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DETERMINANTS OF FINANCIAL PERFORMANCE OF INCOME GENERATION UNITS AMONG PUBLIC UNIVERSITIES: CASE STUDY OF JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY ENTERPRISES LIMITED

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Abstract

One of the major challenges facing public institutions is low funding. Public universities operate financially mainly through revenue allocation from the Government. Apparently, these universities have more needs than the revenue allocations they receive hence the universities have in most cases experienced deficit between the actual budgetary allocation and the forecasted budget. Due to this deficit, universities have gone ahead and introduced Income Generating Units (IGUs) to help mitigate and supplement the revenue allocation by Government. Some of the established IGUs have had a good performance than others. It is not clear what factors causes differences in financial performance between these units hence this study sought to determine the factors that affect the financial performance of these Income Generating Units in public universities and specifically a case study of JKUATES. This project outlines four main objectives, which were to determine the effect of liquidity, internal controls, operation cost and unit structure on financial performance of these units. The study found a significant negative relationship between operating costs but a significant positive relationship between internal controls and financial performance of IGUs in public universities in Kenya. However, the study found an insignificant relationship between liquidity, unit structure and financial performance of IGUs in public universities in Kenya. The study concluded that only operating costs and internal controls significantly influence income-generating units in public universities in Kenya. The study recommended that the management of income generating units in public universities in Kenya should manage their operating costs effectively to ensure that they do not affect their organizations financial performance adversely.

Keywords: *public institutions, budgetary allocation, revenue allocation, Income Generating Units, operating costs*

1.1 Background of the Study

Funding Universities throughout the world has witnessed dramatic challenges in the last decade of the 20th and the first decade of the 21st centuries. These changes are responses to a worldwide phenomenon of rising costs of University education in excess of the corresponding rates of increase of available revenues. In order to cope with government funding reductions, Universities worldwide now generate additional sources of funds Murage & Onyuma (2015). Universities funding shortfalls has been the norm for many years as enrollments have increased more quickly than the government's capacity to maintain its proportional financial support. Because government funding is insufficient to maintain institutional performance in teaching and research, Kenyan Universities, just like other Universities elsewhere in the world have sought to supplement their public funding with locally generated incomes.

Most African higher education institutions rely greatly on the state for funding as well as for policy-making as far as the public sector are concerned. However, most states do not apportion a sufficient amount of their financial resources to the education sector. From the little provision that is made for education, the greater portion is assigned to basic and secondary education Bindslev, (2006). Odalo, (2015), the inadequate funding of the Universities and other tertiary institutions has had calamitous effect on teaching and research and universities themselves have been forced to embark on income generating projects in order to source for funds. Therefore, the available revenue is spent on capital projects, administration, teaching and research and students welfare. Capital projects and salaries reportedly take a bulk of the total revenue while teaching and students 'welfare tend to be given less priority.

Like most African countries, higher education in Kenya was historically free, with public purse covering both tuition and living expenses. The rationale for higher free education was based, among other things, on the country's desire to create highly trained manpower that could replace the departing colonial administrators. In return, graduates were bound to work in the public sector for a minimum of three years Murage & Onyuma, (2015).

The total government expenditure on education has increased from Ksh.81 billion in 2004/05 to Ksh.106 billion in 2008/09 fiscal year Ministry of Finance, (2012). In 2011/2012 budget, education sector took up to Ksh.149.4 billion of the total National budget and this was increased to Ksh.233.1billion in the following 2012/2013 fiscal year Ministry of Finance, (2012). In 2004, for example, the Republic of Kenya decreased the education budget from 37 percent of its total annual recurrent budget to about 30% stating that it was not possible to allocate additional funding to higher education Muya, (2013). This short fall in public budget for higher education brought about the impetus for institutions to look for alternative income generating sources, in effect, reducing their over-dependence on the government budget.

JKUAT Enterprises is a limited company fully owned by JKUAT. It was incorporated in the year 2002 According to JKUATES articles of association, (2002). The idea behind its incorporation was to help the university commercialize its innovations. At its inception, the enterprise comprised of a single income generation unit together with administration section. This single unit used to do all income generation activities for the enterprise. In the year 2004, four income generating Units were established as divisions. These were products division, ICT division, EDC Division, and consultancy division.

The administration division remained separately as it acts to support and facilitate all the income generation units. The products and ICT divisions have different sections which make up the divisions. Under products division, there is Institute of Biotechnology section which produces tissue culture bananas and other organic products like aloe vera and vegetables, Horticulture section which produces assorted fruit seedlings. The ICT division has three sections within it namely: the short courses section, corporate training section and the support staff section. The Consultancy and EDC divisions are all single units with no sections within them.

1.1 Statement of the Problem

Income Generating Activities in Public Universities were created to alleviate financial difficulties in these institutions Murage & Onyuma, (2015). However, Public Universities especially in developing countries continue to suffer from various financial problems including but not limited to debt accumulation and inability to promptly pay suppliers of goods and services; inability to make timely purchases of project inputs; delay in payment of salaries Tsuma & Mugambi, (2014). Additionally, it is not clear how the aforesaid variables can play part in impacting differences in the financial performance of these units but evident is the fact that whereas some IGUs have been recording good performance, others have been performing poorly as demonstrated under JKUAT Units' performance table 1.1.

Several researches have been done on Income Generating Units (IGUs). 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. In Kenya, Odingo (2010) did factors affecting sustainability of income generating activities among women in Nyando division and found out that factors like leverage, age, ownership structure and liquidity each affects financial performance of those IGAs. Mahonja, (2010) did research on factors influencing adoption of income generating activities in public secondary schools in Kakamega East District and found out that leverage negatively affected financial performance while liquidity positively affects financial performance. 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 factors like liquidity, age and size of the units positively affected financial performance positively.

Following the above researches, no research has ever been done on the factors influencing the financial performance of IGUs in public universities and with combination of the variables used this study. This research therefore seeks to fill this gap by highlighting how several factors influence financial performance among income generating units in public universities a case study of JKUATES. The study will address the following question: which factors influence financial performance of Income Generating Units among public universities enterprises and to what level?

1.3 Objectives of the Study

The general objective of the study is to evaluate the factors affecting the financial performance of IGUs among public universities with focus to JKUATES.

The study will concentrate on the following specific objectives:

i. To evaluate how liquidity affects the financial performance of IGUs.

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ii. To analyze how operation cost affects financial performance of IGUs.

iii. To investigate how internal controls affects financial performance of IGUs.

iv. To assess how unit structure affects financial performance of IGUs.

LITERATURE REVIEW

2.1 Theoretical Literature Review

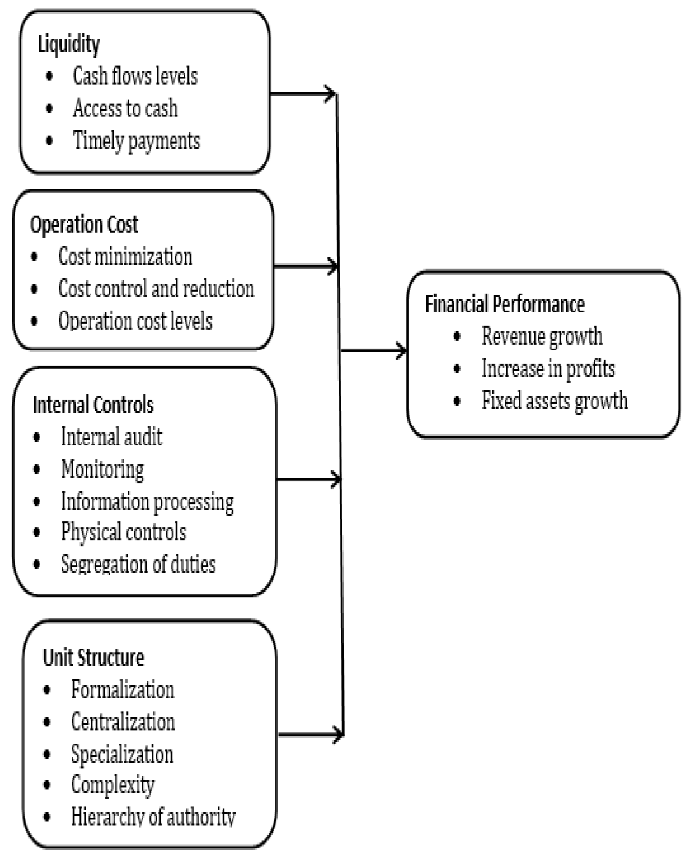
Theories provide a generalized explanation to an occurrence. Therefore, this study was guided by the Liquidity Preference Theory, Transaction Cost Theory and Theory of the Firm.

2.2 Conceptual Framework

The conceptual framework is a setoff broad ideas and principles taken from relevant fields of enquiry and used to structure the subsequent presentation of objectives.

Independent Variables **Dependent Variable**

Figure 1: Conceptual Framework



2.2.1 Financial Performance

Financial performance refers to the act of performing financial activity. In broader sense, financial performance refers to the degree to which financial objectives being or has been accomplished Dufera, (2010). Company performance is very essential to management as it is an outcome, which has been achieved by an individual, or a group of individuals in an organization related to its authority and responsibility in achieving the goal legally, not against the law, and conforming to the morale and ethic. Performance is the function of the ability of an organization to gain and manage the resources in several different ways to develop competitive advantage Mutuaruchiu, (2010). Financial performance is used to measure firm's overall financial health over a given period of time and can also be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. The financial performance analysis identifies the financial strengths and weaknesses of the firm by properly establishing relationships between the items of the balance sheet and profit and loss account Dufera, (2010).

2.2.2 Liquidity

According to Muya (2013), Liquidity is the term used to describe how easy it is to convert assets to cash. The most liquid asset, and what everything else is compared to, is cash. This is because it can always be used easily and immediately. Liquidity is important for both individuals and companies. While a person may be rich in terms of total value of assets owned, that person may also end up in trouble if he or she is unable to convert those assets into cash. The same holds true for companies Odingo, (2010). Without cash coming in the door, they can quickly get into trouble with their creditors. According to Kinyua (2016), Banks are important for both groups, providing financial intermediation between those who need cash and those who can offer it, thus keeping the cash flowing. An understanding of the liquidity of a company's stock within the market helps investors judge when to buy or sell shares. According to Muya (2013), Cash is a company's lifeblood. In other words, a company can sell lots of widgets and have good net earnings, but if it can't collect the actual cash from its customers on a timely basis, it will soon fold up, unable to pay its own obligations.

2.2.3 Operation Costs

Operating costs are the expenses, which are related to the operation of a business, or to the operation of a device, component, piece of equipment or facility. They are the cost of resources used by an organization just to maintain its existence. There is a relentless pressure on chief executive officers of companies to generate more profit to the shareholders in terms of earnings per share. Meanwhile, ongoing economic challenges in the post-recession landscape have prompted most companies to seek various ways to trim their operating costs Kinyua, (2016). Though profitability concerns worldwide appear to be genuine, a solution that lies in cost cutting measures is rather simplistic. This is because cost is not the only cause of loss of income Nielsen (2015). There is also concern for growth and how it can be optimized in a cost cutting scenario. Taking for instance during a retrenchment exercise, a company can easily lose skilled staff and this can itself lead to a drop-in revenue. According to Nielsen (2015) poor expenses management is one of the contributors of poor profitability.

2.2.4 Internal controls

According to Odingo, (2010) internal controls refer to the measures instituted by an organization so as to ensure attainment of the entity's objectives, goals and missions. They are systems of policies and procedures that protect the assets of an organization, create reliable financial reporting, promote compliance with laws and regulations and achieve effective and efficient operations. These systems are not only related to accounting and reporting but also relate to the organizations communication processes, internally and externally, and include procedures for: -handling funds received and expended by the organization, preparing appropriate and timely financial reporting to board members and officers, conducting the annual audit of the organization's financial statements, maintaining inventory records of real and other properties and their whereabouts.

An organization's system of internal control has a key role in the management of risks that are significant to the fulfillment of its business objectives. A sound system of internal control contributes to safeguarding the shareholders' investment and the company's assets. Internal control facilitates the effectiveness and efficiency of operations, helps ensure the reliability of internal and external reporting and assists compliance with laws and regulations (Sanghani, (2014). A company's objectives, its internal organization and the environment in which it operates are continually evolving and, as a result, the risks it faces are continually changing. A sound system of internal control therefore depends on a thorough and regular evaluation of the nature and extent of the risks to which the company is exposed. Since profits are in part the reward for successful risk.

2.3 Empirical Review

Okpara, (2010) did a study on income generating activities in public universities: The study investigated the role liquidity play in influencing financial performance. Through his regression analysis on the correlation between liquidity and financial performance, he found out that firms with more cash had their investment plans boosted by greater access to credit lines. That relation was reversed for firms with little or no access to credit lines. He reports that liquidity positively impacts financial performance.

According to Awino (2015), based on his research on effect of capital structure on firms performance: He found out that a unit increase in liquidity will lead to increase in 0.113 in the financial performance measured as ROA. From his study findings, Liquidity has a positive and significant effect on financial performance and rejects the hypothesis-H0: Liquidity does not affect financial performance of listed non-financial firms in Kenya and conclude that liquidity affects the financial performance of the firm.

A study carried out by Awino (2015) investigated the existence and adequacy of implemented security controls of computerized accounting information systems in the Saudi banking sector. The results of study revealed that the vast majority of Saudi banks have adequate security controls in place and that these controls have a significant influence on banks performance in the banking sector. Their results also could be used to enable bank managers and practitioners to better secure their computerized accounting information systems and to champion the security of information technology for the success of their banks.

Mohamed, (2017) study on his study on factors affecting financial performance of income generating units among universities in Puntland state of Somalia: the case puntland state university (PSU), the second objective sought to find out the effect of internal control systems on the performance of the income generating units in Universities in the Puntland State of Somalia. The finding from the regression model shows that internal control systems have a positive effect on financial performance. The study concludes that internal controls have a positive effect on performance of income generating units among Universities in Puntland State of Somalia.

Raviv, (2015) in his study on organization structure impact on its performance commerce Essayargue that the OS performs a significant role in the achievement of organizations set objectives and accomplishment of its strategic goals and direction. Organization's structure becomes more relevant when it is in harmony with the objective mission, competitive environment and resources of the organization. They believe "One cap fits all" is non-existence in an organizational structure design as no two firms are entirely similar and as such faces different challenges from its environment.

Awino, (2015) organizational structure and performance of large manufacturing firms in Kenya: An empirical Investigation study on impact of organizational structure and strategies on construction organizations performance, found that organization structure has no direct impact on both financial and non-financial performance.

2.4 Research Gaps

Based on the literature presented by other researchers, the studies have not been fully exhaustive to meet the need of public universities. Most public universities are still facing challenges as to what factors underpin the financial performance of the established IGUs. In these areas since most of the studies identified have been looking at factors generally affecting income-generating units in organizations. The researcher took time to explore the issues relating particularly to public universities.

RESEARCH METHODOLOGY

3.1 Research Design

This study adopted a descriptive research design. A descriptive research aims at providing an accurate and valid representation of the factors or variables that pertain or are relevant to the research question. The population of the data source for this study was made-up of all the employees and management of JKUATES. This population was structured as follows: 3 Top managers, 4 units heads, 14 supervisors and 97staff in the respective income generating units. The study used a census technique method whereby data from all the managers, unit heads, supervisors and other employees was gathered and analyzed. The collected data was analyzed using multiple linear regression which was used to draw inferences by establishing the relationship between the dependent and the independent variables.

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

The study carried out a census of the 118 respondents who included all the managers, unit heads, supervisors and other employees. As such, complete data was obtained from all the respondents hence a 100% response rate.

4.2 Regression Analysis

Regression analysis was used to establish the relationship between the dependent and the independent variables. The regression analysis results comprised of the model summary, Analysis of Variance (ANOVA) and the summary of regression coefficients. The regression equation took the following form

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

Y = Financial Performance

X_1= Liquidity

X_2= Operating costs

X_3 = Internal Controls

X_4= Unit structure

β_0 = Constant

β_1 - β_4 = Regression coefficients

ε = Probable error

4.2.1 Model Summary

Table 4.1 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.360a	.130	.099	.76248

a. Predictors: (Constant), Unit structure, Operation costs, Internal controls, Liquidity

The model summary results on table 4.1 show the R square value is 0.13, which indicates that the independent variables (unit structure, operation costs, internal controls and liquidity explain 13% of the variation in financial performance of IGUs in public universities. The other 87% is explained by other factors not considered by the study and the error term.

4.2.2 Analysis of Variance (ANOVA)

Table 4.2 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	9.794	4	2.448	4.211	.003b
1	Residual	65.696	113	.581		
	Total	75.490	117			

a. Dependent Variable: Financial performance

b. Predictors: (Constant), Unit structure, Operation costs, Internal controls, Liquidity

The ANOVA results on table 4.2 show that the F value is 4.211 and the significance value is 0.003<0.005 which indicates that the model is significant a good predictor.

4.2.3 Regression Coefficients

Table 4.3 Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	1.696	.562		3.016	.003
	Liquidity	.014	.121	.010	.112	.911
1	Operation costs	-.292	.132	-.194	-2.201	.030
	Internal controls	.366	.120	.268	3.043	.003
	Unit structure	.130	.127	.091	1.026	.307

a. Dependent Variable: Financial performance

The results on table 4.3 show that there is a significant negative relationship between operating costs and financial performance. This implies that operating cost significantly influence the financial performance of IGUs in public universities. This implies that internal controls significantly influence the financial performance of IGUs in public universities. Similarly, Mohamed, (2017) found that internal controls have a positive effect on performance of income generating units among Universities in Puntland State of Somalia.

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary of Findings

Correlation analysis results found that there was a weak negative correlation between liquidity financial performance of IGUs in public universities. The results of regression analysis found that there is an insignificant positive relationship between liquidity and financial performance of IGUs in public universities in Kenya. The results also found out that there was a weak negative correlation between operation costs and financial performance of IGUs in public universities. The results of regression analysis found that there is a significant negative relationship between operating costs and financial performance of IGUs in public universities in Kenya. Correlation analysis results found that there was a weak positive relationship between internal controls and financial performance of IGUs in public universities. The results of regression analysis found that there is a significant positive relationship between internal controls and financial performance of IGUs in public universities in Kenya. Additionally, the study found a week positive correlation between unit structure and financial performance of IGUs in public universities in Kenya. Further, the study found an insignificant positive relationship between unit structure and financial performance of IGUs in public universities in Kenya.

5.2 Conclusion

The findings of the study found that there is an insignificant positive relationship between liquidity and financial performance of IGUs in public universities in Kenya. Based on the finding, the study concludes that liquidity levels do not influence the financial performance of income generating units in public universities in Kenya. Thus, liquidity plays no role in financial performance of IGUs in public universities in Kenya. The study also found a significant negative relationship between operating costs and financial performance of IGUs in public universities in Kenya. This leads to the conclusion that operating cost significantly influence financial performance income generating units in public universities in Kenya.

The study also found that there is a significant positive relationship between internal controls and financial performance of IGUs in public universities in Kenya. Based on this finding, the study concludes that internal control has a direct influence on financial performance of income generating units in public universities in Kenya. Finally, the study found that there was an insignificant positive relationship between unit structure and financial performance of IGUs in public universities in Kenya. The study therefore concludes that unit structure does not affect the financial performance of income generating units in public universities in Kenya.

5.3 Recommendations

The study has concluded that liquidity levels do not influence the financial performance of income generating units in public universities in Kenya. However, the study recommends that IGUs in public universities in Kenya should maintain adequate liquidity levels to meet the current needs as and when they fall due. The study also concluded that operating cost significantly influence financial performance income generating units in public universities in Kenya. The study therefore, recommends that the management of income generating units in public universities in Kenya should manage their operating costs effectively to ensure that they do not affect their organizations financial performance adversely. The study further concluded that internal control has a direct influence on financial performance of income generating units in public universities in Kenya. Therefore, the study recommends that the management of income generating units in public universities in Kenya should set up strong internal controls to ensure they safeguard assets, which are used for production purposes and for income generation. Finally, the study concluded that the unit structure does not affect the financial performance of income generating units in public universities in Kenya. However, the study recommends that the management of income generating units in public universities in Kenya should come up with organizational structures, which would ensure their units function in an efficient manner.

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