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## Influence of Diversification Innovation on Revenue Streams Sources of Public Universities in Kenya

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### **Abstract:**

*The purpose of the study was to assess the influence of strategic innovation on revenue streams sources of public universities in Kenya. The study used descriptive research design to conduct a census on 31 public universities in Kenya. Questionnaires were used to obtain primary data and documentary review for secondary data. The study concluded that if public universities apply diversification innovation, they will increase their revenue instead of depending on government capitations and tuition fees. The study thus recommends that public universities should continue taking part in strategic innovation because it is important in revenue generation in public universities in Kenya.*

**Keywords:** *Diversification innovation, public universities, Revenue streams, capitation fund*

### **1. Introduction**

There is hyperbolic pressure globally in higher institutions of learning to enlarge opportunities for enrollments whereas rising the standard of education offered, however, countywide governments aren't assigning sufficient funds for them. For example, in Australia and European countries there's a mentioned reduction in their provisions for higher institutions of learning, despite the very fact that European colleges are for the most part funded by the state (Muscio, Quaglione & Vallanti, 2013). Subsidizing for higher institutions of learning in Ireland, Lithuania, and the UK reduced by around thirty five percent from the academic year 2008-2009 to 2013-2014 (European University Association, 2014). Since 2009, Italian public universities have lost roughly ten thousand academic staff and scholars; meantime, 'state funding for scholarships was reduced by ninety percent from 2010 to 2011 and by other fifty percent in 2012' (Katsomitros, 2012). American states allotted, averagely, twenty eight percent less for higher education in 2013 than they did in 2008 (Oliff, Palacios, Johnson, & Leachman, 2013) throughout those five years, eleven states cut their funding for higher education by a third or more per student. To cover this financial gap, student tuition fees have been on the increase. Tamayo-Torres, Ruiz-Moreno, and Verdú, (2010) argues that because of the instability and dynamic nature of business environment, most organizations are engaging in incessant and periodic strategic innovation. Therefore, in order to realize sustainable competitive advantage and increased revenue streams in unstable and dynamic environment, organizations must strengthen their innovative capabilities. A good number of scholars have established that well performing institutions use diversification innovation so as to increase their experiences, skills, networks, resources, competencies and technologies which is a prerequisite to outstanding performance (Awino & Mutua, 2014). This implies that strategic innovation is a forebear to the increase of revenue streams sources in universities, therefore, strategic innovations are necessary for the achievement and control which ultimately leads to sustainable financial performance of universities.

Kilonzo, (2011) opined that most Kenyan public universities admit students who sponsor themselves as a source of revenue, because, as compared to the ones that the government of Kenya sponsors, they pay a little bit higher tuition fee. However, in the last three years the quality assurance audit led by commission of university education closed a number of public university satellite campuses which were supposedly revenue centers for the public universities. Another twin tragedy was the crackdown by the ministry of education extended to secondary schools to check on administration of Kenya Certificate of secondary school examination which is a qualifying exam to higher institutions of learning. This led to few qualifying students for admission to the increased number of universities in Kenya due to a great drop in performance. This was worsened by enforcement of the mean entry grade for university and abolishing bridging courses for failed grades. The outcome of these raft measures was extreme reduction in the catchment numbers for fresh admissions for both public and private universities implying a drop in revenue collection since tuition fees forms the major source of university income. Against the backdrop of established research gaps, the study therefore attempts to fill the knowledge gap by investigating the influence of diversification innovations on revenue streams sources in public universities in Kenya.

### 1.1. Research Objective

The objective of the study is to examine the influence of diversification innovation on revenue streams sources of public universities in Kenya.

### 1.2. Hypothesis

Hypothesis of the study is: There is no statistically significant influence of diversification innovation on revenue streams sources of public universities Kenya.

## 2. Theoretical and Empirical Review

Resource based view (RBV) theory originated from the work of Penrose in 1959 that envisions an organization as a managerial firm and a collection of productive resources, including human resources, financial resources and physical resources. Since, the Resource Dependency theory is found in the field of Strategic Management, its basics can be found in the works of Penrose, (1959) and (Rugman & Verbeke, 2002). Emphasis was put on the importance of resources and their implications for the performance of the firm, these resources provides the organization with a diversity of services that can be used in diverse ways, depending on the ideas of the firms on how to use them (Penrose, 1980). Therefore, there is a close connection between the organizational knowledge and the services obtained from the organization leading to a conclusion that firms are indeed storehouses of knowledge. Resource dependence theory further provides valuable conceptual tools for understanding the responses of public universities to financial challenges. This theory further argues that there is no organization that is completely self-reliant. The need to acquire resources creates dependencies between organizations and their external units and the scarcity of resources determines the degree of dependency.

According to Johnson, Scholes, and Whittington (2008) diversification is a strategy that takes the organization away from its current market or products or competences. It is a corporate level strategy, which is based on task of crafting and implementing action plans to improve on the attractiveness and competitive strategies of a company's business product portfolio. According to Weidman (1995), higher education all over the world are engaged in revenue diversification, in his study he suggested several strategies for reducing government expenditures on higher education, including direct cost recovery, grants from and contracts with external agencies, income producing enterprises, private contributions, and expansion of the private sector. Policy implications and examples are presented for both developing and developed countries. Psacharopoulos and Woodhall (1993) direct cost recovery, grants from contracts with external agencies and income producing enterprises are some of the several options that universities in united states of America use to diversify their sources of revenue.

Teixeira and Koryakina (2013), opined that, tertiary institutions in many countries are forced to come up with new ways to diversify their revenue sources due to the growth in student numbers, financial severity, and increased competition, that has highly contributed to a reduction in public budgets devoted to higher education. In relation to both Europe and the United States, the ability of higher education institutions to engage in revenue diversification activities has also been fueled by opportunities provided by a more technologically sophisticated, knowledge-based economy. There is mixed evidence on the extent and the impact of revenue diversification activities across institutions and countries (OECD, 2008), institutions in most developing countries do not seem very vibrant in pursuing external sources of funding. Resources, raised externally, normally represent a minor fraction of institutional budgets, which most often reflects insufficient awareness of the potential for diversifying and increasing revenues.

A decline in government funding has increasingly encouraged universities to engage in diversification innovation by acquiring vital resources (Massy, 2009; Ouma, 2007; Altbach & Teferra, 2004;) diversification innovation in universities are guided by external factors, specifically laws and policies , the surrounding industry (Gulbrandsen & Smeby, 2005), regional conditions (Friedman & Silverman, 2003), the funding and incentive regimes in the institutional environment and the unique features of the individual university. The major characteristics of the environment which affect the universities diversification innovation are social, political, economic, and technological trends that surround it (Gulbrandsen & Smeby, 2005).

## 3. Methodology

The design that was adopted for this study was descriptive and Cross-sectional survey design. The population for the study comprised all public universities in Kenya that are thirty-one in number with purposeful sampling used to select sixty-two respondents. The study covers three calendar years (2016, 2017 and 2018). The research instrument used in collecting data for the study was a questionnaire which was administered through drop and pick later method. To ensure validity, the instrument was given to the panel of professionals in Kabarak University during proposal defense to check whether the items were in line with the objectives under study. It was then pilot tested using ten respondents. The respondents completed the questionnaires and their responses were used to establish the reliability of the instrument. The Cronbach Alpha reliability of the instrument was found to be 0.8. Data to answer the research questions were analyzed using means and standard deviation whereas data to test the hypothesis was analyzed using analysis of variance (ANOVA).

## 4. Results and Findings

### 4.1. Research Question

The responses to the items on the questionnaire were in a five point Likert scale 1=strongly agree 2= agree, 3= Neutral 4= disagree, 5= strongly disagree Research results established that, the highest rated item was; Diversification

help in building synergies in resource utilization; with a mean of 1.85, and standard deviation of 0.788; Diversification allows the University to Invest in profitable Businesses like hospitals or business centers; with a mean of 1.76, and standard deviation of 0.673; Diversification is seen as the need to avert wide fluctuations in revenue; with a mean of 1.72, and standard deviation of 0.72; Diversification enables investment of surplus funds in the University; had a mean of 1.67, and standard deviation of 0.845; lastly, The University is generating income from other sources other than its main core of operation; with a mean of 1.63, and standard deviation of 0.826. The responses thus indicated that main goal of diversification was to raise revenues from sources other than academics, which is the mainstay of the university goal, as presented in table 1. Results imply that diversification innovation has an influence on revenue stream sources

Table 1

	N	Mean	Std. Deviation
The University is generating income from other sources other than its main core operation	46	1.85	0.788
Diversification allows the University to Invest in profitable Businesses like hospitals or business centers	46	1.76	0.673
Diversification is seen as the need to avert wide fluctuations in revenues	46	1.72	0.72
Diversification help in building synergies in resource utilization	46	1.63	0.826
Diversification enables investment of surplus funds in the University	46	1.67	0.845

Table 1

The results denote that both related and unrelated diversification has a positive influence on financial performance, related diversification emphasizes on operational synergy that enables a firm to benefit from economies of scale. It can also leverage existing capabilities by expanding into other businesses (unrelated diversification), diversifying into related businesses as an avenue for cost reduction. Such firms have a very powerful brand name that can be used to drive up sales. A firm can also diversify into a closely related business or move into a completely new business that is not related to the current operations (Boschma & Capone, (2015).

#### 4.2. Research Hypothesis

There is no statistically significant influence of diversification innovation on revenue streams sources of public universities Kenya. The objective was to examine the influence of diversification innovation on revenue streams sources of public universities in Kenya. The finding of this hypothesis is shown in table below.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.565 <sup>a</sup>	0.319	0.304	0.66627

Table 2: Diversification Innovation Model Summary

A. Predictors: (Constant), Diversification Innovation

In this case the adjusted R squared is 0.319, meaning that diversification innovation explains 31.9% variations in the dependent variable while the rest are explained by the error term. The strength of the relationship is 56.5% which is significant relationship between product innovation and revenue streams sources of public universities in Kenya.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.161	1	9.161	20.638	.000 <sup>b</sup>
	Residual	19.532	44	.444		
	Total	28.693	45			

Table 3: Diversification Innovation Anova<sup>a</sup>

a. Dependent Variable: Revenue Streams Sources. b. Predictors: (Constant), Diversification Innovation

The strength of variation of diversification innovation influence revenue streams sources by 0.000 significant levels. This shows that the overall model was significant. The ANOVA findings on diversification innovation indicates a numerator whose degree of freedom (df)=1, denominator df=45 and critical F value is 2.945 the above findings show computed f value is 20.638, and the regression model is significant since the computed f value exceeds the critical value that 20.638 > 2.945 this is collaborated by the p value = 0.000 < 0.05. This implies that diversification innovation provides a significant level of explanation of the influence of diversification innovation on revenue streams sources of public universities in Kenya. This implies that 95% chance that the relationship with the variable is not due to chance.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.289	.340		3.791	0.000
	Diversification innovation	0.540	.119	0.565	4.543	0.000

Table 4: Diversification Innovation Coefficients<sup>a</sup>  
a. Dependent Variable: revenue streams sources

The findings express that diversification innovation leads to an increase in revenue streams sources of public universities in Kenya by a factor of 0.540 with p value of 0.000 at 0.05 level of significant and 95% level of confidence this is statistically significant at the p value < 0.05. The alternate hypothesis is therefore accepted implying that diversification innovation has a significant influence on revenue streams sources of public universities in Kenya. Based on this statistic, the study concludes that there is significant positive relationship between diversification innovation and revenue streams sources of public universities in Kenya.

## 5. Conclusion

The objective of the study was to examine the influence of diversification innovation on revenue streams sources of public universities in Kenya. It was concluded that, there is a positive relationship between diversification innovation and revenue streams sources. Through the employment of diversification strategies, public universities should find strengths that enable them to broaden their scope within the public universities market and identify a position for themselves. Public universities should expand into new markets and identify products that can help them compete within the established markets for example venturing into businesses and agriculture. This will be done by identifying the segments in the market that suits their products and services. Ansoff and McDonnell (1999) argued that there are key reasons why firms think of or opt to pursue diversification innovation. This study agrees with (Kiveu, 2017) and many more scholars as reviewed in the literature.

Generally, the following are several strategies for diversifying the funding base of public universities; apart from charging tuition fees. Public universities can seek to establish agreements with private sector employers willing to sponsor promising students by paying their tuition and other fees, or by providing scholarships, funds can be obtained by contracting with external agencies like commerce, industry, and government, for the provision of expert services by professors and other skilled staff; Paid internships, arrangements can be made for students to receive salaries and support from employers for internships related to their fields of study. Such internships could be done either during a vacation period or during a semester away from campus and this will attract many students, establishing income generating units like maintaining a herd of livestock like cattle, sheep, goats, etc. but others can generate revenue through renting space for a shop, providing copying services, running bookstores.

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