Fit of on effect of Information Technology Governance on service delivery of state corporations in Kenya

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson
1	.768 <sup>a</sup>	.590	.565	2.78413	1.657

a. Predictors: (Constant), Information Technology Governance on Resource Capability/Use, IT Governance Framework, Implementation of IT Risk Management Framework, Enforcement of ITG Framework, IT risk management framework, IT Governance level of Implementation, Monitoring and Evaluation of ITG Framework

b. Dependent Variable: Service Delivery

From the results in Table 11, 56.5% (Adjusted  $R^2 = 0.565$ ) of variations in the service delivery is explained by variations in the information technology governance namely information technology governance on resource capability/use, IT governance framework, implementation of IT risk management framework, enforcement of ITG framework, IT risk management framework, IT governance level of implementation, monitoring and evaluation of ITG framework. Table 12 presents that the model is statistically significant in explaining the effect of information technology governance on service delivery of state corporations in Kenya,  $F(7, 112) = 23.052$ ,  $P > 0.000$ .

Table 12: Model Overall Significance (ANOVA<sup>a</sup>) on Effect of Information Technology Governance on Service Delivery of State Corporations in Kenya

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1250.771	7	178.682	23.052	.000 <sup>b</sup>
Residual	868.155	112	7.751		
Total	2118.926	119			

a. Dependent Variable: Service Delivery

b. Predictors: (Constant), Information Technology Governance on Resource Capability/Use, IT Governance Framework, Implementation of IT Risk Management Framework, Enforcement of ITG Framework, IT risk management framework, IT Governance level of Implementation, Monitoring and Evaluation of ITG Framework

From the results in Table 12, it can be observed that the model is significant at 95% confidence interval with the F values of 23.052.

As presented in Table 12, using standardized coefficients: IT governance framework has a weak positive effect on service delivery ( $\beta = 0.039$ ,  $t = 0.497$ ,  $P > 0.620$ ); IT governance level of implementation has a weak positive effect on service delivery ( $\beta = 0.233$ ,  $t = 2.868$ ,  $P > 0.005$ ); enforcement of ITG framework has a weak positive effect on service delivery ( $\beta = 0.033$ ,  $t = 0.425$ ,  $P > 0.672$ ); monitoring and evaluation of ITG framework has a strong positive effect on service delivery ( $\beta = 0.314$ ,  $t = 3.533$ ,  $P > 0.001$ ); IT risk management framework has a weak positive effect on service delivery ( $\beta = 0.126$ ,  $t = 1.535$ ,  $P > 0.128$ ); implementation of IT risk management framework has a weak positive effect on service delivery ( $\beta = 0.077$ ,  $t = 1.101$ ,  $P > 0.273$ ); information technology governance on resource capability/Use has a weak positive effect on service delivery ( $\beta = 0.193$ ,  $t = 2.500$ ,  $P > 0.014$ ).

Table 13: Regression Coefficients of the effect of Information Technology Governance on Service Delivery of State Corporations in Kenya Model coefficients <sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	43.69	2.031		21.51	.000	39.666	47.715		
IT Governance Framework	.324	.652	.039	.497	.620	-.967	1.616	.603	1.658
IT Governance level of Implementation	1.568	.547	.233	2.868	.005	.485	2.652	.552	1.811
Enforcement of ITG Framework	.233	.548	.033	.425	.672	-.852	1.318	.621	1.609
Monitoring and Evaluation of ITG Framework	2.282	.646	.314	3.533	.001	1.002	3.562	.463	2.162
IT risk management framework	.914	.595	.126	1.535	.128	-.266	2.093	.544	1.838
Implementation of IT Risk Management Framework	.653	.593	.077	1.101	.273	-.522	1.828	.744	1.345
Information Technology Governance on Resource Capability/Use	1.322	.529	.193	2.500	.014	.274	2.369	.615	1.625



The relationship derived on the effect of information quality on service delivery of state corporations in Kenya is statistically significant. The regression equation derived was thus as follows:

$$\begin{aligned} \text{Service Delivery (Y)} = & 0.039 \text{ IT Governance Framework} + 0.233 \text{ IT Governance level of} \\ & \text{Implementation} + 0.033 \text{ Enforcement of ITG Framework} + 0.314 \\ & \text{Monitoring and Evaluation of ITG Framework} + 0.126 \text{ IT risk management framework} + \\ & 0.077 \text{ Implementation of IT Risk Management Framework} + \\ & 0.193 \text{ Information Technology Governance on Resource Capability/Use} \end{aligned}$$

The results of the beta coefficient showed that a unit increase in IT governance framework will cause a 0.039 positive effect on service delivery ( $\beta = 0.039$ ,  $t = 0.497$ ,  $P > 0.620$ ); a unit increase in IT governance level of implementation will cause a 0.233 positive effect on service delivery ( $\beta = 0.233$ ,  $t = 2.868$ ,  $P > 0.005$ ); a unit increase in enforcement of ITG framework will cause a 0.033 positive effect on service delivery ( $\beta = 0.033$ ,  $t = 0.425$ ,  $P > 0.672$ ); a unit increase in monitoring and evaluation of ITG framework will cause a 0.314 positive effect on service delivery ( $\beta = 0.314$ ,  $t = 3.533$ ,  $P > 0.001$ ); a unit increase in IT risk management framework will cause a 0.126 positive effect on service delivery ( $\beta = 0.126$ ,  $t = 1.535$ ,  $P > 0.128$ ); a unit increase in implementation of IT risk management framework will cause a 0.077 positive effect on service delivery ( $\beta = 0.077$ ,  $t = 1.101$ ,  $P > 0.273$ ); a unit increase in information technology governance on resource capability/use will cause a 0.193 positive effect on service delivery ( $\beta = 0.193$ ,  $t = 2.500$ ,  $P > 0.014$ ).

Moreover, the effect of information technology governance on service delivery of state corporations in Kenya was statistically significant. This implies, overall, information technology governance are a good predictor of service delivery of state corporations in Kenya. The findings therefore confirms alternate hypothesis one (ii) that there is a significant effect of service delivery of state corporations in Kenya on service delivery of state corporations in Kenya. The null hypothesis  $H_{01}$  is therefore rejected.

## DISCUSSION

The study sought to establish the effect of Information technology governance on service delivery of state corporations in Kenya. The results indicate that there is a significant and strong association between information technology governance and service delivery. The overall model was statistically significant suggesting that the influence of between information technology governance on service delivery was statistically significant. This implies, overall, information

technology governance is a good predictor of service delivery. The findings thus were sufficient to reject the first *that* there is no significant effect of Information technology governance on service delivery of state corporations in Kenya. The results support various empirical reviews. For instance Pang (2014) contends that with the emergence of globalization, firms felt the need to strategically embrace ITG to support IT strategic planning; performance, value creation and competitive advantage.

Blitstein and Ron (2012) also advanced that ITG is an integral part of organizational management put in place to ensure IT sustains and promotes organizational strategies and objectives. This fundamental aim of strategic alignment is to ensure that ITG supports corporate governance objectives towards operational excellence and superior management processes. Jewer and McKay (2012) also contends that benefit optimization and risk minimization has made firms to invent mechanisms or rather procedures leading to decision making monitoring. This has made top management leadership to prioritize in IT governance in order to properly connect and sustain IT and organizational strategic goals and objectives.

## CONCLUSIONS

The study concludes that there is a statistically significant effect of information technology governance on service delivery of state corporations in Kenya,  $F(7, 112) = 23.052$ ,  $P > 0.000$ ; 56.5% (Adjusted  $R^2 = 0.565$ ) of variations in the service delivery is explained by variations in the information technology governance.

## SCOPE FOR FURTHER STUDIES

The study suggests future studies, which it deems important in contributing to future knowledge in research works. It is recommended that other studies should be done using other popular measures of service delivery like availability of IT skilled staffs at various management levels and trainings on emerging customer perceptions and needs. Additionally, it is also important to evaluate the influence of IT governance on other aspects like administrative and operational processes since they build a base for enhanced service delivery. This study can further be disaggregated per state entity in order to offer more in-depth insight and should not presume only linear relationships but also curvilinear relationship. Other studies can be conducted on factors influencing service delivery like political instability, government interference, market conditions like polices, taxation, supply and demand aspects on their potential impact on service delivery.

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