

## **Effect of Financial Control Mechanisms on Performance of Income Generating Units in Selected Public Universities in Kenya**

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### **ABSTRACT**

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*In an attempt to bridge the gap between the budgetary allocations and actual expenditures most universities have started income generating units with the aim of boosting their operational expenses. Whereas there is the potential of the use of Income Generating Units (IGUs) to generate additional funds, most universities still experience challenges in full implementation and realization of the revenue goal. This study therefore sought to determine the financial control mechanisms affecting performance of income generating units among selected public universities. The study sought to determine the effect of internal controls, credit policies, financial risk management and internal audit on performance of income generating units in selected universities. Targeted population was all the 290 employees in the IGU departments of selected public universities. The respondents were sampled using simple random sampling so as to enable equal representation of the target population without any biasness. Data collection was done using the questionnaire to ensure sufficient data was collected from the respondents. Descriptive statistics assisted in the determination of respondent's views and opinions on every variable. Qualitative data was analysed using content analysis into meaningful, precise and comprehensive statements and presented in quotations. Data analysis was done using SPSS version 21 and data presented in form of figures and tables. The study ensured that all ethical considerations were considered by the study. The findings were that most employed Income Generating Units in Public Universities were Collection of rental fees, Evening and executive programs and Trainings of both short and long courses while the least was established to be Sales of memorabilia and books. All the financial control mechanism investigated namely internal audit, internal control measures, risk management strategies and credit policies had large extents of adoption in the selected universities. The results of the regression analysis showed that the financial control mechanisms investigated had a significant positive relationship on performance of the IGUs. Specifically, 47% of the variation of the performance of IGUs was established to be explained by the studied factors. The study concluded that the performance of the IGUs among the selected public universities was largely accounted for by the implemented financial control measures. Therefore effective financial control mechanisms is concluded to lead to better IGU performance whereas shortcomings in the financial control mechanisms is concluded to lead to diminished returns in the IGUs. The study recommended that the management in charge of the IGU department in the public universities to prioritize the formulation, implementation and monitoring of financial control mechanisms in the IGUs. To facilitate effective financial controls, the study recommended that the management especially those in the audit section to conduct regular checks and inspections on the IGUs. Additionally, frequent reforms were recommended to address the shortcomings experienced in integrating financial control measures in IGUs.*

**Key Words:** *Internal Control Measures, Internal Audit, Credit Policies, Financial Risk Management, Financial Control Mechanisms, Income Generating Units, Public Universities in Kenya*

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**1. Introduction**

Recent increase in financial distress in organizations, Income generating Units (IGUs) have gained recognition in improving the financial position of the firms (DeFond, & Lennox, 2017). Income generating Units (IGUs) comprise additional units or initiatives that are a means of gaining or increasing income. They are a means of livelihood not just in organizations but also in community development areas. According to Kiamba, (2014) IGUs may constitute small-scale projects which have the ability of creating an income source to the individual beneficiaries or groups and improve development. Despite the perceived importance of the IGUs, most of the units have been established to underperform by not attaining the set targets. Specifically, the internal control mechanisms in the organization plays a great role in determining the level of success of the IGUs (Stacey, 2016). The internal control is composed of control environment, the risk assessment, the control activities, the information communication and monitoring which aim at ensuring the efficiency of a firm's operations. This is through regular review of the financial information, ensuring safeguarding of the firm assets, compliance with regulatory guidelines and ensuring effectiveness in the management activities.

Internal control systems are divided into two main aspects which include the financial and non-financial aspects (DeFond & Lennox, 2017). The financial internal control system deals mainly in controlling the financial activities of the firm such as cash receipts and payments. While the non-financial internal control dealing with matters that are mostly administrative in nature and not necessarily financially related. Therefore, organizations that lack proper and systematic controls have been established to structure financially. This may be due to the failure or neglect of the management to formulate and implement these control measures (Mutesi, 2016). Universities in developed countries experience insufficient funds in overseeing their activities (Aastern, 2013). Whereas there is the potential of the use of IGUs to generate additional funds, most universities still experience challenges in full implementation and realization of the IGUs projects. In Kenya, public Universities have continued be underfunded compared to their high expenditure resulting in accumulation of debts and delayed payments. This could be due to ineffective financial control mechanisms in the universities. Understanding this is essential in improving the performance of the IGUs which could go a long way in boosting this sector which is a crucial economy development tool.

The society is gradually recognizing that universities are essential in impacting on the economic life which results in universities increasingly adopting more enhanced market leading attitude, outgoing and supporting economic development. However, globally universities continue to struggle to sustain their financial capability to remain competitive, the costs of higher education

and research are high, yet they are having low funds (Aastern, 2013). These challenges in funding occur due to the rising costs in the university education as compared to the relatively low revenues. Income Generating Units are thus internationally practices in sourcing additional funds into the universities (Siswanto, 2013). The IGUs not only aim to bridge the capital insufficiency in the institutes of higher learning, but also improve the quality of education as well. The income may either be generated through academic-oriented means or non-academic means depending on the intended outcomes. In spite of the accrued benefits from the utilization of the IGUs, the extent and effectiveness of the IGUs have been established to vary greatly amongst the organizations which could be due to the underlying factors (Amudo & Inanga, 2009).

In Africa, most institutes of higher education tend to be dependent on the government funding for running their operations. However, given the unfavorable economic condition in these developing countries, the governments are not in positions to adequately fund the public sectors such as the education (Odalo, 2015). Majority of the finance allocated to education by the government is directed to primary and secondary education with very minimal given to the higher institutions of learning. Therefore, the universities still remain underdeveloped and struggle to fulfill their financial obligations (Bindslev, 2006). The inadequate funding of the universities and other tertiary institutions has had adverse negative effects on both teaching and research in the universities (Mutesi, 2016). This necessitates the diversification of the revenue incomes by the universities so as to curb this capital insufficiencies. In this regard, universities have initiated programs aimed at supplementing the little government funds provides mainly through the introduction of IGUs. Therefore the available revenue is spent on capital projects, administration, teaching and research and students welfare. Even though there is a potential for generating finances through innovations and inventions, most of the public universities in developing countries have not adequately utilized them. According to Ogada, (2006) such avenues of collecting extra capital may have been achieved were it not for the many challenges. One factor is the control and management mechanisms for the IGUs ventured by the universities. This necessitates an undertaking on the exact underlying factors which determine how the IGUs will perform and this current study aimed at investigating this taking the case of selected universities in Kenya.

In Kenya over the past ten years public corporations have continually received relatively low financial allocations by the government compared to their estimated higher expenditure by the institutions (Njue, & Ongoto, 2018). Owing to limited state funding and with grants from donors and development partners also declining, several public universities have been engaged in IGUs to supplement revenue. Most public universities have thus had to innovate other ways of generating income to funding their programs (Ayuya, & Wainaina, 2017). The main financial aim of the University is to grow its revenue from non-funding council sources which means that it will be less reliant on grant funding. Sourcing of revenue is one area that has been recognized as one from which a growth of non-core income may be realized. "Income Generation" (sourcing of revenue) has been defined as revenue commercially priced with an anticipation of a turnover margin. It involves income such as ventures as corporate events, short courses, consultancy, commercial research, external income and facilities (Murage, & Ishengoma, 2015). Revenues generated from IGUs can be categorized by the type of the activities such as hiring of premises, consultancy, teaching, short courses, halls, and canteen, sales of memorabilia and books with clearly defined plans for expense (Murage, & Ishengoma, 2015). Universities are proactively engaged with businesses to raise expertise amongst employees as well as allowing for knowledge

sharing among employees. Characteristically, it is achieved through the provision of consultancy, training and applied research. According to Oketch (2003) the market model emphasizes the inclusion of both the market-driven approaches and market principles to the financing. Whereas Oketch views marketing technique of funding universities concerning financial diversification and incomplete privatization of the institutions. Abadi, S. (2018). proposes implementation of the present marketing models of the 4 P's (elements such as product, price, place, and promotion) in public universities. The financing models of Kenyan higher education sector can be justified when it is composed of market segments which can allow for trading using the market mix. This can be achieved by opening up of dialogues with available markets that are willing to engage public universities.

The Kenyan market can also be justified with the marketing model that has been in existence that improves quality improvement as well as efficiency. The recommended model is grounded on three principles which are the human resource development, equity and shared costs. The marketing model of financing higher institutions has been criticized on the grounds that it leads to academic capitalism (Bindslev, 2009). However, if effectively and efficiently adopted, the model can turn around the financing from donors and government projects. A good instance is in Makerere University where the model was adopted and has been effective. The Kenyan education policy maintains that the new models and techniques to financing higher institutions and the management of the same institutions are key approaches to achieving the set goals. The government will share financing of university education, development partners, and private entities together with students themselves to allow for an increased equity and maintenance of quality as well as access. The financial obligation of the government is to be expanded to cover both private and public learning institutions in the way of capital expansion and supporting them in terms of budgeting. Additionally, such privileges as government scholarships, loans and bursaries shall also be made available to the private sectors (Siswanto, 2013). As in the cases with the Kenyan public universities, for the four or five years that a student will be in the university, under government regular program, they are assured that they will receive tuition funding from the government (Oketch, 2003). Consequently, the national government has an obligation of making sure that students complete their four-year course without hindrances. Thus, the national government is obliged to ensuring that university's accounting system remains relevant throughout the course. On top of that, the private institutions will also have to abide by the set guidelines that are applicable to the public universities in financial control mechanisms.

## **2. Statement of the Problem**

Increasing financial needs of the public universities, the government might no longer be in a position to provide adequate funding. Low funding thus still prevails as a major problem facing most public institution which results in more organizations becoming insolvent (Aastern, 2013). Most universities have started income generating units with the aim of boosting their operational expenses. As exemplified by the public universities in the developing countries, significant revenue can be collected through the IGUs (Siswanto, 2013). However, most universities continue to experience capital insufficiencies, despite the existence of the IGUs and this has been linked largely to ineffective financial control mechanisms in the firms. Empirically, Kituku, (2010) studied factors affecting financial sustainability of income generating activities in Non-Governmental Organizations in Kenya a case study of Compassion International Kenya and found out that improper finance management resulted in poor performance of the IGUs. Aastern (2013) found out that without clear and comprehensive guidelines being in place, to govern the

day to day operations of the units. Similarly, Olumbe (2012) studied internal control systems and found that IGUs were underperforming. While Yenesew, (2014) researched on impact of income generating groups on refugees in Ethiopia and found out that economic, institutional and political factors influence income generation in these IGUs. This shows that though studies have been conducted on the area of IGUs, the findings have been inconclusive on the effect of financial control mechanism on performance of IGUs in public institutions of higher learning. As such, most studies conducted have investigated the two concepts separately without determination of the relationship that exists. The available literature is thus not sufficient enough, presenting a research gap this study on performance of IGUs aimed to address. It is imperative to understand the effect of financial control mechanism so as to elevate the performance of Income generating units in selected public universities in Kenya

### **3. General Objective**

The general objective of the study was to examine the financial control mechanism affecting performance of Income generating units in selected public universities in Kenya.

The study was guided by the following specific objectives:

- i. To assess the effect of internal control measures on performance of IGUs in selected public universities in Kenya
- ii. To establish the effect of internal audit on financial performance of IGUs in selected public universities in Kenya
- iii. To evaluate the effect of credit policies on financial performance of IGUs in selected public universities in Kenya
- iv. To determine the effect of financial risk management activities on performance of IGUs in selected public universities in Kenya

### **4. Theoretical Framework**

#### **4.1 Agency Theory**

Agency Theory was proposed by Jensen and Meckling, (1976). The agency theory is used to describe the contractual relationship between two parties, which one party (principal) deputy the work to another (the agent) who perform that work (Jesen & Meckling 1976). The prominence of the theory is that it divides the organization into two groups namely the managers and shareholders. The difference in the interest of these two parties is what result in the agency problem which needs to be resolved. Though Agency Theory may not directly point out the existence of the internal controls in organizations, it sensitizes the need for it. The theory makes the assumptions that the managers cannot be trusted hence ought to be constantly monitored and evaluated, which is not usually the case (Opanga, 2013). The proposition of the theory is that the shareholders in the universities have delegated the responsibilities of daily running of the IGUs to the employees in charge as their agents. Therefore, internal control will ensure maximization of organization performance for the benefit of the principals. Hence, internal control measures, audit, credit policies and financial risk management are expected to improve financial performance of selected universities in Kenya. Based on this theory, the study aimed to establish whether internal control measures, audit, credit policies and financial risk management affect the performance of IGUs in the selected universities.



## 4.2 Attribution Theory

Attribution Theory was first introduced by Heider (1958) as a psychological theory. It was later developed and advanced by Weiner, (1974). The theory provides a framework through which people's behaviors and interactions are described and understood. The attribution theory has been used in examining the use of information in the social environment to explain events and behaviors. According to Reffett (2007) attributing responsibility for an outcome to an individual highly determines their behaviors and actions. The importance of the theory to the study is that it proposes three dimensions of performance to be considered; the locus, the stability and the controllability of the causes of the task performance (Weiner, 1974). Hence internal control outcomes are expected to be utilized in understanding of the internal controls in place, assess the design and implementation of the internal controls, and test the operating effectiveness of the internal controls. The performance of the IGUs is therefore attributed to efficiency of the financial control mechanisms and commitment of the employees. Internal control measures, audit, credit policies and financial risk management are expected to improve financial performance of selected universities in Kenya.

## 4.3 Contingency Theory

Contingency Theory was initially proposed by Woodward (1958) but later modified by Pike, (1986). The theory holds that there is no definite way to manage operations in an organization due to changing dynamics. According to the theory, optimum performance is attained mainly by having a fit between the current organization setting and the factors influencing the firm operations. Contingency theory therefore used in describing the relationship between the context and the effectiveness of the internal structures on the performance. These contextual factors will affect the organization's structure, which will then influence the design of the financial control system (Chenhall, 2003). The proposition of the study is that though financial control systems may have a positive influence in the university, the outcomes may differ based on the contextual; factors in the firms. Hence, the relevancy of any measure should be based on the prevailing factors and the intended results. For improved performance of the IGUs in the universities to be obtained, it is assumed that a close evaluation of the financial control mechanisms is to be undertaken which will enable the determination of internal factors affecting the performance of the IGUs in the selected universities. Therefore, the effect internal control measures, audit, credit policies and financial risk management will have on financial performance of selected universities in Kenya will depend with the existing situation at the selected universities. The positive influence of internal controls on financial performance may not happen unless the environment in which the internal controls are implemented is conducive.

## 5. Empirical Literature Review

This section under literature review provides a review of the empirical sources of data relevant to the proposed study. It captures the ideas of other scholars and identify a review of gap to be filled. Teketel and Berhanu (2009) on a study on internal control in Swedish Small and Medium-size concluded internal control mechanism appropriate include wide-ranging operational control activities, effective information and communication system, effective monitoring and evaluation system. The weakness of this study is that the author anchored themselves in the angle to explain the effectiveness of internal control systems applicable for SMEs, which may not be applicable in the Higher Learning Institution because of different ways of managing a public organization. Njeri (2010) did a survey on strategic risk management practices by large commercial banks in

Kenya. The research was a census survey on 13 large commercial banks in Kenya. The researcher established that there is an appreciable level of strategic risk management practice among the large commercial banks as exhibited by the findings. The study found out that banks have adopted strategic risk management practices and though there was a slight variance in approach between the banks, the most commonly adopted practice centered on strategic risk assessment, evaluation, monitoring, control and reporting. The study was however conducted on the commercial banks and thus the findings cannot be generalized to the universities.

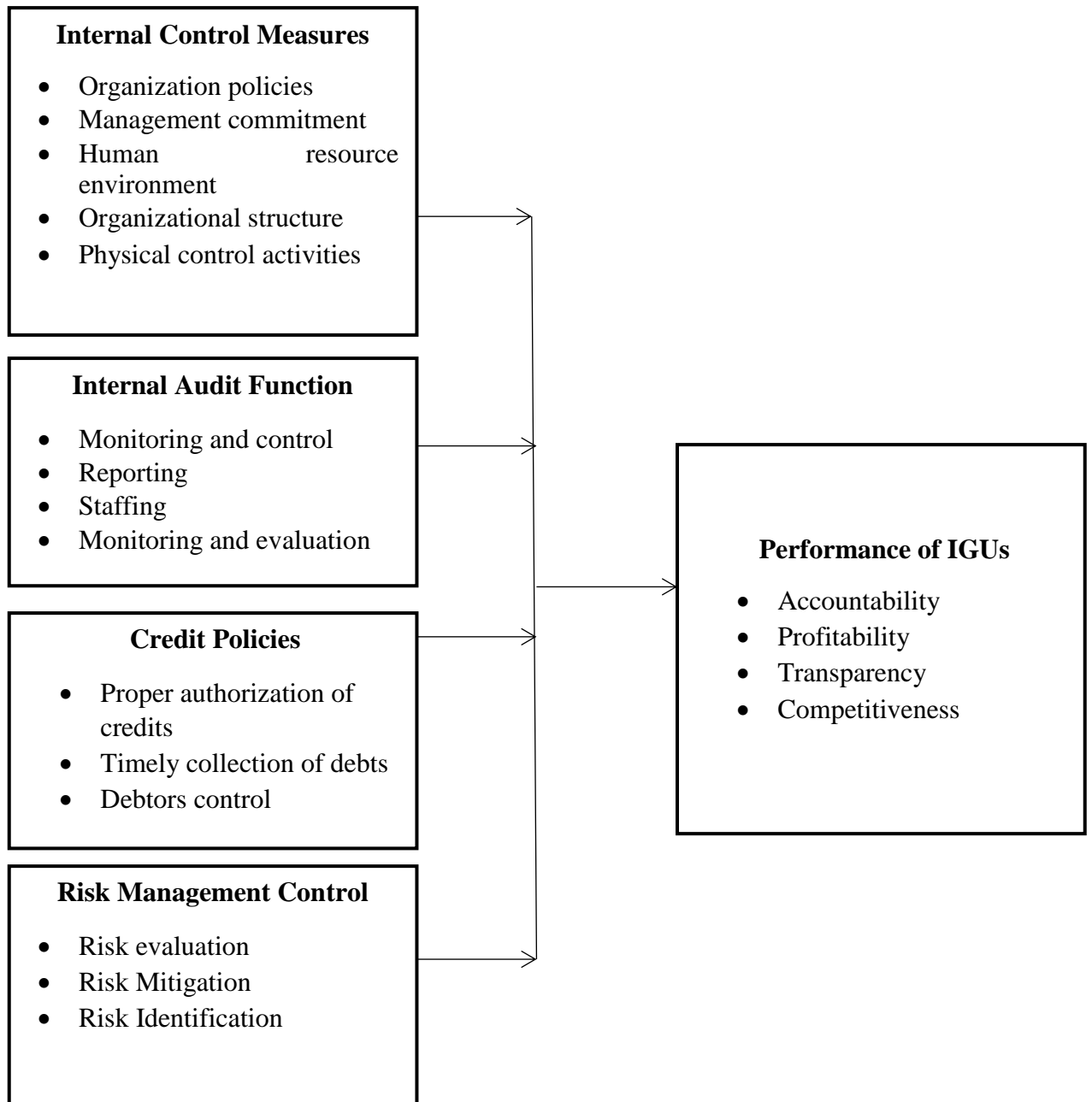
Tsuma and Mugambi, (2014) carried out an empirical study on Factors Influencing Performance of Income Generating Units in Public Universities in Kenya. They observed that economic factors that include inflation affect allocation of resources in the units and funds allocated to the various votes do not sufficiently meet the needs of the units. They also added that the accountability of the employees determines the performance of the IGAs. Thus, it can be realized that inflation and the accountability of the employees within a public university in Kenya determines the effectiveness and performance of the IGUs. Abdullahi and Mturi, (2016) conducted a study on the effects of internal control systems on the financial performance of Higher Learning Institution in Puntland. The research was conducted using quantitative survey design with the data being collected through primary means. Inferential analysis was employed to generate the findings of the study. The study found that internal control systems do function although with delays and that there is a significant relationship between internal control systems and financial performance in an Institution of higher learning. The study however only concentrated on three internal control dimensions without taking consideration other internal control measures available such as risk management control. The study also did not investigate the role played by the internal financial control systems in enhancing the performance of the IGUs. Mutesi, (2016) conducted a study on the relationship between internal control systems and financial performance in public institution in Rwanda. The research was conducted using the entire population because the finance department, audit, coordination of projects & finance department of the Single Project Implementation Unit (SPIU) is composed by a small number of staff which is ten. The study found that the internal audit doesn't conduct regular audit activities and doesn't produce regular audit reports. This current study aimed to ascertain whether financial control mechanism affect the performance of income generating units in selected public universities in Kenya.

## **6. Conceptual framework**

The study, explores four main variables in the issue of IGUs management within the higher education institution. The independent variable in the research is the financial control mechanisms adopted by the public universities, while the dependent variable is the performance indicated by the outcomes of the mechanisms employed as shown by Figure 1. The effectiveness of the income generating units in an institution depends on the financial control techniques employed in managing them.

***Independent Variable***

***Dependent Variable***



**Figure 1 Conceptual Framework**

**Source: Researcher (2019)**

**7. Research Methodology**

This study used the descriptive research design.

The study was conducted at selected public universities. The selected universities entailed Kenyatta University, Egerton University, Jomo Kenyatta University of Agriculture and Technology, Moi University and Nairobi University. These five universities are mainly selected



as they have been in existence for a considerable length of time (more than 20 years) hence have well established Income Generating Units. The study targeted all the 290 employees in the IGU departments of selected public universities. These employees are deemed appropriated as they are well conversant with the study topic. The sample size for the study was defined using Slovin's formula (1960) where a sample size of 79 respondents was studied. The respondents were sampled using stratified random sampling so as to enable equal representation of the target population without any biasness. The method constitutes sub-dividing the study population into its respective strata. The stratified proportionate random sampling was adopted in selection of the sample respondents based on the categories in each respective university.

The sources of data for this study was both primary and secondary. In this research, the primary data collection method was undertaken using a semi-structured questionnaire having both open ended and close ended questions. The questionnaire was also divided into sections each addressing a specific research objective and a Likert Scale was used in rating the responses of the respondents. Secondary data on the other hand was accessed from published documents including financial statements, annual reports, statistical data and journals. This enabled to get abstract and empirical contextual information related to the study topic. Data collection was taken up once the recommended amendments by the panel have been made. A letter of approval to collect data was then sought from the university. Administration of the questionnaires was through drop and pick method which provides an ample time to duly fill and return questionnaires to the respondents. Follow ups were done through calls and emails to make sure there is a high response rate. Documentary analysis on the other hand was undertaken through examining the documents or records related to the subject topic. The researcher analyzed various documents as deemed necessary to this study.

Two different types of data analyses were carried out which are the quantitative and qualitative data analysis methodologies. Coding and summary of the data was aided by SPSS version 21. Percentages as well as frequency tables were tabulated as descriptive statistics. Descriptive statistics assisted in the determination of respondent's views and opinions on every variable. Qualitative data was analysed using content analysis into meaningful, precise and comprehensive statements and presented in quotations. Findings were presented by use of figures and tables. The study adopted a linear regression equation in determining the relationship between the study variables.

## 8. Regression Analysis

The regression analysis was used to the effect of internal control measures on performance of IGUs in selected public universities in Kenya. The regression model results obtained are shown by Table 1.

**Table 1 Regression analysis results on effect of internal control measures on performance of IGUs**

| R     | Model Summary |                   |                            |
|-------|---------------|-------------------|----------------------------|
|       | R Square      | Adjusted R Square | Std. Error of the Estimate |
| .537a | 0.288         | 0.277             | 0.35706                    |

| ANOVA(b)                  |                             |            |                           |       |       |
|---------------------------|-----------------------------|------------|---------------------------|-------|-------|
|                           | Sum of Squares              | Df         | Mean Square               | F     | Sig.  |
| Regression                | 3.151                       | 1          | 3.151                     | 24.71 | .000a |
| Residual                  | 7.777                       | 61         | 0.127                     |       |       |
| Total                     | 10.929                      | 62         |                           |       |       |
| Coefficients(a)           |                             |            |                           |       |       |
|                           | Unstandardized Coefficients |            | Standardized Coefficients |       |       |
|                           | B                           | Std. Error | Beta                      | t     | Sig.  |
| (Constant)                | 1.299                       | 0.593      |                           | 2.191 | 0.032 |
| Internal Control Measures | 0.68                        | 0.137      | 0.537                     | 4.972 | 0.000 |

a. Predictors: (Constant), Internal Control Measures

b. Dependent Variable: Performance of IGUs

**Source: Survey Data (2019)**

The results of the regression analysis statistics as shown by Table 1 reveal that Internal Control Measures contribute to 28.8% ( $R^2=0.288$ ) of the variation of the performance of IGUs. This further implies that 81.2% variation of the IGUs performance is accounted by other factors other than Internal Control Measures. The test of variance results also show that the model,  $F_{(1,61)} = 24.718$ ,  $P < .001$  was valid for further analysis. This means that the Internal Control Measures have a positive contribution to variation in performance of the IGUs. The model coefficient ( $B=0.68$ ,  $P=0.0$ ) imply that Internal Control Measures have a positive and significant effect on performance of IGUs. Therefore a unit increase in the Internal Control Measures will result in a unit increase in the performance of IGUs. The same positive effect was obtained by Nyakundi, Nyamita, and Tinega, (2014) who studied the effect of internal control systems on financial performance of small and medium scale business enterprises in Kisumu City, Kenya. Similarly, Tunji, (2013) also obtained similar findings on their study on effective internal controls system as antidote for distress in the banking industry in Nigeria.

The regression analysis was used to the effect of internal audit measures on performance of IGUs in selected public universities in Kenya. The regression model results obtained are shown by Table 2.

**Table 2 Regression analysis results on effect of internal audit measures on performance of IGUs**

| Model Summary |                |                   |                            |       |       |
|---------------|----------------|-------------------|----------------------------|-------|-------|
| R             | R Square       | Adjusted R Square | Std. Error of the Estimate |       |       |
| .490a         | 0.24           | 0.227             | 0.36907                    |       |       |
| ANOVA(b)      |                |                   |                            |       |       |
|               | Sum of Squares | Df                | Mean Square                | F     | Sig.  |
| Regression    | 2.619          | 1                 | 2.619                      | 19.23 | .000a |
| Residual      | 8.309          | 61                | 0.136                      |       |       |
| Total         | 10.929         | 62                |                            |       |       |

|                          | Coefficients(a)             |            |                           |       |       |
|--------------------------|-----------------------------|------------|---------------------------|-------|-------|
|                          | Unstandardized Coefficients |            | Standardized Coefficients |       |       |
|                          | B                           | Std. Error | Beta                      | t     | Sig.  |
| (Constant)               | 1.384                       | 0.653      |                           | 2.121 | 0.038 |
| Internal Audit Practices | 0.67                        | 0.153      | 0.49                      | 4.385 | 0.000 |

a. Predictors: (Constant), Internal Audit Practices

b. Dependent Variable: Performance of IGUs

**Source: Survey Data (2019)**

The results of the regression analysis as shown by Table 2 reveal that Internal Audit Practices contribute to 24% ( $R^2=0.24$ ) of the variation of the performance of IGUs. This further implies that 76% variation of the IGUs performance is accounted by other factors other than Internal Audit Practices. The test of variance results also show that the model,  $F_{(1,61)} = 19.23$ ,  $P < .001$  was valid for further analysis. This means that the Internal Audit Practices have a positive contribution to variation in performance of the IGUs. The model coefficient ( $B=0.67$ ,  $P=0.0$ ) imply that Internal Audit Practices have a positive and significant effect on performance of IGUs. Therefore a unit increase in the Internal Audit Practices will result in a unit increase in the performance of IGUs. In a similar manner, Amudo, and Inanga (2009) established the same positive relationship in their study on Evaluation of Internal Control Systems: A case study from Uganda. Wainaina, (2011). Who did an Evaluation of the Internal Control Function also established a significant positive relationship. However, Olumbe (2012) studied internal control systems and found that IGUs were underperforming.

The regression analysis was used to the effect of credit policies on performance of IGUs in selected public universities in Kenya. The regression model results obtained are shown by Table 3.

**Table 3 Regression analysis results on effect of credit policies on performance of IGUs**

| Model Summary   |                             |                   |                            |       |       |  |
|-----------------|-----------------------------|-------------------|----------------------------|-------|-------|--|
| R               | R Square                    | Adjusted R Square | Std. Error of the Estimate |       |       |  |
| .346a           | 0.12                        | 0.105             | 0.39717                    |       |       |  |
| ANOVA(b)        |                             |                   |                            |       |       |  |
|                 | Sum of Squares              | df                | Mean Square                | F     | Sig.  |  |
| Regression      | 1.306                       | 1                 | 1.306                      | 8.282 | .006a |  |
| Residual        | 9.622                       | 61                | 0.158                      |       |       |  |
| Total           | 10.929                      | 62                |                            |       |       |  |
| Coefficients(a) |                             |                   |                            |       |       |  |
|                 | Unstandardized Coefficients |                   | Standardized Coefficients  |       |       |  |
|                 | B                           | Std. Error        | Beta                       | t     | Sig.  |  |
| (Constant)      | 2.454                       | 0.622             |                            | 3.947 | 0.000 |  |
| Credit Policies | 0.438                       | 0.152             | 0.346                      | 2.878 | 0.006 |  |

a. Predictors: (Constant), Credit Policies

b. Dependent Variable: Performance of IGUs

**Source: Survey Data (2019)**

As shown by Table 3, indicate that the Credit Policies contribute to 12% ( $R^2=0.12$ ) of the variation of the performance of IGUs. This further implies that 88% variation of the IGUs performance is accounted by other factors other than risk management practices. The test of variance results also show that the model,  $F_{(1,61)} = 8.282$ ,  $P < .001$  was valid for further analysis. This means that the credit policies have a minimal but positive contribution to variation in performance of the IGUs. The model coefficient ( $B=0.438$ ,  $P=0.006$ ) imply that credit policies have a positive and significant effect on performance of IGUs. Therefore a unit increase in the credit policies will result in a unit increase in the performance of IGUs. This concurs with Anthony, Robert, and Kennedy, (2015) who conducted a similar study focusing on Micro Finance Institutions in Kenya. Similarly, Otieno, and Nyagol (2016) also acknowledged that coordination of credit policies functions in bank highly influenced its financial performance.

The regression analysis was used to the effect of risk management practices on performance of IGUs in selected public universities in Kenya. The regression model results obtained are shown by Table 4.

**Table 4 Regression analysis results on effect of Risk Management Practices on performance of IGUs**

| Model Summary             |                               |                   |                                |       |       |       |
|---------------------------|-------------------------------|-------------------|--------------------------------|-------|-------|-------|
| R                         | R Square                      | Adjusted R Square | Std. Error of the Estimate     |       |       |       |
| .478a                     | 0.228                         | 0.216             | 0.37181                        |       |       |       |
| ANOVA(b)                  |                               |                   |                                |       |       |       |
|                           | Sum of Squares                | Df                | Mean Square                    | F     | Sig.  |       |
| Regression                | 2.496                         | 1                 | 2.496                          | 18.05 | 2     | .000a |
| Residual                  | 8.433                         | 61                | 0.138                          |       |       |       |
| Total                     | 10.929                        | 62                |                                |       |       |       |
| Coefficients(a)           |                               |                   |                                |       |       |       |
|                           | Unstandardized Coefficients B | Std. Error        | Standardized Coefficients Beta | t     | Sig.  |       |
| (Constant)                | 1.828                         | 0.569             |                                | 3.213 | 0.002 |       |
| Risk Management Practices | 0.57                          | 0.134             | 0.478                          | 4.249 | 0.000 |       |

a. Predictors: (Constant), Risk Management Practices

b. Dependent Variable: Performance of IGUs

**Source: Survey Data (2019)**

The results of the regression analysis statistics as shown by Table 4.15, indicate that the Risk Management Strategies contribute to 22.8% ( $R^2=0.228$ ) of the variation of the performance of IGUs. This further implies that 77.2% variation of the IGUs performance is accounted by other factors other than risk management practices. The test of variance results also show that the model,  $F_{(1,61)} = 18.052$ ,  $P < .001$  was valid for further analysis. This means that the risk management strategy is a good predictor of variation in performance of the IGUs hence able to significantly explain changes in the performance at any particular time. The model coefficient ( $B=0.57$ ,  $P=0.000$ ) imply that risk management practices have a positive and significant effect on performance of IGUs. Therefore a unit increase in the risk management practice will result in a unit increase in the performance of IGUs.

In a similar way, Collier, Berry, and Burke, (2004) and Williamson (2004) found out that proper risk management practices positively influenced performance. Fan, and Yijun, (2014) also established the same positive relationship on their study on the Impact of Credit Risk Assessment on Profitability of Commercial Banks.

The regression analysis was used to the effect of Financial Control Mechanisms on performance of IGUs in selected public universities in Kenya. The regression model results obtained are shown by Table 5.

**Table 5 Regression analysis results on effect of Financial Control Mechanisms on performance of IGUs**

| R                         | R Square                    | Adjusted R Square | Std. Error of the Estimate |        |       |
|---------------------------|-----------------------------|-------------------|----------------------------|--------|-------|
| .686a                     | 0.47                        | 0.434             | 0.31599                    |        |       |
| ANOVA(b)                  |                             |                   |                            |        |       |
|                           | Sum of Squares              | Df                | Mean Square                | F      | Sig.  |
| Regression                | 5.137                       | 4                 | 1.284                      | 12.863 | .000a |
| Residual                  | 5.791                       | 58                | 0.1                        |        |       |
| Total                     | 10.929                      | 62                |                            |        |       |
| Coefficients(a)           |                             |                   |                            |        |       |
|                           | Unstandardized Coefficients |                   | Standardized Coefficients  |        |       |
|                           | B                           | Std. Error        | Beta                       | t      | Sig.  |
| (Constant)                | -0.652                      | 0.707             |                            | -0.923 | 0.36  |
| Internal Control Measures | 0.494                       | 0.143             | 0.39                       | 3.456  | 0.001 |
| Internal Audit Practices  | 0.458                       | 0.16              | 0.334                      | 2.864  | 0.006 |
| Credit Policies           | -0.182                      | 0.16              | -0.143                     | -1.136 | 0.261 |
| Risk Management Practices | 0.366                       | 0.124             | 0.307                      | 2.946  | 0.005 |

a. Predictors: (Constant), Risk Management Practices, Internal Audit Practices, Internal Control Measures, Credit Policies

b. Dependent Variable: Performance of IGUs

**Source: Survey Data (2019)**

The results of the regression analysis statistics as shown indicate that the financial Control mechanisms studied contributed to 47% ( $R^2=0.47$ ) of the variation of the performance of IGUs. This further implies that 53% variation of the IGUs performance is accounted by factors not included in the model. The test of variance results also show that the model,  $F_{(4,58)} = 12.863$ ,  $P < .001$  was valid for further analysis. This means that the independent variables are a good predictor of variations in performance of the IGUs hence able to significantly explain changes in the performance at any particular time. The model coefficients further showed that all the variables except Credit Policies have a significant positive effect on IGUs performance on the selected public university. The same positive effect coincides with Kituku, (2010) who studied factors affecting financial sustainability of income generating activities in Non-Governmental Organizations in Kenya a case study of Compassion International Kenya and found out that improper finance management resulted in poor performance of the IGUs.



## 9. Conclusion

According to the study findings obtained under the analysis of the collected data, the researcher makes several conclusions with respect to the research objectives as the data was collected. The study found out that the financial control mechanisms investigated namely internal audit, internal control measures, risk management strategies and credit policies have a significant positive effect on the performance of IGUs. The study thus concludes that internal audit functions ensure that the operations and employees in the IGUs are both efficient and transparent. The study concludes that internal controls are imperative in ensuring that the records in the IGUs are accurate and complete. This is attributed by the fact that through internal controls, proper documentations in practiced thus minimizing any forms of fraud or malpractices translating to improved performance of the IGUs. The study also concludes for the IGUs to attain and maintain a conducive internal environment, the internal control systems must be well suited to meet the execute duties.

The study also concludes proper risk management strategies will translate to improved performance of the IGUs. This is largely because the risk management strategies provide a sense of assurance of the continued prosperity of the IGUs even in the occurrence of risks. As such, the organizations will be able to detect the impending risk before they occur as well as minimize the possible losses. The study further concludes that adequate credit policies are essential in prevention of default debts and loss of revenue. Therefore the credit policies ought to be properly developed to ensure lending only to credit worthy customers and collection of debts. On the overall relationship between financial control mechanisms and IGUs performance, the study found a strong positive relationship. The study concludes that the current performance of the IGUs in the public university is largely accounted for by the implemented financial control measures. Therefore effective financial control mechanisms is concluded to lead to better IGU performance whereas shortcomings in the financial control mechanisms is concluded to lead to diminished returns in the IGUs. The importance of financial control on performance is supported by Ngari, (2017) who found out segregation of duties, authorization and internal audit functions affect financial performance significantly. Similarly, Muraleetharan (2012) also found out that there was a positive and significant relationship between internal control and organizational performance.

## 10. Recommendations

The main intent of the study was to establish the effect of financial control mechanisms on the performance of IGUs in selected public universities. The findings obtained from the study revealed that financial control mechanisms adopted in the public universities have a significant positive impact on how the IGUs performed. The study therefore recommends that the management in charge of the IGU department in the public universities to highly prioritize the formulation, implementation and monitoring of financial control mechanisms in the IGUs. As such, they such ensure that appropriate infrastructure, resources and budgetary allocations to support good financial control mechanisms. This will ensure that transparency and accountability is maintained in the IGUs translating to improved performance. To facilitate effective financial controls, the study recommends that the management especially those in the audit section to conduct regular checks and inspections on the IGUs. This will act to assure that the IGUs are operated under the required standards of operations through constant monitoring and evaluation. Additionally, external audit personnel are recommended to be hired to offer additional assurance to the internal control systems on the cost effective and efficiency of the IGUs whilst minimizing

any forms of internal biasness. Additionally, all managers in the public university are recommended to ensure that there are adequate internal control activities that safeguard the assets of the IGUs from misuse and frauds.

The study also recommends the public universities to adopt more aggressive risk management strategies. This is attributed to the increased volatility and competition facing the universities making them more vulnerable to external risks. The risk management strategies recommended by the study include using physical standards, trainings, techniques and tools to either prevent the perceived consequences or risks and manage or reduce risks upon their occurrences hence safeguarding the IGUs from immense losses. The study further recommended the management of public universities to ensure that the IGUs have strong internal control environment with adequate policies and procedures. The study recommends that regulatory bodies such as government through the ministry of education to ensure that public universities adopt appropriate financial control measures in their IGUs. They should also ensure that the IGUs in the universities are allocated with adequate funds and resources to ensure proper implementation of these financial control mechanisms. The regulatory bodies are also recommended to conduct random and regular audits or inspections in the public universities to check whether their IGUs operate within the required financial standards. Additionally, frequent reforms are recommended to address the shortcomings experienced in integrating financial control measures in IGUs. The study also recommends policies in the IGUs such as collection policies on loans and other financial control strategies to be well designed and implemented so that they are cost effective and productive. The collection of credit strategies should be adequately tested so as to ensure that there is minimal loss of revenue. The study further recommends benchmarking practices to be undertaken in universities which have been able to implement effective IGU policies. This will facilitate shielding the IGUs in the public universities from avoidable defaults and risks.

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