EFFECT OF FINANCIAL INVESTMENT STRATEGIES ON THE FINANCIAL SUSTAINABILITY OF UNIVERSITIES IN KENYA

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ABSTRACT

This study assessed the effect of financial investment strategies on the financial sustainability of universities in Kenya. The specific objectives were to establish and critically evaluate the effect of the following two strategies of investments on the financial sustainability of universities in Kenya: investment strategy and consultancy strategy. Descriptive and cross-sectional co-relational survey design was used. Study population comprised of all 71 universities in Kenya; the study targeted 142 respondents consisting of 71 DVCs in charge of finance and 71 Finance Officers from each university. Findings from the descriptive analysis indicated that with

regard to investment strategies, the fact that universities had invested in real estate ranked the highest (M = 4.69, SD = 0.4641), while the idea that universities had invested in catering services ranked the least (M = 3.55, SD = 0.8041). Consultancy had the highest mean of (M = 3.6, SD = 0.9382) for the idea that universities had specialized experts in different fields. Study findings therefore provide crucial insights as to the need to embrace various resource strategies for resource mobilisation to boost the financial sustainability of universities in Kenya.

Key Words: *financial investment strategies, financial sustainability, investment strategy, consultancy strategy*

INTRODUCTION

Financial sustainability of institutions is an important parameter in evaluating their ability to survive any turbulence in their operating environment. On the global front, a number of studies have been conducted on resource mobilisation and their effect on the overall performance of firms. For instance, Abbas et al. (2013) examined the determinants significantly affecting a firm's financial performance in the textile sector of Pakistan between 2005 and 2010. The findings indicated the financial performance is a function of a number of variables. These variables however, varied from one organisation to another. The manner in which each organisation dealt with the various determinants of financial performance had a great impact on the overall financial results posted.

Kenyan government's priority to universities in terms of funding has declined and this has limited the ability of the public universities to effectively and efficiently perform their duties, particularly the traditional roles of teaching and research (Archuleta, Dale & Spann, 2013). Public universities in Kenya had to innovate in order to cope with increased competition and diminishing capitation. Since 1990, public universities have continued to receive reduced financial allocations from the government than their estimated expenditure. This has resulted to the accumulation of debts, delayed payments to suppliers and service providers, among others. According to a report of Ministerial Public Expenditure Review in 2005, there was a strong indication that the government was no longer able to fully finance public universities (GoK, 2005).

Funding shortfalls in public universities has been the norm for many years because enrolments have increased faster than the government's capacity to maintain its proportional financial support. Because government funding is insufficient to maintain institutional sustainability in teaching and research, income-generating activities in public universities were created in order to alleviate financial difficulties in these institutions.

However, it is evident that public universities, 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 and implementation of Collective Bargaining Agreements; limited number of academic field courses and academic conferences; curtailment in purchase of books; and reduction of research grants, among others. In fact, income generation measures that have been introduced in public universities over the years, only offset a fraction of the huge financial burden facing the universities. Kenyan public universities, just like other public universities elsewhere in the world have sought to supplement their public funding with locally generated incomes by adopting various resource mobilisation strategies. In view of the above, is not clear the extent to which resource mobilisation strategies can be linked to financial sustainability of public universities in Kenya (Omondi & Muturi, 2013).

The financial resources available to public universities in terms of capitation from governments have been declining across Sub-Saharan African countries (Claessens et al., 2012). Income generating units have been in operation in Kenyan universities since the 1990s. Underfunding in Kenyan universities is a consequence of the expansion of the higher education in response to the growing demand for the university education and the intensity of needs of modern economy driven by knowledge. Despite the fact that universities' core business is teaching and research the quality has fallen considerably due to inadequate financial resources. Furthermore, effects of inadequate funding are evident in the fact that the physical facilities in the universities are in a state of disrepair and several capital projects have been abandoned for years (Omondi & Muturi, 2013).

Reduced state financing of higher education in Kenya has created a funding gap that has negatively affected quality of university education as manifested in poorly trained academic staff, inadequate libraries, and overcrowded classrooms. Auditor General's report (2016) notes that a number of public universities are experiencing financial distress, a situation where cash flow is insufficient to cover universities current obligations leading to unpaid debts to suppliers, failure to make statutory deductions and delayed payments to employees, such as adjunct lecturers among others. In order to improve their financial sustainability, universities have resorted to increased tuition fees and cost recovery measures through commercialization of their activities.

The need for the universities to meet part of their costs has resulted in universities developing various strategies to mobilise resources for their financial sustainability. Despite the tremendous diversity that exists in an effort to mobilise resources, there is still a lot of financial pressure due to rising student population and costs of undertaking research, hence the challenge of designing sustainable funding models. The viability of these strategies, their effectiveness and impact have so far not been critically evaluated, hence this study. For instance, some universities have set up revenue generating streams like real estate, funeral homes, rented out properties and commercialised their services like catering and hospitality among others. But even with this, the management of funding streams is still a real challenge because of the government's funding requirements and stringent rules and regulations of public finance, which make it difficult to facilitate successful diversification. This has in turn affected the quality of graduates and the overall quality of higher education in the country. Unless this is examined and appropriate measures institutionalized, the future economic development of the country remains at stake as the competitiveness of Kenyan graduates will continue to deteriorate (Ongore & Kusa, 2013).

THEORETICAL REVIEW

Dynamic Capabilities Theory

Wheeler (2002) defines dynamic capabilities as the ability to integrate, build, and reconfigure internal and external competencies to address rapidly-changing environments. The role of dynamic capabilities is to impact on the firm's extant resource base and transforms it in such a way that anew bundle of resources is created so that the firm can sustain or enhance its competitive advantage (Ambrosini & Bowman, 2009). The concept of dynamic capabilities arose from a key shortcoming of the Resource-Based View Theory of the Firm. The RBV has been criticized for ignoring factors surrounding resources, instead assuming that they simply exist.

Considerations such as how resources are developed, how they are integrated within the firm and how they are released have been under-explored in the literature. Dynamic capabilities attempt to bridge these gaps by adopting a process approach: by acting as a buffer between firm resources and the changing business environment, dynamic resources help a firm adjust its resource mix and thereby maintain the sustainability of the firm's competitive advantage, which otherwise might be quickly eroded. So, while the RBV emphasizes resource choice or the selecting of appropriate resources, dynamic capabilities emphasize resource development and renewal.

According to Lawson and Samson (2001) resources may take on many of the attributes of dynamic capabilities, and thus may be particularly useful to firms operating in rapidly changing environments. Thus, even if IS resources do not directly lead the firm to a position of superior sustained competitive advantage, they may nonetheless be critical to the firm's longer-term competitiveness in unstable environments if they help it to develop, add, integrate, and release other key resources over time. This theory shall support the fees policy by universities on the

services rendered. Universities are established with mandates which they strive to achieve; and achieving the mandate is based on them being able to adjust to the changes and fund their missions in seeking knowledge. In theory, endeavours they create strengths in certain areas which influence student's preference and subsequent fees collected from the different course modules offered. Despite the wide usage of dynamic capabilities construct, a universally accepted definition is slow to emerge (Easterby-Smith & Peteraf, 2008). Kitenga and Thuo (2014) in the study of theoretical underpinnings of dynamic capabilities assert that perhaps a study involving all relevant theories can unravel a universal definition.

Modern Portfolio Theory

This theory was developed by Harry Markowitz in 1952 to help explain the how individual investors go about making their investments with the aim of maximizing expected returns of a given amount of portfolio risk which can also be achieved by minimizing the level of risk for a given level of investment's expected return (Shipway, 2009). This is achieved through careful selection of different proportions of various assets.

This theory is relevant for investments as it helps in guiding individual investors in optimally allocating the scarce organisational resources within an investing portfolio for optimization of investment returns. A university is a legitimate entity and hence it must make decisions on investing so as to be able to source for extra funds for its projects. The returns from the projects will supplement what the government allocates to public universities and the contribution of funds from fee charged to the students. For private universities funds to run operations is from its investment projects and fees charged and collected. Thus, this theory helps investors with key tools that they can use to estimate the expected risk and return associated with a given investment.

Investment Strategy and Financial Sustainability

Murage and Onyuma (2015) analysed the financial performance of income generating activities in public institutions of higher learning using a case of Egerton University. Secondary data was collected from financial statements from which key financial ratios were computed and used to analyse the financial performance of the income generating activities over a period of ten years. Empirical results indicated that the Module II study programmes were the most profitable income source. Furthermore, the income generating activities recorded a 15% rate of return on investment and a liquidity ratio of over three years. However, the declared surpluses did not take into account the personnel emoluments for the university staff working in the income generating activities. There is a need for public universities to maintain accurate and complete sets of financial statements for informed decision making.

Musau (2016) investigated the effect of investment decision on financial performance of savings and credit cooperatives in Kitui central sub-County. The study adopted an empirical study design for a time series data of a ten-year period from 2006-2015. The study findings indicated that replacement, renewal and, research and development decisions, positively contributed to SACCO performance as measured by dividends while expansion decisions had a negative contribution. This shows that the investment strategy adopted dictates the amount of returns an organisation gets.

Odundo and Rambo (2013) investigated the effect of school-based income generating activities on the financial performance of public secondary schools in Kenya. The study adopted the static group comparison design; which has two groups' project beneficiaries and non-beneficiaries, which are not randomly constituted. The study established that income generating activities and non-income generating activities in schools were significantly different in terms of category, student population, age, annual income and number of paid workers.

Barrow and Rouse (2016) investigated on financial incentives and educational investment: The impact of performance-based scholarships on student time use. The study used survey data from a field experiment in the U.S to test whether and how financial incentives change student behaviour. It was revealed that provision of postsecondary scholarships with incentives to meet performance, enrolment, and/or attendance benchmarks induced students to devote more time to educational activities and to increase the quality of effort toward, and engagement with, their studies; students also allocated less time to other activities such as work and leisure.

Consultancy Strategy and Financial Sustainability

Rodrigues, Wainaina and Mwangi (2006) conducted a study on income generation in public universities. The study noted that revenues from industry and commerce are becoming an important source of income for universities. These sources are gradually accounting for a larger proportion of the total income. The generation of this income, along with certain other activities, has sometimes been referred to as 'academic entrepreneurship'. The study also noted that University of Nairobi (UoN) has continued to receive reduced financial allocations from the Kenyan government than the estimated expenditure. Hence the institution has been accumulating debts over several years and this trend will continue as a result of the strong indications that the government will no longer be able to fully finance public universities. In an attempt to bridge the gap between the budgetary allocations and actual expenditures, the university established University of Nairobi Enterprises and Services Ltd. (UNES) in 1996 as its commercial arm and charged it with the responsibility of promoting and coordinating income-generating activities in the university. The UNES came up with strategies that are income generating in nature such as pressing enrolment for Module II students and establishing consultancies that earn the university an income and enables the sustainability of the university's activities.

Anderson, et al. (2011) in the study on changing the culture of science education at research universities. The study noted that the two primary assignments for professors in any institution of higher learning is tasked with the generation of new knowledge and educate students and teaching responsibilities in many STEM (science, technology, engineering, & math) disciplines. Due to inefficiencies within institutions of higher learning throughout the world, the management within these institutions has been using the research work drawn by the professors to tackle different social issues. And in return, the institutions of higher learning have been compensated for their efforts. Many governments pay highly for academic research done by these institutions of higher learning. This has become a second source of income which comes in handy to cater for the budget deficits as Shattock (2010) noted in the book titled 'Managing successful universities'.

Drucker and Goldstein (2007) in the investigation on the impact of universities on regional economic development indicated that research universities in the United States have increasingly become involved in economic development since the mid-1980s. There has been a corresponding growth of interest in measuring the impact of higher education on regional economies. University activities, particularly knowledge-based activities such as teaching and basic research, have been found to have substantial positive effects on a variety of measures of regional economic progress and have contributed to resources for the university budgets (Drucker & Goldstein, 2007).

According to Altbach (2010) the decline of higher education over the last 15 years has been so stark that the loss of top-up fees is a little short and the salaries offered at every level of academia especially to those entering the profession as lecturers, which has also lumped from insufficient funds to some level of insolvency. "To work in higher education today one either has to have some form of private income, be devoted to it in such a missionary manner as to forgo any hint of materialism or be incapable of securing employment elsewhere". Geuna and Nesta (2006) studied university patenting and its effects on academic research. The research and development enabled the university to earn more through payments from their own governments, other governments, international bodies and non-governmental organisations.

RESEARCH METHODOLOGY

Research Design

The study applied descriptive and cross-sectional correlation survey research design. Descriptive research is a process of collecting data to answer questions concerning current status of the subjects in the study. It determines and reports the way things are with the subjects. It attempts to describe such things as the behaviour, attitudes, values and characteristics (Cooper & Schindler, 2008). This study will adopt a cross sectional co relational survey design. According to Yin (2013), a survey design is most suitable in a research aimed at establishing a problem and

determining its extent. The advantage of a survey design is emphasized in the growing tendency of ethnographers to complement their works with survey research. Corelational approach helps to determine whether and to what degree a relationship exists between the quantifiable variables in a study (Mugenda & Mugenda, 2003). This is appropriate design as it shows the kind of relationship that exists between financial resource mobilisation strategies and financial sustainability.

Population of the Study

A population refers to a group of individuals, objects or items from which samples are taken for measurement (Cooper & Schindler, 2008). It represents the total collection of elements about which one wants to make inferences. Kothari (2004) defines population as the researcher's 'universe.' Target population is the totality of cases conforming to the designated specifications as required by the study. The population of this study comprised all 71 universities in Kenya as at June 2016. These universities were selected because they had diverse experience in so far as financial resource mobilisation challenges are concerned.

Sample Design

In statistics, a sampling frame is the source material or device from which a sample is drawn. The frame refers to the list of units in the survey population. Since the selection of the sample is directly based on this list, the frame is one of the most important tools in the designs of a survey. It determines how well a target population is covered and affects the choice of the data collection method. The sampling frame is a list of all those within a population who can be sampled, and may include individuals, households or institutions (Cooper & Schindler, 2008). The sampling frame defines a set of elements from which a researcher can select sample of the target population. Yin (2013) defines a sampling frame as a list of all the items where a representative sample is drawn for the purpose of a study. A researcher rarely has direct access to the entire population of interest in social science research, and therefore must rely upon a sampling frame to represent all of the elements of the population of interest (Cooper & Schindler, 2008). A sampling frame is therefore a list or rule defining the population. In this study the sampling frame consisted of the list of deputy vice chancellors and finance officers in universities. The study targeted DVCs in charge of finance from each university because of their role in raising and accounting for financial resources in the universities. The total number of universities in Kenya is low and can all be easily accessed. This study therefore included all the 71 universities in the study hence a census sampling technique will be adopted. The sample size of 142 respondents consisted of 71 DVC's in charge of finance and 71 Finance Officers.

Data Collection

Data collection is the process of gathering and measuring information on targeted variables in an established systematic fashion, which then enables one to answer relevant questions and evaluate outcomes. Primary and secondary data will be used. The researcher gathered secondary data from the public universities' financial statements, reports and journals from Ministry of Planning and Devolution; the data was collected using a data collection sheet. Primary data was obtained from DVCs in charge of finance and Finance Officers in the universities under study using structured questionnaires. Both quantitative and qualitative primary data was sought for this study.

Data Analysis

The data collected was analysed using the Statistical Package for Social Scientists (SPSS) software version 24.0. All the questionnaires received were coded to facilitate data entry into the software. The reliability of the data collected was judged through tests. During analysis, reliability tests will be undertaken to check on any unusual cases, using Cronbach's Alpha. Descriptive statistics reports, representing the various research items were developed during the analysis. The tables generated gave means and percentage responses to all the items in questionnaire using the five-point Likert scales. The measurement tool ranged from 1 to 5 with 1 representing the minimum score and 5 the maximum rated score. Cross tabulations were also used to assess the relationship between two categorical variables. According to Babbie (2011), cross tabulations can be used to statistically test whether two categorical variables are independent or dependent. Pearson chi-square values and associated probability values (P-values) will be used to ascertain the statistical significance of relationships. Multiple linear regression analysis was conducted in order to establish the extent of linear relationship between the various resource mobilisation strategies and financial sustainability of the selected universities. The key aspects of the model is the model summary which gives the coefficient of determination that shows the percentage of variations in the dependent variable caused by variations in the independent variables, followed by the table that shows Analysis of Variance (ANOVA) with respect to both the model as well as the residuals and finally the table of regression that summarizes the regression coefficients of the variables of the study, alongside the computed values of the t-statistic and whether they were statistically significant at the set level of significance. The multiple linear regression model that was used in this study is indicated below. It shows the dependent variable on the left-hand side and the independent variables, the y intercept as well as random error of the model on the right-hand side.

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where: Y= Financial Sustainability of Universities; X_1 = Investment strategy; X_2 = Consultancy strategy

RESULTS

Influence of Investment Strategies on Financial Sustainability

The third objective of the study focused on determining how various investment strategies influenced financial sustainability of universities in Kenya. This was because investment strategies needed to be emphasized by universities in order to ensure financial sustainability of these institutions. Accordingly, opinion given by the respondents were ranked as per the values of the arithmetic mean and summarized.

Regarding investments, it became apparent that universities have made some considerable effort towards investing in real estate in order to raise funds. This is an idea which was ranked first ($M = 4.69$, $SD = 0.4641$), followed by the fact that universities have invested in shares ($M = 4.63$, $SD = 0.4835$). However, it can also be observed that when it comes to the fact that universities have invested in fixed deposits in order to improve financial standings, this issue was ranked low with ($M = 3.82$, $SD = 0.7591$) alongside the idea that the universities have invested in catering services in order to improve financial sustainability with ($M = 3.55$, $SD = 0.8041$).

Analysis of the study findings for investment strategies with regard to the variations in the opinions given by the respondents revealed that issues such as universities have invested in real estate that collect some returns had the lowest standard deviation of $SD = 0.4641$, followed closely by $SD = 0.4835$ and $SD = 0.4933$ for the idea of universities having invested in shares and universities having invested in government bonds respectively. The highest standard deviation, hence highest variation in the opinion given by the respondents was associated with the fact that universities had invested in catering services to improve financial sustainability with a standard deviation of $SD = 0.8041$.

Effect of Consultancy Strategy on the Financial Sustainability

The fourth objective of the study was to establish the effect of consultancy strategy on the financial sustainability of universities in Kenya. This is especially after realization that empirical findings point to the fact that consultancy strategy is important for universities in order to raise revenues and even contribute towards financial sustainability of these universities, and more so in Kenya.

From the findings of the study, it becomes clear that issues such as the universities had specialized experts in different fields in different faculties was strongly agreed to by the respondents indicating that there has been serious investment by the universities to ensure that they have experts who assist in the process of consultancy and get revenue for the universities. This was followed closely by the fact that the specialized experts engage in various consultancies that raise revenue for the universities ($M = 3.4$, $SD = 0.9606$). Consultancy services to improve revenue so as to render projects scored $M = 3.03$, $SD =$, 1.4486.

Regarding the consultancy strategy, it is clear from the findings in the table 4.4 above that the widest variation in the opinions were associated with the fact that the universities engage in several consultancy services to improve revenues in order to run their projects with the SD = 1.4486. This was highest followed by the fact that specialized experts engage in various consultancy activities that raise revenue for the universities with SD = 0.9606. As far as consultancy strategy was concerned, the issues that had most consistent opinion i.e. with the least standard deviation was to do with the fact that universities had specialized experts in different fields in different faculties with SD = 0.9382.

The table of regression coefficients is the last table when it comes to utilisation of multiple linear regression analysis. This clearly indicates the coefficients of the regression model as well as the coefficient of the y-intercept which is sometimes referred to as the constant term. A positive value of the regression coefficient indicates that a unit increase in the independent variable, is associated with an increase with indicated number of units in the dependent variable, while a negative value of the regression coefficient indicates that a unit increase in the independent variable is associated with decreased in the number of units of the of the dependent variable of the study.

Table 1: Regression coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.368	1.213	0.1892	3.6	0.000
Investment strategy	-0.161	0.177	-0.078	-0.909	0.365
Consultancy strategy	-0.008	0.087	-0.007	-0.092	0.927

The study revealed that a unit increase in investment strategy is associated with 0.161 decreases in the financial sustainability of the selected universities. Accordingly, a unit in increase in consultancy strategies in the universities is associated with 0.008 change in the financial sustainability of the universities

CONCLUSIONS

From these study findings, it can also be concluded that investment strategy is one of the most important strategies that can be harnessed by universities in order to help secure funding in order to run various projects in the universities. Having established the importance of consultancy strategies in the universities, it can be concluded that universities would benefit if they invest seriously in ensuring they increased the number of personnel who would assist in providing consultancy services especially so as to secure funding for these universities.

RECOMMENDATIONS

For investment strategies, universities need to improve on the area of investment in more viable income generating activities in order to help boost financing for such universities. Also areas such as fixed deposits as well as treasury bills need to be focused on to raise more funding for the universities.

It is also strongly recommended that universities need to invest more in equipping various experts with enough skills and expertise in order to ensure that they help with the process of providing consultancy services for the universities which are aimed at raising revenue to run various activities.

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