AFRICAN JOURNAL OF BUSINESS AND MANAGEMENT

(AJBUMA)

ISSN 2079-410X

University of Nairobi
School of Business

THE EFFECT OF INFORMATION QUALITY ON SERVICE DELIVERY OF STATE CORPORATIONS IN KENYA

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Abstract

This study intended to unravel the influence of information quality on service delivery of state corporations in Kenya. The motivation of the study was out of unresolved number of research gaps which could only be addressed through an integrated conceptual model testing on how information quality could individually affect service delivery of state owned entities. The Fourth Industrial Revolution Theory and Diffusion of Innovation (DoI) Theory guided the conceptualization of the investigation. To achieve the study objective, positivist philosophy was applied since only factual knowledge that was gained through observation and measurement was relied on. Descriptive cross-sectional technique was used to gather comprehensive information about all the 178 state corporations in Kenya at a span of five years since 2013 to 2018. Primary and secondary data were collected through administering structured questionnaire and from annual performance contract reports respectively. The analysis established that 37.8% of variations in service delivery of state corporations in Kenya are explained by the changes in information quality. The findings of this study can be utilized by all staff cadres in embracing information quality to foster knowledge that facilitates service delivery of state corporations. Based on the results of this study, the government through relevant ministries and other stakeholders in the state corporations sector should develop appropriate policies in an attempt to organize quality information systems that in turn enhances information quality that supports networking and sharing of credible information about current customer needs and trends.

Key words*: Information Quality, Service Delivery, State Corporations and Kenya*

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Introduction

All organs of an organization can competitively function well by embracing quality outputs that are fit for sharing informed decisions and strategic plans for superior performances (Durcikova & Gray, 2009). All stakeholders rely on information quality that is an outcome of valuable data that need to be well-handled and processed for useful information to booster organizational performance in terms of growth and profitability (Li & Feeney, 2014). Khalid (2010) noted that the need for improved service delivery is an outcome of information revolution that has made citizens and clients to demand for customized, prompt and enhanced services at minimal cost. Establishment of a lean IT supported organization circuit requires a well-interrelated and inseparable information quality and competent IT staffs that can engineer and support growth in service delivery practices (Madnick, Wang, Lee& Zhu, 2009).

This study was anchored bother on the diffusion of innovation theory which postulates that new ideas and technologies diffuse through various elements of an organization through systematic ways over a period of time (Rodgers, 2003) and the Fourth Industrial Revolution Theory, which explains that there is growth in technology and economy due to the shift from mechanical digital production (Frey & Osborne, 2013). Information quality is inclined on excellent information systems which is an outcome of technological innovations which need to flow through all nerves of the organization for operational excellence and superior performance (Batini et al., 2009). On the hand economic advancements calls for customized services that can lead to leveraged outcomes. Therefore, in the wake of proper networking, timely and customized service delivery, firms need to revert and diffuse their processes to pedigree technologies that outwit manual systems that are costly, slow and unreliable (Li & Feeney, 2014).

The study was conducted on state entities that are owned, financed and regulated by Kenya government since they are highly regarded as major contributors of employment, innovation and growth of the economy (GoK, 2003). They also provide crucial services that improve the livelihoods of citizens, which include energy, manufacturing, agriculture, transport, infrastructure, health, education, training and research (Bomett, 2015). However, majority of state corporations luck adequate IT strategies, IT skilled manpower, funds and government goodwill. Apart from that the entities are vulnerable to fund losses and inefficiencies in product and services provision due to corruption and mismanagement of public resources (Mirungu &Muoria, 2012).

Research Problem

Firms greatly depend on information quality to support organizational processes thus the need for IT function to continuously co-evolve to suit the emerging opportunities and challenges (Friedman 2008). The alignment of quality IT and information quality enable firms to operate at low costs that will eventually lead to survival, profitability and growth of firms (Nelson et

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al., 2005). A study by Chen et al., (2009) outlines that customer oriented services need to be strongly influenced by new technologies, motivated employees and well versed top management on the need to meet customer requirements and expectations promptly. Despite that, there is need to fit information quality through IT skilled leaders and all staffs to ensure that service delivery improvements prevails. However, Khodayari and Khodayari (2011) noted that service delivery improvements remain crucial to every sector that is eager to remain productive in the competition arena. As a result of this, organizational leadership needs to intertwine information quality in their operations in order to foster customer friendly environment.

State corporations in Kenya are created with the vital role of fulfilling government responsibilities and designing policies on how to enhance service delivery to the public. Nevertheless, most of these state entities are not operating optimally resulting to rendering poor services triggering perennial public outcries from concerned citizens (Mulili & Wong 2011). This failure is attributed to 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 that can 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.

Empirical studies linking information quality and service delivery have varying conclusions with either positive, negative or no relationship at all and are also carried out in different contexts and regions. According to Otto (2011) valuable information hastens sharing of ideals, decision-making process and strategic planning for informed competitive advantage. Alongside that Gil-Garcia et al., (2010) contends that well application of useful information can as well as lead to prudent networking, coordination, quality services, and provision of solutions to organizational problems. Also, Durcikova and Gray (2009 adduced that useful information is vital to organizational competitive strength in decision making process and disseminating information to clients. Kenyan context, many corporations have tried to invest on quality information systems to monitor and control service provision (Magutu, Lelei & Borura, 2010). However other public organizations are employing performance contracting so as to improve governance and accountability towards improved performance and sustainable growth (Bomett, 2015; Ochieng 2010). As a result of this, the study sought to establish the effect of information quality on service delivery of state corporations in Kenya. Thus, the study was directed by the following research question; Does information quality has an effect service delivery of state corporations in Kenya?

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Research Objective

Specific objective of the study was to establish the effect of information quality on service delivery of state corporations in Kenya.

Literature Review

The focus of this section is to review foundations of theories that support various arguments of the study and literature concerning the study objectives and hypothesis tested. The section concludes with the proposed conceptual model, alongside the extracted hypotheses that guided the research.

Theoretical Foundation

The study was anchored on the Fourth Industrial Revolution and Diffusion of Infusion theories since both postulate the penetration of technological innovations in any organization in order to transform manual work to digital for effectiveness and efficiency (Frey & Osborne, 2013). Economic and technological advancements are characterized with major industrial revolution; firstly manual production to digitization of work processing and working environment meant to enhance operational excellence and superior performance (Schwab, 2016). Therefore, firms need to embrace technological advancements by strategically investing on superior IT resources and competencies to enable them add value to operations that support service delivery processes (Brynjolfsson & McAfee, 2014). Not only that but also management processes should be well coordinated with superior quality technologies to support service delivery improvements (Ford, 2015).

Diffusion of innovation theory describes that a new idea penetrates in an organization through specific ways over a period of time. Innovations, technological and economic advancements are new ideas that organizations need to competitively embrace and exploit for them to realize sustained growth and profitability (McAfee & Brynjolffson, 2008). Service delivery improvements cannot prevail without incorporating quality user-friendly technologies and well IT versed management team to support strategic diffusion of service delivery innovations that can enable customer satisfaction and retention (Arvanitis, Loukis & Diamantopoulou, 2013).

Empirical Literature Review on Information Quality and Service Delivery

Well utilized information is likely to lead to professional networking, improved coordination, well-coordinated services, provision of solutions to organizational problems, organizational capacity, better appreciation of policy goals, accountability and integrated planning (Gil-Garcia, Guler, Pardo & Burke, 2010). In addition, Durcikova and Gray (2009) established that in an effort of becoming more productive in the current dynamic business conditions, organizations need to continuously rely on information quality to enhance organizational processes like improved decision making processes, information sharing and planning. Nelson et al., (2005) noted that for organizations to realize value of information quality it is prudent to invest on quality user-friendly information systems.

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Many organizations continuously depend on information quality by deploying quality information systems and IT leaders to hasten gathering, processing, storage, retrieval and sharing of the required information for different and credible operations sharing (Otto, 2011). Investing on quality systems and the use of IT experts to run them also enhance information quality that support reengineering of obsolete processes towards organizational transformation and superior competitive positioning (Madnick et al., 2009). Moreover, information quality enables top management to effectively communicate to the internal and external environment the vision, mission, objectives and strategy of the organization and how processes are streamlined in line to leveraged market share for sustainable prosperity (Zheng, Dawes & Pardo, 2009).

Therefore, based on the reviewed empirical studies it is quite clear that a lot of studies have been conducted on relationship between information quality and quality information systems (Nelson et al., 2005; Otto, 2011), information quality and organizational processes (Durcikova &Gray, 2009; Gil-Garcia et al., 2010). This has left much storming on the effect of information quality on service delivery of organizations t which this study strived to answer.

Summary of Empirical Studies and Knowledge Gaps

A review of literature indicates that the variables in this study have been used in various other studies over time but contradictions exist on some of the relationship while other relationships are yet to be tested empirically. Literature on information quality was reviewed in the context of how it relates to service delivery with key gaps identified. It is therefore important to identify conceptual and contextual gaps in order to fill them in the study and add knowledge on practice, theory, managerial and future research.

Table 1: Summary of Knowledge Research Gaps

Author/Year	Focus	Findings	Research Gaps	Proposed Remedy
Otto (2011)	Data Governance. Business and Information Systems Engineering.	Author noted that information quality depends on quality information systems and IT leaders to hasten gathering, processing, storage, retrieval and sharing of the required information.	The effect of information quality on service delivery is not elaborate.	There is need to empirically test how service delivery is enhanced by information quality.
Nelson et al. (2005)	An empirical examination on the Antecedents of information and system quality.	IT quality measures information quality. Author emphasized that for quality outputs to be realized, information systems need to be of value.	Service delivery which is critical is not considered in the study	There is need to empirically test the link between information quality and service delivery of organizations
Durcikova and Gray (2009)	How knowledge Validation Processes Affect Knowledge Contribution	Established that organizations continuously rely on information quality to enhance processes like decision making processes, information sharing and planning towards becoming productive in the current dynamic business conditions,	Much emphasis was on organizational processes with little said on service delivery improvements	There is need to empirically test the relationship between information quality and service delivery
Zheng et al. (2009)	Leadership behaviors in cross-boundary information sharing and integration	Noted that information quality enables top management to effectively communicate the organization's vision, mission, objectives and strategy for sustainable prosperity	Information quality enables firms to s communicate why they but not clear on service delivery	There is need to empirically establish the between information quality and service delivery

Source: Researcher data, 2019

Conceptual Framework

A conceptual model that shows how information quality indicators and service delivery perspectives are linked in line with the objective of the study and hypothesis is captured as shown in the figure below

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Information Quality

- Contextualizing information quality (reliability, usability, correctness, appropriate amount, understandable, safety)
- Quality of data (consistency, , accuracy, & completeness, consistency)
- Information quality rating–based on assessment of information systems

Independent Variable

H_O

H_O

Service Delivery
- Implementation of Service Delivery Charter
- Service Delivery Innovations
- Resolution of customer Complaints
- Customer satisfaction index

Dependent Variable

Figure1: Conceptual Mode

Methodology of Research

This section is set to highlight and discuss the methodology proposed for the study in question. The methodological sections proposed are; philosophy of the research, study design, study population, methods for data collection, measurements of validity and reliability and a section of how variables of the study were operationalized and finally analytical models and regression assumptions employed.

Research Philosophy

The study was anchored on the positivist orientation since only facts and data gained through observation and measurement was used to empirically and objectively analyze the relationships existing between the variables in question and the hypothesis drawn from the theories (Hjørland, 2005). 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 (Collins, 2010).

Research Design

Descriptive technique was used to gather information that is doing on about the subject of study at a given period of time (Mugenda & Mugenda, 2003). This design enabled the researcher an opportunity to collect data across different SCs and empirically test the relationship of the variables and conceptualize the indicators. In view of the breath of the study, the design affords the researcher the opportunity to capture data on information quality and service delivery of state corporations in

African Journal of Business and Management
Special Issue: Volume 7, Issue 1, March 2022 H**ttp://uonjournals.uonbi.ac.ke/ojs/index.php/ajbuma**
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Kenya. Thus, the design also enables 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 in order to get enough and complete information from all participants in the population of study (Saunders et al., 2012; 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 for the year 2013 observed that due to policy dynamism and economical changes as influenced by the government decisions to review merge or discontinue some corporations, the number is likely to keep changing depending on their purpose, performance and government development agenda. One questionnaire was presented to every state corporation and it remained the prerogative role of the concerned to delegate or consult and provide relevant information. Thus, the study established and maintains a complete list of the primary unit of 178 state corporations in Kenya as indicated below.

Table 2: 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
	Total	**178**

Source: Research Data, 2020

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). 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 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 (Creswell, 2013).

The questionnaire comprised of two sections on information quality and secondary data on service delivery that was collected from annual performance contract reports and 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 whether it 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). 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). 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). 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 (Ghauri & 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 was 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 was done by testing and retesting the questionnaire that covered all the two main areas of the study. Construct validity on the other hand was attained through variable operationalization in line with the

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hypothesis that underpins the conceptual model of this study.

Variables of the study were operationalized as shown in the table 3 below.

Operationalization of Study Variables

Table 3: Operationalization of Study Variables

Variable	Operational Indicators	Operational Definition	Supporting Literature	Rating measure
Information Quality	Contextualizing information quality ; (reliability, usability, correctness, appropriate amount, understandable)	This is the process of putting into meaningful information use based on that is complete, worthy, and easily interpreted for useful strategic results.	Madnick et al. (2009)	5-point Likert type scale
	Operationalizing data quality;(Completeness, Timeliness, Accuracy, Consistency)	This is the processes of collecting and defining data quality that will be used to timely produce accurate, complete and uniform data information fit for use	Nelson et al. (2005)	5-point Likert type scale
	Information quality rating – based on assessment of information systems	This is the measure of the value of information in relation to available information systems	Otto (2011)	5-point Likert scale
Service Delivery	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 etal. (2011)	Ratio
	Application of Service delivery Innovation	Is the process of putting resources into innovative services that will enhance customer satisfaction	(Lee &Wang.2013)	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

Source: Researcher, 2019

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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 using scatter plots (Burns & Burns, 2008). Test for normality was also conducted to establish whether the two variables are normally distributed the test was based on Shapiro Wilk test since it can be used both on small and large samples. If P-value is greater than 0.05 (P>0.05) then assumption of normality is justified (Saunders et al., 2012).

Multi-collinearity was tested to establish the existence of high correlation between independent variables. The problem exists if Variance Inflation Factors (VIF) is greater than 10 or tolerance is less than 0.1 to reduce their individual's effects on the dependent variable. The acceptable range of CI<30, VIF< 10, and tolerance >0.1 was 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 of the dependent variable was computed. Thereafter a composite index of service delivery index (Y) was also generated 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 4: 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						Av1
Implementation of' Service Delivery Charter	%	0.3						Av2
Application of Service delivery Innovation	%	0.2						Av3
Resolution of Public Complaints	%	0.2						Av4

Source: Research Data (2020)

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

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

After computing the composite score for the Service Delivery Index, inferential statistical tests were conducted at 95 percent level of confidence to establish the relationship among the variables. This included Person's product moment coefficient correlation (r) and simple linear regression method was used to establish the nature of the relationship between information quality and service delivery of Kenyan state corporations respectively.

Table 5: Summary of Objectives, Hypotheses and Analytical Model

Objective	Hypothesis	Analytical model	Interpretation
To establish the effect of information quality on service delivery of state corporations in Kenya;	H_1: There is no significant effect of information quality on service delivery of state corporations in Kenya;	Simple Regression analysis $$Y = \alpha + \beta_1 W_1 + \varepsilon$$ Y= Service Delivery α= constant (intercept) β_1= Coefficient parameters to be determined W = Composite index of information quality ε = Error term	R^2 depicts model fitness and explains the changes in dependent variable. β_1: coefficient explaining the influence of a unit change in the information quality constructs P-value, F-ratio and t-statistic explains the significance of the model constructs

Source: Researcher, 2020

Results of the Research, Findings and Discussions

The objective of the study was to establish the effect of information quality on service delivery of state corporations in Kenya. The

details of descriptive analysis using frequency distribution tables, descriptive statistics such as means, standard deviations and coefficient of variations are well presented and discussed. With descriptive statistics, this section provides the premise

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on statistical operations and analysis carried out to test the study hypotheses.

The study population comprised of 178 state corporations 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% which was adequate for the study. According to Kamel & Lioyd (2015), a response rate of above 50 percent is acceptable for such studies. The study findings are presented in Table 6.

Table 6: Response Rate

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

Source: Research Data, 2020

Information quality was operationalized as contextualizing information quality (reliability, usability, correctness, appropriate amount, understandable, safety); quality of data (consistency, accuracy, & completeness, consistency) and information quality rating – based on assessment of information systems. If well utilized operational efficiency characterized by customized services should be realized. Thus descriptive analysis were used to determine variance of information quality manifestations as shown in table 7 below

Table 7: Information Quality –Descriptive Analysis

Information Quality	Mean	Standard deviation	N
Reliability of Information	**3.09**	**1.07**	**11**
Usability of Information	3.14	1.08	**11**
Correctness of Information	3.00	1.06	**11**
Understandability of Information	2.99	0.99	**11**
Appropriate Amount of Information	**2.92**	**1.02**	**11**
Safety of Information	3.00	1.05	**11**
Completeness of Data	3.03	1.04	**11**
Timeliness of Data	2.95	1.06	**11**
Accuracy of Data	2.97	1.02	**11**
Consistency of Data	3.02	1.03	**11**
Information Quality Rating Based on Measurement of Information Systems	2.97	1.03	**11**
Average	3.00	1.04	**11**

Source: Research Data, 2020

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The average mean score for information quality is rated to a great extent (Mean = 3.00, SD = 1.04). The study therefore depicts that information quality is a good predictor of service delivery of state corporations to a *great extent.*

Hypothesis Testing: Findings and discussion

This subsection presents the results of the tests for the hypothesis of the study which was formulated from the research objective that sought to establish the effect of information quality on service delivery of state corporations in Kenya. This objective was tested for through this hypothesis: H_0: There is no significant effect of information quality 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

Table 8: Variables Entered/Removed on the Effect of Information Quality on Service Delivery of State Corporations in Kenya

Model	Variables Entered	Variables Removed	Method
1	Information QualityRating Based on Measurement of Information Systems, Completeness of data, Reliability of information, Accuracy of Data, Understandability of Information, Usability of Information, Timeliness of Data, Safety of Information, Appropriate amount of Information, Consistency of Data, Correctness of Information[b]	Nil.	Enter
a. Dependent Variable: Service Delivery			
b. All requested variables entered.			

Source: Research Data (2020)

From the findings on table 8, all the eleven indicators of information quality were included in the regression analysis testing the effect of information quality 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.

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Table 9: Model Goodness of Fit of on the Effect of Information Quality on Service Delivery of State Corporations in Kenya

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.660[a]	.436	.378	3.32783	1.904
a. Predictors: (Constant), Information Quality Rating Based on Measurement of Information Systems, Completeness of data, Reliability of information, Accuracy of Data, Understandability of Information, Usability of Information, Timeliness of Data, Safety of Information, Appropriate amount of Information, Consistency of Data, Correctness of Information					
b. Dependent Variable: Service Delivery					

Source: Research Data (2020)

From the results in Table 9, the adjusted R^2 shows that information quality is a good predicator of service delivery of state corporations in Kenya. As presented in Table 11, 37.8.1% (Adjusted R^2 = 0.378) of variations in service delivery is explained by variations in the information quality namely information quality rating based on measurement of information systems, completeness of data, reliability of information, accuracy of data, understandability of information, usability of information, timeliness of data, safety of information, appropriate amount of information, consistency of data, correctness of information. Table 12 presents that the model is statistically significant in explaining the effect of information quality on service delivery of state corporations in Kenya, $F(11, 108) = 7.576$, $P<0.000$.

Table 10: Model Overall Significance (ANOVA[a]) on the Effect of Information Quality on Service Delivery of State Corporations in Kenya.

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	922.888	11	83.899	7.576	.000[b]
	Residual	1196.038	108	11.074		
	Total	2118.926	119			
a. Dependent Variable: Service Delivery						
b. Predictors: (Constant), Information Quality Rating Based on Measurement of Information Systems, Completeness of data, Reliability of information, Accuracy of Data, Understandability of Information, Usability of Information, Timeliness of Data, Safety of Information, Appropriate amount of Information, Consistency of Data, Correctness of Information						

Source: Research Data (2020)

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As presented in Table 10, using standardized coefficients: reliability of information has a weak positive effect on service delivery (β= 0.121, t= 1.294, P>0.198); usability of Information has a strong positive effect on service delivery (β= 0.116, t= 1.157, P>0.05); correctness of Information has a strong positive effect on service delivery (β= 0.181, t= 1.674, P>0.05); appropriate amount of Information has a weak negative effect on service delivery (β= -0.008, t= -0.076, P>0.05); understandability of Information has a strong positive effect on service delivery (β= 0.174, t= 1.791, P>0.076); safety of Information has a weak positive effect on service delivery (β= 0.014, t=0.136, P>0.892); completeness of data has a weak positive effect on service delivery (β= 0.012, t=0.127, P>0.05); timeliness of Data has a strong positive effect on service delivery (β= 0.107, t= 1.131, P>0.05); accuracy of Data has a strong positive effect on service delivery (β= 0.107, t= 1.039, P>0.05); consistency of Data has a weak positive effect on service delivery (β= 0.038, t=0.363, P>0.05); and information quality rating based on measurement of information systems has a weak positive effect on service delivery (β= 0.088, t=.921, P>0.05).

Table 13: Regression Coefficients of the effect of Information Quality on Service Delivery of State Corporations in Kenya Model coefficients [a]

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)	43.280	2.517		17.194	.000	38.291	48.270		
Reliability of information	.821	.634	.121	1.294	.198	-.436	2.078	.594	1.683
Usability of Information	.827	.715	.116	1.157	.250	-.590	2.244	.518	1.932
Correctness of Information	1.375	.821	.181	1.674	.097	-.253	3.003	.446	2.242
Appropriate amount of Information	-.055	.722	-.008	-.076	.939	-1.487	1.376	.499	2.003
Understandability of Information	1.541	.861	.174	1.791	.076	-.165	3.248	.556	1.797

Safety of Information	.098	.723	.014	.136	.892	-1.335	1.531	.504	1.983
Completeness of data	.090	.708	.012	.127	.899	-1.314	1.494	.566	1.765
Timeliness of Data	.780	.689	.107	1.131	.260	-.587	2.146	.585	1.709
Accuracy of Data	.880	.847	.107	1.039	.301	-.799	2.559	.497	2.012
Consistency of Data	.309	.850	.038	.363	.717	-1.376	1.993	.481	2.081
Information Quality Rating Based on Measurement of Information Systems	.622	.675	.088	.921	.359	-.716	1.959	.572	1.747

Source: Research Data (2020)

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:

Service Delivery (Y) = 0.116Usability of Information + 0.181Correctness of Information -0.008 Appropriate amount of Information + 0.174Understandability of Information + 0.014Safety of Information + 0.012Completeness of data + 0.107Timeliness of Data + 0.107Accuracy of Data + 0.038Consistency of Data + 0.088Information Quality Rating Based on Measurement of Information Systems

The results of the beta coefficient showed that a unit increase in reliability of information will cause a 0.121 positive effect on service delivery (β= 0.121, t= 1.294, P=0.198>0.05); a unit increase in usability of Information will cause a 0.116 positive effect on service delivery (β= 0.116, t= 1.157, P=0.250>0.05); a unit increase in correctness of Information will cause a 0.181positive effect on service delivery (β= 0.181, t= 1.674, P=0.097>0.05); a unit increase in appropriate amount of information will cause a 0.008 negative effect on service delivery (β= -0.008, t= -0.076, P=0.939>0.05); a unit increase in understandability of Information will cause a 0.174 positive effect on service delivery (β= 0.174, t= 1.791, P=0.076>0.05); a unit increase in safety of Information will cause a = 0.014 positive effect on service delivery (β= 0.014, t=0.136, P=0.892>0.05); a unit increase in completeness of data will cause a 0.012 positive effect on service delivery (β= 0.012, t=0.127, P=0.899>0.05); a unit increase in timeliness of data will cause a 0.107 positive effect on service delivery (β= 0.107, t= 1.131, P=0.260>0.05); a unit increase in accuracy of data will cause a 0.107 positive effect on service delivery (β= 0.107, t= 1.039, P>0.301); a unit increase in consistency of data will cause a 0.038 positive effect on service delivery (β= 0.038, t=0.363, P=0.717>0.05); and a unit increase in information quality rating based on measurement of information systems will cause a 0.088 positive effect on service delivery (β= 0.088, t=.921, P-value=0.359>0.05).

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Therefore, the effect of information quality on service delivery of state corporations in Kenya was not statistically significant. This implies, overall, information quality is not good predictor of service delivery of state corporations in Kenya. The findings therefore confirms null hypothesis that there is no significant effect of information quality on service delivery of state corporations in Kenya. The null hypothesis H_{O1} is therefore accepted.

Discussion

The study sought to establish the effect of information quality on service delivery of state corporations in Kenya. The study found no significant relationship between information quality and service delivery. The overall model is not significant thus depicting that information quality is not a predictor of service delivery of state corporations in Kenya and thus the null hypothesis that there is no significant effect of information quality on service delivery of state corporations in Kenya was accepted. The findings support previous empirical studies. For instance study by Chen et al., (2009) outlines that customer oriented services need to be strongly influenced by new technologies, motivated employees and well versed top management on the need to meet customer requirements and expectations promptly.

Khalid (2010) noted that the need for improved service delivery is because of information revolution that has made citizens and clients to demand for customized, prompt and enhanced service delivery at minimal cost. Friedman (2008) noted that firms greatly depends on information quality to support organizational processes thus the need for IT function to continuously co-evolve to suit the emerging opportunities and challenges. This alignment of quality IT and information quality will also enable firms to operate at low costs that will eventually lead to survival, profitability and growth of firms. Nelson et al. (2005) outlined that for organizations to realize growth in quality services and information it has to invest on user friendly systems.

Conclusions and Recommendations

Based on research findings, the study summarized that information quality has no significant influence on service delivery of state corporations in Kenya. However, The study also established from previous empirical studies that diffusion of innovation theory and the fourth industrial revolution theory propositions need to be borrowed by organization that technological innovations should penetrate through the entire system for value added operations and service provisions. It is recommended that Future researchers need to use other popular measures of service delivery like availability of services and improved processes. It is also prudent for the study to be done on factors that general affect service delivery of state owned entities. Additionally, it is also important to evaluate the influence of information quality on other measures apart from service delivery like performance and also deviate to other sectors like private or even corporations listed at NSE. These studies can further be disaggregated per corporation to offer more in-depth insight and should not presume linear relationships but adopt a different form of relationship

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like a curvilinear relationship. Other studies on the factors influencing service delivery like market efficiency may also be important to evaluate their effect on the regulator's potential to give regulations that enhance efficient services

Limitation of the Study

The study zeroed in on service delivery in terms of implementation of service delivery innovations, resolution of customer complaints and customer satisfaction index which are not the only perspectives of service delivery. The study adopted a censures survey where information was supposed to be gathered from all all the gazzetted 178 state corporations spread across the country which was cumbersome due to regular merging of the entities thus delayed feedback.

Contributions of the Study Findings

The outcome of the study contributes to scholarly literatures and future knowledge in research works. Consequently, the government through relevant authorities and other interested stakeholders on matters related to state parastatals should formulate polices that can guide how to utilize information quality to attain customized services. Further, t The study findings can be used to enhance on building of existing theories such as the Fourth Industrial Revolution theory and Diffusion of Innovation Theory (DoI), which both advances on the penetrations of new technological and economic innovations in organizations which are a recipe of information quality that triggers stable decision making process on networking and sharing of information.

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