Effects of Information System and Control Environment on Financial Performance of State Owned Corporations in Kenya: A Case Study of the Ministry of Labour Social and Security Services

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Abstract

State corporations require good performance from individuals to achieve their objectives. In view of the growing presence of technology, it becomes necessary to understand performance in the context of information systems. The control environment is the foundation on which an effective system of internal control is built and operated in an organization that strives to achieve its strategic objectives, provide reliable financial reporting to internal and external stakeholders, operate its business efficiently and effectively, comply with all applicable laws and regulations, and safeguard its assets. State corporations in Kenya have in the recent past experienced a number of corporate failures related to corporate power structures in place. The general objective of this study was to establish the effect of internal control systems on performance of state owned corporations in Kenya. The specific objectives was to establish the effect of information system on performance of state owned corporations in Kenya and to investigate the effect of control environment on performance of state owned corporations in Kenya; Descriptive design was used in the study. 160 employees were used from the selected from corporation owned by the state as the population target. This comprised of directors, managers, and administrators of departments from, NITA, National Human Resource Planning and Development National Council for Children, Registrar of Trade Unions, and National Council for Persons with Disability, National Employment Bureau, NSSF and Productivity Centre for Kenya. The study engaged census approach since the population was minor. Primary data was collected by use of structured questionnaires and was studied quantitatively using statistical package for social sciences (SPSS). SPSS engendered both descriptive statistics such as frequencies, mean, percentages of the received responses. Inferential statistics included regression and bivariate correlation. The study established that information systems and control environment were positively and ominously related to performance of state owned corporations. Built on the results

above the study determined that internal control systems through information systems and control environment positively affected the financial performance of state owned corporations in Kenya. The study recommended that management of parastatals should implement effective internal control systems such as information system and control environment to enhance effective and efficient performance

Keywords: *Information system, Control environment, Performance and State owned corporations in Kenya*

1.0 Introduction

1.1 Background of the study

There is a general consensus that internal Control systems are used as management tools in financial management (Shah 2003). In view of the foregoing virtually all the state owned corporations have established Internal Control measures in order to enhance their financial reporting systems, check on their efficiency and effectiveness of operations as well as enhance adherence to the prescribed rules and regulations.

While there may be differences in control language around the world, the intent and the principles are similar and consistent. An effective control environment functions like a keystone in an arch bridge without which, no matter what, the best material and craftsmanship cannot hold the bridge together. Auditing the control environment and assessing its effectiveness is an important part of an auditor's assurance responsibility.The control environment includes the attitudes, awareness, and actions of management and those charged with governance concerning the entity's internal control and its importance in the entity. Hooks (1994) describes the Control Environment as in part an operationalization of organization culture. The control environment encompasses the following elements (ISA UK and Ireland 315): Communication and enforcement of integrity and ethical values is an element of control environment; the effectiveness of controls cannot rise above the integrity and ethical values of the people who create, administer, and monitor them. Integrity and ethical values are essential elements of the control environment which influence the effectiveness of the design, administration, and monitoring of other components of internal control. They include management's actions to remove or reduce incentives and temptations that might prompt personnel to engage in dishonest, illegal, or unethical acts

An information system consists of infrastructure (physical and hardware components), software, people, procedures, and data. Infrastructure and software have less significance, in systems that are exclusively or primarily manual. Many information systems make extensive use of information technology (IT). IT as defined by Williams et al (1999) is technology that merges computing with high speed communications links carrying data, sound and video. Accordingly, an information system encompasses methods and records that: Identify and record all valid transactions. Describe on a timely basis the transactions in sufficient detail to permit proper classification of transactions for financial reporting. Measure the value of transactions in a manner that permits recording their proper monetary value in the financial statements. Determine the time period in which transactions occurred to permit recording of transactions in the proper accounting period. Present properly the transactions and related disclosures in the financial statements. Williams et al (1999) stresses that protection of information system entails; control of access, audit controls that track that track servers and programs, and people controls (check

resumes to confirm training and separate employee functions, input controls, and output controls).

1.2 Statement of the problem

Public establishments are facing the risk of scam in management of communal funds. Rezaee (2004) revealed that financial statement fraud had cost market participation more than USD 500 Billion during recent years, with serious lawsuit penalties.State owned corporation have had inadequate or lack of enhanced information systems and control environment. The corporations are prone to fraud and other forms of financial embezzlement. Many of the state corporations still brawls with Liquidity problems, financial reports are not made on time, accountability for the financial resources is still deficient, frauds and misappropriation of institutional properties have been exhumed and a number of decisions made have not borne the expected results. This may have led to poor performance of state corporations. Therefore, there was need to carry out this research to assess the effects of information system and control environment on performance of state owned corporations in Kenya.Effective management of risks involves evaluating and monitoring not only business process controls but also controls relating to the entity's control environment. If the effectiveness of the control environment is not considered in an audit engagement, there is a risk that the assessment even misleading or incorrect.

In an attempt to fill the existing knowledge gap, this study analyzed the effects of information systems and control environment in the state owned corporation, with specific reference to Ministry of Labour Social and Security Services financed by the taxpayer funds to enhance performance and proper corporate governance. Therefore, there was need to carry out this research to assess the information systems and control environment on performance of state owned corporations in Kenya.

1.3 Specific objectives

  i.   Establish effect of information systems on performance of state owned corporations in Kenya
  ii. Determine the effect of control environment on performance of state owned corporations in Kenya

1.4 Research questions

  i.   What are the effects of information systems on performance of state owned corporations in Kenya?
  ii. To what extent does control environment affect performance of state owned corporations in Kenya?

2.0 Literature Review

2.1 Theoretical review: Agency Theory

Many theories have been articulated to explain the relevant issues impelling financial performance in organizations and agency theory was used in relation to the study. A significant body of work has built up in this area within the context of the principal agent framework. The work of Jensen and Mecklin (1976) in particular and of Fama and Jensen (1983) are important. Agency theory examines the contracts between a party (the principal) who delegates work to another (the agent). Agency relations become problematic when the principal and agent have conflicting goals and when it is difficult or costly for the principal to monitor the performance of

the agent. When goals are incongruent, the agent is assumed to have a different set of incentive structures from the principal; the agent will consume perquisites out of the principal's resources and make suboptimal decisions. These activities produce efficiency losses to the principal. To counter these losses, the principal designs contracts to align the goals at the lowest possible costs. Costs can arise from providing incentives and from monitoring to insure that the agent is acting for the principal's interests.

Agency theory can offer insights for information systems. First, principals can design information systems to monitor the actions of agents. Electronic communication systems, electronic feedback systems, and electronic monitoring systems are examples of monitoring devices that can be implemented to insure that agent behaviours are aligned with principal interests. Secondly, information systems professionals themselves often enter into agency relationships with other stakeholders in organizations and agency problems can arise. Important examples of such agency relationships include systems development in the context of state corporations and issues of corporate control, agency theory view corporate governance mechanisms especially the board of directors, as being an essential monitoring device to try to ensure that any problems that may be brought about by the principal-agent relationship, are minimized. Blair (1996) states; managers are supposed to be the 'agents' of a financial Institutions 'owners' but mangers must be monitored and institutional arrangements must provide some checks and balances to make sure they do not abuse their power

2.2 Empirical review

Alraja, & Alomiam, (2013) conducted a study on the effect of general controls of information system auditing in the performance of information systems: field study. By using appropriate statistical tests, results of the study showed that banks listed in Amman Stock Exchange apply General controls of information systems auditing in general, also it found that there is a significant relationship between general controls of information systems auditing and information systems performance, and general controls of information systems auditing has a significant impact on information systems performance.

Ali, & Younes, (2013) conducted a study on the Impact of Information Systems on user Performance: An Exploratory Study. Information systems play an important supportive role in most sectors of them economy. This study was developed to answer the question related to the impact of information systems on user performance in Tunisian companies. This article proposes a model combining the Task Technology Fit (TTF), the Technology Acceptance Model (TAM) and Delone & McLean model to evaluate the performance of users in the Tunisian organizations. The model was tested using survey data collected from 314 users of the information system. The results of structural equation analyzes supported the proposed model and highlighted the important role of perceived ease of use and perceived usefulness in mediating effects between TTF, system quality and information quality and performance users. The results show that TTF, system quality and information quality directly influences the performance of users and indirectly through perceived usefulness and perceived ease of use.

Lotto, J. (2013) conducted a study on examining the impact of information technology on internal auditing effectiveness in Tanzanian organizations. This research assessed the impact of Information technology on internal auditing in Tanzanian organizations. The study was exploratory and descriptive in nature and it was restricted to the Dar es Salaam area, which is the

commercial center of Tanzania. As such it represents IT growth of both government and a business organizations in the country. Primary data was collected through questionnaires. The central finding in this research work reveal that the internal audit profession in Tanzania lags behind in effective use of IT to support their duties. From the discussion of the findings it was clearly observed that several factors, which contributed to the hindrance of internal auditors' use of technology, are interwoven. As such, it was clear that the lack of top management support seemed to be a critical problem because it is from this factor that other factors were brought into existence. For instance, inadequate training programs, internal auditors' involvement in information systems development, and poor allocation of budget to the internal audit department were the result of lack of top management support.

Whittington and Pany (2001) note that the control environment sets the tone of the organization by influencing the control consciousness of people. They further assert that control environment is viewed as the foundation for all the other components of internal control. Control environment factors include; integrity and ethical values of personnel responsible for creating, administering, and monitoring the controls, commitment and competence of persons performing assigned duties, board of directors or audit committees (especially the extent of their independence from management, experience & stature), management philosophy and operating style (in terms of their aggressiveness or conservativeness which may determine the level of risk they may take on), and Organizational structure (which may be a well-organized structure that provides for proper planning, directing and controlling operations or a disorganized structure that may only serve to confuse the key players by creating unclear roles). Control environment has several factors, however, for purposes of this research, the review will focus on Management philosophy and operating style, the integrity and ethical values of personnel that create and administer controls, and audit committees and board of directors.

According to Hayes *et al.*, (2005) internal control comprises five components; the control environment, the entity's risk appraisal process, the information and statement systems, control actions and the monitoring of controls, though, for purpose of this study, the research will slight down to only three components of the internal control system. These are; the control situation, internal audit and control activities. The additional components of the internal control systems will be held steady. Gupta (2001) drawing from Statements of Standard Auditing Practices No. 6 (SAP 6) define Internal control as "the plan of organization and all the methods and procedures adopted by the management of an entity to assist in achieving management objectives of ensuring as far as practicable, the orderly and competent perform of its production, including observance to organization policy, the protection of assets, prevention and detection of fraud and error, the accuracy incompleteness of accounting records and the timely preparation of reliable financial information". It is so value note from the above that; suitably instituted systems of internal control will ensure; completeness of all transactions undertaken by an entity.

2.3 Conceptual framework

According to Kombo and Tromp (2009), a concept is an abstract or general idea inferred or derived from specific instances. A conceptual framework is a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation. Kothari (2004) defines an independent variable also known as the explanatory variable is the presumed cause of the changes of the dependent variable, while a dependent variable refers to the variable which the researcher wishes to explain. Figure 1 shows the conceptual representation.
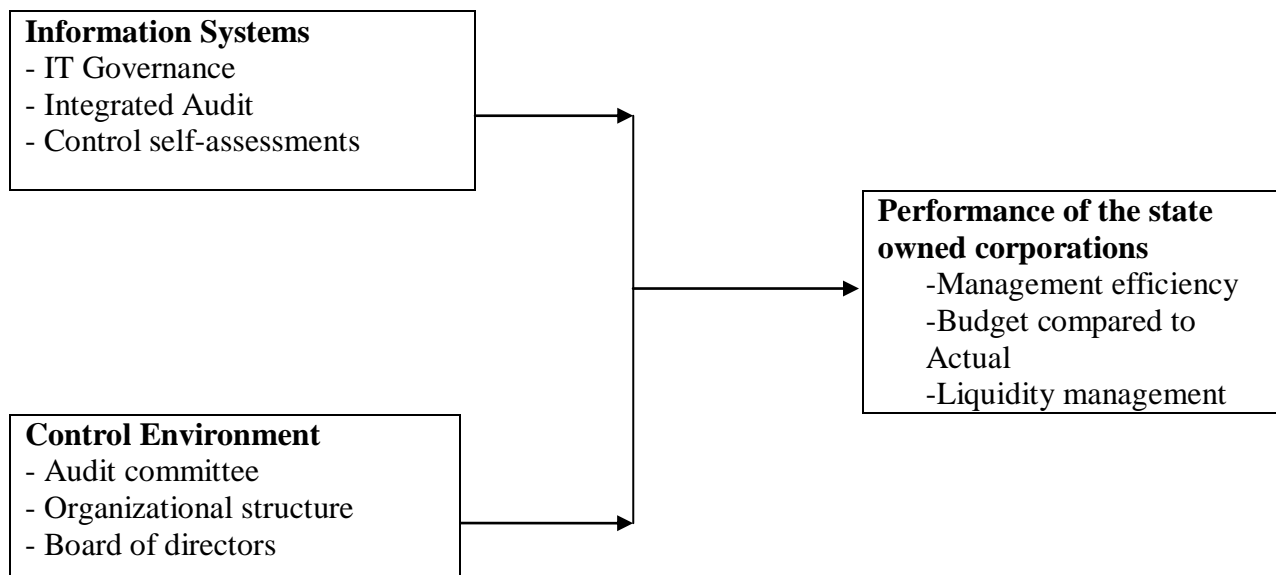
Figure 1: Conceptual framework

3.0 Research methodology

The study adopted a descriptive survey design. The sample size of 160 respondents working as employees from the selected state owned corporation as the target population. This included directors, managers, and supervisors of departments from National Council for Children, National Human Resource Planning and Development, National Council for Persons with Disability, Registrar of Trade Unions, NITA, NSSF, National Employment Bureau and Productivity Centre for Kenya. Questionnaires were used to obtain data, which was analyzed by the use of descriptive statistics. A Likert scale of five responses was used. Likert scale is an interval scale that specifically uses five anchors of strongly disagrees, disagree, neutral, agree and strongly agree. The Likert scale measures the level of agreement or disagreement. Correlation and regression analysis was used to assess the effect of internal control systems on performance of state owned corporations in Kenya.

The regression model adopted was:

$Y== \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e$

Where:

Y = Performance

X_1 = Control environment

X_2 = Information System

e is error term

β_0 represents the constant

$\beta_{1,2}$ are regression coefficients

4.0 Results and findings

4.1 Information systems

4.1.1 Descriptive statistics

The first objective of the study was to establish the effect of information system on performance of state owned corporations in Kenya. Results in table1 show that 80%(35%+45%) of the respondents agreed that there is a clear methodology for strategic planning for information systems linked to the overall strategy of the organization, 65% of the respondents agreed that The organization relies specific actions are periodically carried out to ensure the accuracy of the information system, 60% of the respondents agreed that the information which provided by the systems is features with modernity, 65 % of the respondents agreed that the information has the required accuracy and reliability in spite of the size growing of operations while 85% of the respondents indicated that information provided by the information systems used at the organization meet the needs of decision makers at all administrative levels.

On an average Likert scale the responses had an overall mean of 3.9 which indicated that the respondents agreed to the majority of the questions asked. The standard deviation of 1.2 indicates that the responses were varied. The results imply that information system influence the performance of state owned corporations in Kenya.

Table 1: Information System

Statement	1	2	3	4	5	Mean	Std. Dev
There is a clear methodology for strategic planning for information systems linked to the overall strategy of the organization	5.00%	5.00%	10.00%	35.00%	45.00%	3.90	1.23
The organization relies specific actions are periodically carried out to ensure the accuracy of the information system.	5.00%	10.00%	20.00%	40.00%	25.00%	3.85	1.36
The information which provided by the systems is Features with modernity.	5.00%	10.00%	25.00%	20.00%	40.00%	4.00	1.10
The information has the required accuracy and reliability in spite of the size growing of operations.	10.00%	10.00%	15.00%	30.00%	35.00%	3.85	1.20
Information provided by the information systems used at the organization meet the needs of decision makers at all administrative levels.	0.00%	0.00%	15.00%	45.00%	40.00%	3.90	1.27
Average						**3.90**	**1.23**

4.2 Control Environment

4.2.1 Descriptive statistics

The second objective of the study was to determine the effect of control environment on performance of state owned corporations in Kenya. The results are presented in table 2 show 75% (35%+40%) of the respondent's greed that their institution has an accounting and financial management system. Further results found that appropriate measures are taken to correct misfeasance in operation of our Accounting & Finance Management System as indicated by 70% of the respondents. Results also showed that 75% of the respondents agreed that Management closely monitors implementation of internal control systems in their institution. In addition, results show that 65% of the respondents agreed that Management provides feedback to the junior officers about the operation of the system. Further, 55% of the respondents agreed that Management acts with a great degree of integrity in execution of their roles. These results imply that control environment influence performance of state owned corporations in Kenya.

The average Likert scale of the responses is 3.90 which indicates that majority of the respondents agreed to the statements. The standard deviation was 1.23 which indicates that the responses were varied.

Table 2: Control Environment

Statement	1	2	3	4	5	Mean	Std. Dev
Our institution has an accounting and financial management system	5.00%	15.00%	5.00%	35.00%	40.00%	3.90	1.23
Appropriate measures are taken to correct misfeasance in operation of our Accounting & Finance Management System	10.00%	10.00%	10.00%	25.00%	45.00%	3.85	1.36
Management closely monitors implementation of Internal control systems in our institution	5.00%	5.00%	15.00%	30.00%	45.00%	4.00	1.10
Management provides feedback to the junior officers about the operation of the system	5.00%	10.00%	20.00%	25.00%	40.00%	3.85	1.20
Management acts with a great degree of integrity in execution of their roles	10.00%	15.00%	25.00%	15.00%	40.00%	3.90	1.27
Average						**3.90**	**1.23**

4.3 Regression Analysis

The results presented in table 3 present the fitness of model used of the regression model in explaining the study phenomena. Information system and control environment were found to be satisfactory variables in performance. This is supported by coefficient of determination also known as the R square of 58.8%. This means that information system and control environment explain 58.8% of the variations in the dependent variable which is performance of state owned corporations in Kenya. This results further means that the model applied to link the relationship of the variables was satisfactory.

Table 3: Model Fitness

Indicator	Coefficient
R	0.767
R Square	0.588
Adjusted R Square	0.119
Std. Error of the Estimate	0.42694

Table 4 provides the results on the analysis of the variance (ANOVA). The results indicate that the overall model was statistically significant. Further, the results imply that the independent variables are good predictors of implementation of youth development projects. This was supported by an F statistic of 5.006 and the reported p value (0.001) which was less than the conventional probability of 0.05significance level.

Table 4: Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	3.65	4	0.913	5.006	0.001
Residual	20.962	115	0.182		
Total	24.612	119			

Regression of coefficients results in table 5 shows that control environment and performance of state owned corporations in Kenya were positively and significantly related (r=0.281, p=0.016) while information system and performance of state owned corporations in Kenya were also positively and significantly related (r=0.138, p=0.021)

Table 5: Regression of Coefficients

Variable	B	Std. Error	t	Sig.
(Constant)	1.729	0.538	3.212	0.002
Information system	0.138	0.059	2.336	**0.021**
Control environment	0.281	0.073	1.113	**0.016**

5.0 Conclusions

The study concluded that control environment has a positive and significant effect on performance of state owned corporations in Kenya. This finding agree with that of Whittington and Pany (2001) who noted that the control environment sets the tone of the organization by influencing the control consciousness of people. They further assert that control environment is viewed as the foundation for all the other components of internal control. Control environment factors include; integrity and ethical values of personnel responsible for creating, administering, and monitoring the controls, commitment and competence of persons performing assigned duties.

Furthermore, the study concluded that information system ensure; completeness of all transactions undertaken by state owned corporations. Control environment which comprised of board size, organization culture and management philosophy has a strong association with the performance of the state owned corporations. The study also concluded that the impact of information systems on user performance directly influences the performance of users and indirectly through perceived usefulness and perceived ease of use.

6.0 Recommendations

There should be effective and enhanced operational practices; business system and ICT infrastructure have improved operational processes and efficiency of State corporations. Consequently, this will reduce operating and transaction costs, increased turnover and enhanced profitability. The introduction of a fully supported and integrated IT system will serve as a strategic tool for State corporations to sustain its continued growth and maintain its service delivery

The study recommended that management of state owned corporations should adopt processes in place to monitor the organization's compliance with principles of sound integrity and ethical values. The board meets regularly, often in executive sessions, and devotes sufficient time and resources to adequately carry out its functions. Further recommendation was management's philosophy and operating style emphasize on high-quality and transparent internal and external reporting, and the importance of effective internal control and risk management.

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