

# EFFECT OF COMPUTERISED ACCOUNTING SYSTEMS ON AUDIT RISK MANAGEMENT IN PUBLIC ENTERPRISES: A CASE OF KISUMU COUNTY, KENYA

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## ABSTRACT

*This study investigated the effect of computerized accounting systems on audit risk management in public enterprises within Kisumu County. The recent development in information technology has had a dramatic influence on accounting information system. As computers become smaller, faster, easier to use and less expensive, the computerization of accounting function grows across the entire financial service industry. The effect is significant, as indicated by the coefficient of audit risk management is significantly linked to assessment and determination of risk, monitoring and evaluation control awareness, technology, and attitude and perception. The examined system risk factors identified important areas of information system risks to be the risk of breaches in system security and the risk that the information provided by the system is inadequate and the nature of systems risk factors identified related to those risk. To address systems risk factors, auditors need to review their ERP procedures.*

## 1. INTRODUCTION

According to Fadzil et al (2005), the technology revolution in accounting and auditing began in the summer of 1954 with the first operational business computer. General electric is attributed with the first operational electric accounting system, a UNIVAC computer, in the summer of 1954. Hunton and Wright (2009) concur that Information Technology Auditing (IT Auditing) began as Electronic Data Process (EDP) auditing and developed largely as a result of the rise in technology in accounting systems, the need for IT control, and the impact of computers on the ability to perform attestation services. It is believed the first use of a computerized accounting system was at General Electric in 1954. At this time only mainframe computers were used and a few people had the skills and abilities to program computers. This began to change in the mid-1960s with the introduction of new, smaller and less expensive machines. This increased the use of computers in businesses and with it came the need for auditors to become familiar with EDP concepts in business.

Jones and Young (2006) point out that EDP auditors formed the Electronic Data Processing Auditors Association (EDPAA). The goal of the association was to produce guidelines, procedures and standards for EDP audits. In 1977, the first edition of *control Objectives* was published. This publication is now known as Control Objectives for information and related Technology (CobIT) is the set of generally accepted IT control objectives for IT Auditors. In 1994, EDPAA changed its name to Information Systems Audit and Control Association (ISACA). The period from the late 1960s through today has seen rapid changes in technology from the microcomputer and networking to the internet and with these changes came some major events that change IT auditing forever.

According to Griffiths (2006), the accounting industry is responsible for recording and reporting financial information for business. Accounting functions generally fall in to one of two

accounting categories: management and financial. Where management accounting is responsible for recording and reporting internal financial information for managers for business decisions, financial accounting reviews company's information released to external business stakeholders.

Jackson (2005) suggested that taking comprehensive measures for protecting financial information often helps companies pass external audits with positive audit opinions. External audits may be used by banks, lenders or investors deciding to invest capital into the company. Companies may also need to present clean audit report to government agencies regarding their financial and accounting practices. The ability to present a strong internal control process and audit trails relating to accounting software often helps companies' limits financial or legal liability.

Lorenzo (2001) mention that, the objective of enterprise risk management audit and control is to provide an integrated, comprehensive assessment of all the risks that an institution is exposed to and an objective and consistent approach to managing them. The size and complexity of the larger institutions make computerized auditing more important while on the other hand; their very size and complexity also make it harder to achieve an enterprise wide view of risk auditing. Measuring operational risk is especially difficult due to a variety of reasons. Kunkel (2004) also noted that ERP systems implementation at many corporations has led to increased audit related risk due to automated interdependencies among business processes, and integrated relational database. As technological developments continue, auditors may need to expand their technological knowledge and skills in order to perform effectively and efficiently in audit functions.

In Kenyan perspective, a study by Peterson et al (1996) stated four propositions emerge about the impact of computers on the accounting systems. First and surprisingly, the initial impact of computers is indirect. Their primary impact is to strengthen the manual accounts, which the ministries continue to rely upon. Second, computers promote effectiveness reforms by changing procedures, rather than efficiency reforms by accelerating the throughput of data with existing procedures. Third, computers do not initially promote document processing but initially do improve data processing and fourth, computers do promote rudimentary analysis.

## **RESEARCH OBJECTIVES**

The overall objective of the study was to examine the effect of computerized accounting systems on audit risk management in public enterprises in Kisumu County. Specifically the study sought to: Determine the relationship between computerized accounting systems and audit risk management, establish the effect of computerized accounting systems on audit monitoring and evaluation of risk management, and assess the attitude and perception of employees towards reliability of computerized accounting systems.

## **2. METHODOLOGY AND DATA**

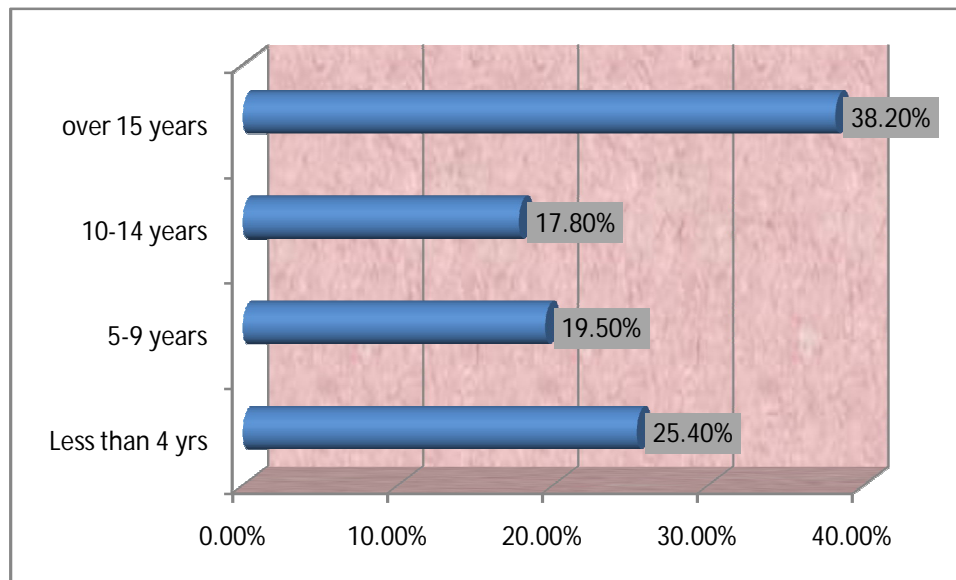
The research adopted an exploratory survey design to examine the effect of computerized accounting systems on audit risk management in public enterprises in Kisumu, Kenya. This design includes cross-sectional and longitudinal studies using questionnaires or structured interviews for data collection, with the intent on generalizing from a sample to a population. The study targeted all public enterprises ranging from state agencies, parastatals and government departments within Kisumu County where information technology platforms host computerized accounting systems for internal control and audit risk management. The study targeted 56 agencies from which a sample of 41 enterprises was drawn for the survey.

Both primary and secondary data was used in the study. Primary data was obtained by use of questionnaires. The questionnaire was administered to managers of the firms (owners, production

and finance managers). Secondary data was collected from relevant business internal records and published reports. Other areas focused on were company audit planning, risk profile and information technology strategy and readiness beside their adoption level. This data was analyzed using descriptive and inferential statistics. Descriptive analysis was expressed in terms of percentages, mean and proportions. Pearson's correlation analysis was used to determine the relationships and significance while pearson's correlation described how the variables are related and the strengths of the relationships. Pie chart, tables, bar charts was used to present the data.

### 3. FINDINGS AND DISCUSSION

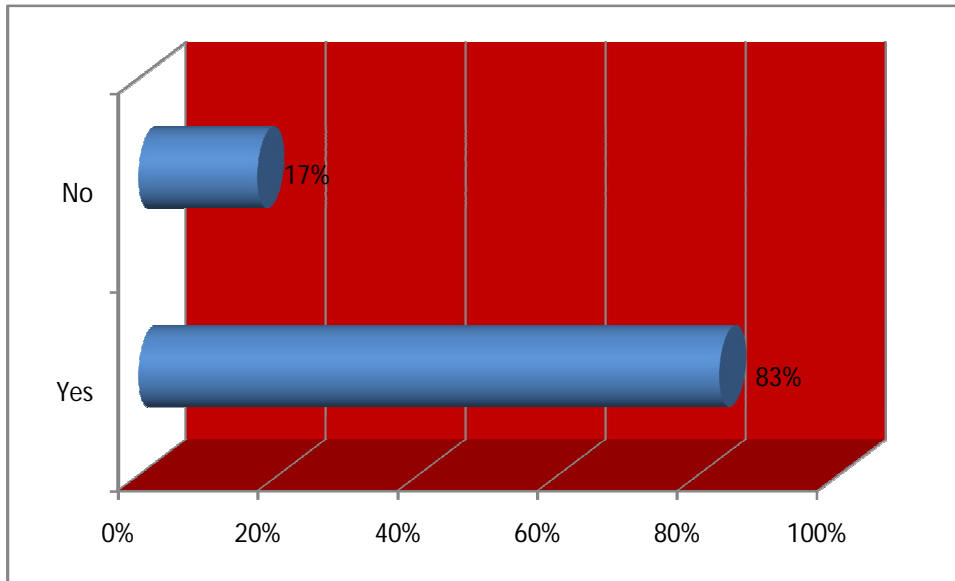
**Table1: Extent of using Computerized Accounting in Risk Evaluation and Management**



**Source: Field data (2012)**

According to the surveyed respondents as shown in the table 1 above, just over half of the respondents, 65% of all respondents were aged between 26 and 40. The distribution of employment tenure of respondents suggests we captured a wide cross-section of employees in the organizations in using or implementing computerized audit system: 25.4% being having employed ERPs' for less than four years, 19.5% between five to nine years while 17.8% had implemented them for between ten and fourteen years. This explains the high response rate attained due to their knowledge of the respective systems in use or being implemented at their organizations.

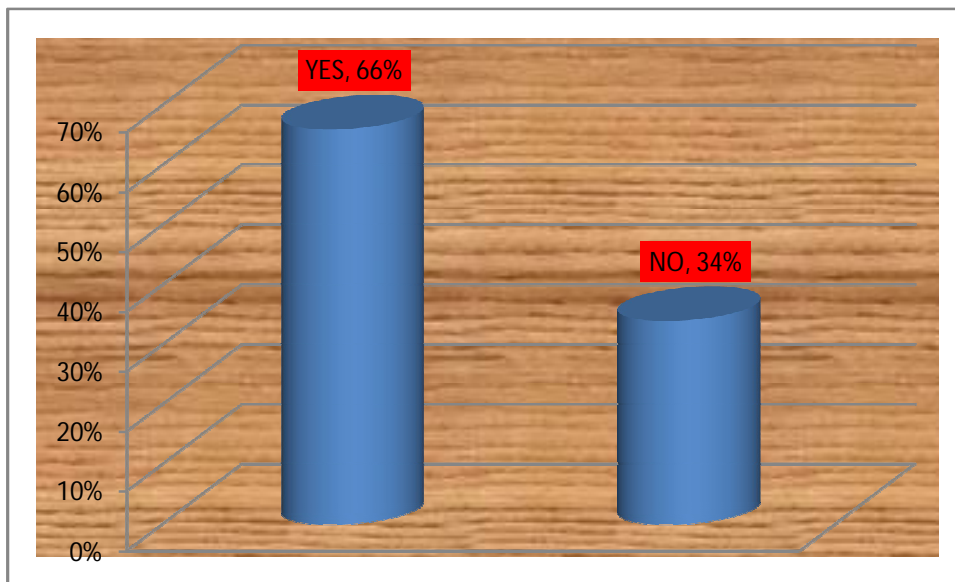
**Table: 2 Audit Policy**



**Source:** Field data (2012)

The findings presented in table 2 above, revealed that among institutions with computerized accounting systems, 83% reported having an approved audit policy framework or policy. 17% of the institutions said their audit framework had been approved at the top management level.

**Table:3 Objective of Risk Management**

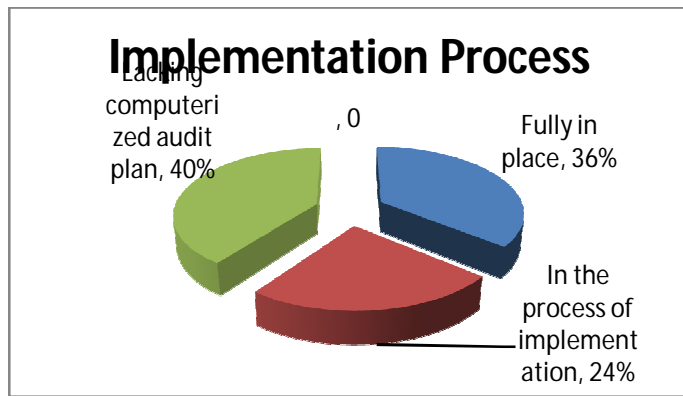


**Source:** Field data (2012)

It is revealed that 34% believed that objective risk management will allow an institution to further understand its risk profile. However, 66% participants strongly agreed that risks faced by diverse business units should be assessed using the organization’s strategic goals as that allow an

organization to gain a clearer picture of its overall risk level, taking into account the correlations and dependencies that can exist across different financial operations and risk types. For all these reasons, public institutions of a significant size should consider the benefits of an audit policy, and regulators are increasingly encouraging this trend. It is important to keep in mind, however, that there is no standard definition of audit plan. Forty five institutions have in place many of the elements of auditing but still not consider themselves to have a full computerized audit program. Yet, the survey seems to indicate implementation during the last ten years has been limited.

**Figure:1 Computerized auditing implementation**



**Source:** Field data (2012)

From the study, only 36% of the institutions reported that they had a regular program or equivalent in place while another 24% were in the process of implementation. More than 40% of the participating institutions lacked computerized audit implementation plan.

**Table 4: Analysis of Relationships and Association**

Variable	1	2	3	4	5	6
Audit risk management*	1.000 (.000)					
Assessment of risks	.638 (.036)	1.000(.000)				
Monitoring and evaluation	.445 (.064)	.427(.420)	1.000 (.000)			
Control awareness	.364 (.354)	.287 (.032)	.576 (.0439)	1.000 (.000)		
Attitude and Perception	.282 (.462)	.434 (.025)	.461 (.0327)	.448 (.0366)	1.000 (.000)	
Technology	.340 (.328)	.268 (.027)	.436 (.043)	.692 (.0435)	.650(.057)	1.000 (.000)

**Source: Field data (2012)**

According to correlation table 4, audit risk management is significantly linked to assessment and determination of risks ( $r= 0.638$ ;  $p< 0.036$ ) followed closely by monitoring and evaluation ( $r= 0.445$ ;  $p< 0.064$ ), control awareness ( $r= 0.364$ ;  $p< 0.354$ ), technology ( $r= 0.340$ ;  $p< 0.328$ ) and finally attitude and perception ( $r= 0.282$ ;  $p< 0.462$ ). The findings show that the organizations studied have focused on internal controls related to financial reporting and on the need to have

external checks and reporting. Monitoring the effectiveness of the company's management audit practices and making changes as needed may be overlooked but is highly relevant. It includes continuous review of the internal information systems architecture of the company to ensure that there are clear lines of accountability for management throughout the organization. This more internal management aspect of the principles might not have received the attention as most firms indicated within their implementation process. Table 5: Model Summary

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Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.986(a)	.972	.972	.13625

Table 5, above shows that the overall contribution of the variables to the dependent variable (audit risk management). R shows the overall value of correlation coefficient while  $R^2$  shows how much of variability of the dependent variable is explained by the predictors. This reflects that risk management systems predictors under study impact on the audit planning practices. This is consistent with Hunton et al (2011) assertion that knowledge audit risks associated with ERP Systems and differences between information systems audit specialists and financial auditors highly relate positively and significantly. The focus risk management does not relate to the technical side of risk management but to the behavioral or attitude and perception aspect. Arguably the risk management models used by financial institutions and by investors does fail due to a number of technical assumptions towards implementation by employees' attitude and perception.

#### 4 RECOMMENDATIONS

The first objective of the study was to determine the relationship between computerized accounting systems and audit risk management. It is suggested that the importance of qualified audit oversight and robust risk management including reference to widely accepted standards is not limited to financial institutions because it is also an essential, but often neglected system governance aspect in large for complex nonfinancial companies. Potential weaknesses in composition and competence of system auditors have been apparent for some time and widely debated should be remedied by current training. The remuneration of senior management also remains a highly controversial issue in many audit environments.

The second objective of the study was to establish the effect of computerized accounting system and evaluation of risk Management. The results show that there are significant differences between different organizations' types regarding the frequency of occurrence of security threats in the environment. Risk management should provide suitable information on performance management to facilitate the effective delivery of internal control, strategic and operational goals. The risk management systems have failed in many cases due to weak corporate governance and audit monitoring procedures rather than the inadequacy of computerized systems alone because information about exposures in a number of cases did not reach the senior levels of management, while risk management was often activity rather than enterprise-based. These are board responsibilities.

The third objective was to assess the attitude and perception of employees towards reliability of computerized accounting systems. The results show that there are no significant differences between different organizations' types regarding the frequency of occurrence of security threats in the environment (except for accidental and intentional destruction of data by employees). Firms need to inculcate strategies that have comprehensive approach to viewing firm-wide exposures and risk, sharing quantitative and qualitative information more efficiently across the firm and engaging in more effective dialogue across the management team. They need adaptive (rather than static) risk measurement processes and systems that could rapidly alter underlying assumptions (such as valuations) to reflect current circumstances. Management also should rely on a wide range of opinions from employees

## **5. CONCLUSION**

The overall objective of the study was to examine the effect of computerized accounting systems on audit risk management in public enterprises in Kisumu County. Pearson's correlation analysis was used to ascertain the relationship between computerized accounting systems and audit risk management. The result was found to be a positive beta coefficient on the overall model summary ( $R=0.986$ ,  $p>0.01$ ). Based on the finding, it can be concluded that there exists a significant relationship between computerized accounting systems and audit risk management in public enterprises. The second objective sought to establish the effect of computerized accounting systems on audit monitoring and evaluation of risk management, secondly it was realized that there exists a significant effect between computerized accounting systems and audit risk management in public enterprises. Finally, it was evident that there is a significant relationship between attitude and perception of employees towards implementation of computerized accounting systems.

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