

Strategic Innovation and Growth of Public Universities in Kenya

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Abstract The Kenya's education sector is a dynamic one and highly competitive with the increase of both private and public universities. Public universities have been relying on capitation fund and own source revenue. Many of them are getting government sponsored programs allocations lower than their declared capacity and they have been unable to get adequate numbers of students for self sponsored programs. With this precarious scenario the management of public universities are realizing the need for strategic innovations on own source revenue. This study aimed at finding the relationship between strategic innovation and growth of public universities in Kenya. The specific objectives of the study were to establish the influence of marketing innovation and product innovation on growth of public universities in Kenya. The study was based on descriptive research design. Census survey was used to select all public universities and a purposive sampling was used to select the Finance officer and Registrar Administration, of all public universities in Kenya. Data was analyzed using descriptive and inferential statistics. Study findings reveal that Marketing Innovation ($\beta = 0.627, p < 0.05$), and product innovation ($\beta = 0.334, p < 0.05$) had significant effect on growth of public universities. It was established and concluded that there existed a positive relationship between strategic innovation and growth of public universities in Kenya. The researcher recommends that there is the need for university management to adopt strategic innovations in order to enhance growth of their institutions and their long term survival.

Key Terms: strategic innovation, public universities, growth, capitation fund, Kenya.

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I. Introduction

The issue of innovation and innovativeness of an organization has been a subject of research and analyses for many years. Nevertheless, it still remains in the centre of attention of people dealing with theory and Practice of management. This is associated with the role that innovations play in the development and building competitive advantage, not only of commercial entities, but also non-profit organizations, public institutions, or scientific units (Waškowski & Jasiulewicz, 2015).According to Kaufmann and Shams (2016), growth is operationally defined as positive shifts in business assets, turnover and number of employees.

Firms that desire to remain competitive by enhancing their growth capacities and capitalizing on the available opportunities can achieve all these by embracing strategic innovation. Public universities play an integral role in mentoring of the human capital which is key to Kenya achieving its strategic goal of Vision 2030. They rely heavily on state funding and tuition fee from self sponsored students. As a result, failure to increase funding in line with enrolments and increase enrolment of self sponsored students has undermined their expansion plans in terms of lecture rooms as well as human resource capacity (Shisia,Matoke & Omwario,2014). Experts in Management continue to build on one another's work in order to formulate more refined ideas about organizational growth (Kirby, 2005). (Machuki and Aosa, 2011), posit that organizational growth in this context refers to achievements of an enterprise with respect to some criterion. Organizational growth can be equated to value creation for stockholders (Carton, 2004).

According to Oke and Myers, (2007), strategic innovation is one of the key features of the behaviors of an entrepreneur that has been significantly linked to institutions, Innovation is widely acknowledged as a core factor to increased productivity and competitiveness. It is one of the key practices that keep the foundations of institutions in a competitive global environment, (Kobia & Katwalo, 2013; Lin & Chen, 2007). An institution is able to compete effectively if it generates a specific and durable differentiating factor and strategic innovation is one of the key ways through which firms can create the differentiating factor (Porter, 1996).

The strategic management literature recognizes innovation as a critical enabler for firms to create value and sustain competitive advantage in the increasingly complex and rapidly changing environment (Yilmaz,Alpkan & Ergun, 2005). According to Drucker (2001), innovation is part of the strategy implementation and is a direct requisite for specific strategies. Innovation therefore serves as a medium of creating new business with exceptional control mechanisms, value addition and risk reduction. Strategic

innovation is essential in improved performance amongst many firms and is reflected by increased profitability and market share growth (Palmer & Kaplan, 2013). As a result, firms that desire to remain competitive by enhancing their growth capacities and capitalizing on the available opportunities can achieve all these by embracing strategic innovation.

The Kenyan public university education sector began in 1963 with less than a thousand students enrolled in Nairobi University College (Weidman, 1995). Since then, the system has undergone substantial growth, and as of 2019, there are a total of thirty one public universities (CUE, 2018). Universities play an integral role in mentoring of the human capital which is key to Kenya achieving its strategic goal of Vision 2030. Moreover, the proliferation of private universities has brought about stiff competition in the sector. To therefore thrive and survive in the dynamic and highly competitive environment, while keeping up with the ever changing customer needs, public universities have to adapt through innovative products and services. Strategic innovation is one of the strategies that public universities in Kenya have adopted in order to remain academically relevant (Shisia *et al.*, 2014).

II. Literature Review

Strategic innovation is grounded in the knowledge-based theory of the firm (Grant, 1996). It is widely accepted that a firm's ability to innovate is tied to the pool of knowledge available within an organization (Subramaniam & Youndt, 2005). The generation of new knowledge has traditionally been connected to a firm's in-house research and development (R&D) activities. Recent literature, however, points to the advantages of combining internal investments with external resources (Cassiman & Veugelers, 2006) to benefit from complementarities. In other words, firms have begun to open up their innovation processes for external knowledge. This trend of so-called "Open Innovation" allows firms to access and exploit external knowledge while internal resources are focused on core activities (Chesbrough, 2003). Many authors show the relationship between innovation and knowledge management (Galunic & Rodan, 1998; Kim & Mauborgne, 1997; Leonard & Barton, 1995; Metcalfe & De Liso, 1998). Knowledge-based strategy determines innovation efforts and may have a strong influence.

The cornerstone of Blue Ocean Strategy/theory is 'Value Innovation', a concept originally outlined in Kim and Mauborgne (1997). Value innovation is the simultaneous pursuit of differentiation and low cost, creating value for the buyer, the company, and its employees, thereby opening up new and uncontested market space. The aim of value innovation is not to compete, but to make the competition irrelevant by changing the playing field. Strategic innovation is a major practice underpinning the survival and competitiveness of universities in a competitive globalized environment (Sheu, 2007; Kiraka, Kobia & Katwalo, 2013; Lin & Chen, 2007). As an essential tool for firm strategies, innovation enables firms to achieve sustained profitability and growth, to access new markets, enhance their market share hence increase its growth (Ulusoy, Kilic & Alpkan, 2011).

As such innovation has become central to firm strategies and government policies in the pursuit of firm competitiveness and ultimately national competitiveness. Innovation in pursuit of growth remains a credible goal of many firms, national policies and is central in many firms increasing its revenue (Cantwell, 2003; Gray, 2006; Aikeli, 2007). Struggling to manage their new circumstances and worried about their long-term survival, universities all over the world are becoming enterprising and initiating non-traditional revenue diversification initiatives to yield additional resources in order to provide quality education. By embracing entrepreneurship, these institutions have initiated reforms that are necessary for efficient management of the revenue generating initiative's needs (Sidek & Rosli, 2013).

Marketing innovation is the implementation of a new marketing method that involves significant changes in product design or packaging, product placement, product promotion or pricing (OECD, 2005). New marketing methods can either be developed by the innovating firm or adopted from other firms or organizations and can be implemented for both new and existing products. Marketing innovations include significant changes in product design that are part of a new marketing concept; changes in the packaging of products, product placement primarily involve the introduction of new sales channels (OECD, 2005).

Marketing innovations focus on better addressing customer needs, opening up new markets and positioning a firm's product in the market, with the objective of increasing the firm's sales (OECD, 2005). According to John and Davies (2000), marketing innovations increase sales by increasing product consumption leading to increase profits to the firm Otero-Neira *et al.* (2009) in their study on "Innovation and Performance in SME Furniture industries" found strong evidence that market innovation positively influenced business performance. Similarly, Varis and Littunen (2010) in their study of SMEs in Finland confirmed a robust significant relationship between marketing innovation and firm performance. However Sidek and Rosli (2013) in their study on "the impact of Innovation on the performance of Small and Medium Manufacturing Enterprises in Malaysia" concluded that marketing innovation did not have significant effects on firm performance.

Product innovation is one of the sources of firm competitiveness that can be applied to improve the quality of products leading to growth by increasing the volume of revenue (Sidek & Rosli, 2013). Product innovation also provides a variety of choice of a firm's products to the customers and greater perceived value as compared to the old products (Crawford *et al.*, 2003). Oke, et al. (2007) carried out a study on firms in UK and concluded that product innovation had a positive impact on firm performance. Atlay, Anafarta and Sarvan (2013) in their study on firms in the automotive supplier industry in Turkey concluded that product innovation had a positive significant impact on firm performance.

Although innovation is generally regarded as a means of institutions obtaining growth, this relationship is not strongly supported empirically. Previous studies did not examine the influence of major factors in the link between innovation and growth. Kiveu (2017) focused on effect of innovation on firm competitiveness: a study of SMES in manufacturing sector in Nairobi city. This represented one aspect of factors that influence strategic innovation leaving a gap to be pursued by other scholars. Aziz and Samad, (2016) established that a innovation had a positive impact on SMES' competitive advantage ,but the Study was carried out on food manufacturing SMES in Malaysia leaving a gap that need to be concluded using public universities in Kenya The study focus was on marketing, and product innovation on growth of public universities in Kenya.

There has been a rapid rise of number of public universities in Kenya from one in year 1970 to thirty one in year 2019. Alongside this the number of private universities have also similarly risen. However unlike private universities, public universities rely on capitation of fund for financing major operational expenses and then charge some minimal tuition and related fees to students admitted in government sponsored programs. The capitation fund and the fees collected from the government sponsored programs have been far short of the operational expenses of the public universities. One of the responses to this challenge was to introduce parallel programs: admission for self sponsored students. But due to massive failure in Kenya Certificate of Secondary School Examination (KCSE), which is the qualifying exam to higher institutions of learning there has been extreme reduction in the catchment numbers for fresh admissions both public and private universities implying a drop in revenue collection since tuition fees forms the major source of university income. Since this outcome there seems to be no adequate research that has been conducted to determine how universities are responding to this crisis from strategic innovation, especially so among the public universities which have a tradition of reliance on the capitation of funds. The study therefore attempts to fill the knowledge gap of influence of strategic innovation on growth of public universities in Kenya.

Objectives

The main objective of this study was to investigate the relationship between strategic innovations and growth of public universities in Kenya.

The specific objectives that contribute achieve this main objective were as follows: -

- i. To assess the influence of marketing innovation on growth of public universities in Kenya.
- ii. To evaluate the influence of product innovation on growth of public universities in Kenya

III. Methodology

The design that was adopted for this study was cross-sectional survey design. Cross-sectional surveys are used to collect information on a population at a single point in time, so as to investigate changes in the population. According to (Fink, 2006), Surveys are used to collect information from and about people to express, evaluate or give explanation on their knowledge, thoughts, morals or behavior. Julian & Burstein (1985) added that cross sectional survey research concerns itself with describing practices that prevail, beliefs, views, attitudes or perceptions that are held. Surveys, in their simplest form, are normally conducted to institute the nature of existing conditions (Cohen, Manion & Morrison, 2007). Survey research seeks to obtain information that describes existing phenomena by asking individuals about their attitudes, perceptions or behavior, but apart from describing, it can be used to explore existing status. It is the best method available to social scientists and educators interested in collecting original data for describing a population that is too large to observe directly (Mugenda & Mugenda, 2003).

The target respondents were sixty two in total, purposive sampling was used to pick the Finance manager and Registrar Administration, in each university since they are directly involved in strategic planning, marketing and finance management. Under judgmental sampling the researcher uses their own judgment to select the sample (Oso & Onen, 2005). According to Van Dyk (1991) questionnaires are the most common method applied to diagnose the functioning of institutions. The researcher used a Questionnaire to evaluate the revenue stream sources and strategy innovation in the public universities in Kenya.

IV. Findings of the Study

This study investigated the influence of strategic innovation on growth of public universities in Kenya. Specifically the study sought to find out the influence of marketing innovation on growth of public universities in Kenya and also to evaluate the influence of product innovation on growth of public universities in Kenya.

The study tested both reliability of instruments used and also the validity of the instruments used as explained below. The validity and reliability of the tools resulted from the extent to which responses from the field reflected theories and empirical evidence of other scholars who have studied similar variables. The main tool of data collection used was the Likert-scale questionnaire. The instrument was reviewed and tested by experts in statistics using Cronbach’s alpha test. Nachmias and Nachmias (2006) explain that a Cronbach’s alpha test confirms the reliability and consistency of a Discounted Cumulative Impact (DCI). The results of the test are summarized in Table 1

Table 1. Reliability Results

Variable	Cronbach’s alpha
Marketing innovation	0.7201
Product innovation	0.7321

Source: (Author, 2019)

From Table 1 the questionnaire instrument consistently returned high scores averaging 0.7321 and 07201 respectively which is highly acceptable since Cronbach’s alpha coefficient of over 0.7 qualifies an instrument as reliable and consistent (Nachmias & Nachmias, 2006; Kent, 2001; Kothari, 2004; Sekaran, 2006).

Table 2. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.737 ^a	.543	.521	.43335

a. Predictors: (Constant), product, marketing

The study results in table 2 indicate the extent to which the predictor variable accounts for the overall variability of the model. The R Square of 0.54 indicate that the predictor variables given in the study affects the organization performance by 54% and 46 percent is affected by other factors not mentioned in the study. The Adjusted R Square indicate that suppose the whole population was involved in the study rather than a sample, then the response would be (1-0.521) 47.9% less variance.

Table 3. Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.087	.305		.286	.776
	marketing	.627	.120	.594	5.205	.000
	product	.334	.151	.251	2.205	.033

a. Dependent Variable: growth

$$\text{Organization growth} = 0.087 + 0.627 \text{ marketing Innovation} + 0.334 \text{ product Innovation}$$

The study results in table 3 indicate that there is a positive relationship between university growth, Product Innovation and Marketing Innovations meaning that in increase in either of them will increase organization performance and a decrease in either of them will also decrease organization performance. Testing at 5% significant level, the study was significant at p<0.05 (0.03<0.05) using a one tail test. All the other individual variables were also significant at p<0.05 using a one tail test.

V. Conclusion and Recommendations

The main aim of this study was to get an understanding on the influence of strategic innovations on the growth of public universities in Kenya. The indicators of growth were identified as revenue streams and web ranking. The innovative strategies were identified as: marketing innovation and product innovation. Based on the findings, the researcher has sufficient evidence to conclude that indeed there is a relationship between strategic innovation and growth of public universities in Kenya. The researcher concludes that universities that adopt and are successful in innovation strategies such as introducing E-learning, short courses, hosting research conferences, do marketing via social media, diversifying their product through agriculture, businesses and others have recorded a great increase in revenue. The study therefore concludes that there is a strong positive relationship between strategic innovations indicators and growth of the public universities in Kenya.

The study findings gives the evidence to the researcher to conclude that strategic innovation of the public universities ranges from the products and services offered and is determined by the technology that is

revolutionizing the current global world and has improved revenue of the public universities. Therefore with innovation in university's resource management, the universities can be able to comply with the set budgetary levels, reduce costs, and increase number of students which in turn translate to growth of public universities.

The researcher recommends that institutions of higher learning, both public and private that have not fully adopted strategic innovation as a means of growth should look for ways of doing so, Since it has been proven that there is a relationship between strategic innovation and growth. At the same time, it is recommended that those that have been successful in doing so should start looking for new ways to continue increasing revenue as the education sector is fast evolving.

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