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A Case of Universities in Kenya
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In institutions of higher education in Kenya, the place of quality assurance as a strategy to universities' attainment of sustainable competitive advantage is of concern to stakeholders. This study focused on moderating effect of quality assurance mechanism on the relationship between strategic factors and sustainable competitive advantage in Kenyan universities since there has been conspicuous differences in performance, and stakeholder concern for quality university education. The study design was descriptive. In a census survey, primary data was collected using a structured close ended Likert type questionnaire administered to six managers in fifty four (54) public and private universities in Kenya. Secondary data was collected from universities' records, the Ministry of Higher Education and the Commission for Higher Education. Specifically, variable characteristics were analyzed using descriptive indices such as means and standard deviations. Pearson's product moment correlation analysis was used to test relationships between variables under study; while multiple, stepwise regression analysis was used to test the effect of moderating variable. The predictive power of the hypothesized model for sustainable competitive advantage in Kenyan universities was tested using multiple and stepwise regression analysis. The study findings showed that there was a statistically significant positive relationship between strategic factors and sustainable competitive advantage. In addition, the study results showed a positive and statistically significant moderating effect of quality assurance mechanisms (explained variance 1.3% {R square change}; beta = 0.125 and p value < 0.05 beta = 0.159 and p value < 0.05) on the relationship between strategic factors and sustainable competitive advantage. All calculations were done at a confidence level of 0.95 and alpha level of 0.05.

Keywords: Sustainable competitive advantage, Quality assurance mechanisms, strategic factors

INTRODUCTION

Background of the Study

According to the British Standard Institution (BSI), quality is the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs (BSI, 1991). Garvin (1988) classified various definitions of quality as:

- Transcendent definitions - definitions that are subjective and personal are related to concept such as beauty and love.
- Product – based definitions – quality is seen as conformance to requirements and specifications.
- Value – based definitions – quality is seen as providing good value for costs.

In essence quality is also looked as 'zero defect', and fitness for purpose (Juran, 1988).
But quality in higher education means educational process that ensures students achieve their goals and thereby satisfies the needs of the society and help in national development (NAAC, 2007). Quality assurance in higher education can be assured through self – evaluation, best practice benchmarking and external quality monitoring (CUE, 2012). In order to capitalize on internal quality and to add value to the quality assessment, external quality monitoring is done and often preferred all over the world.

In Kenya, quality assurance in universities is carried out internally and externally. Internal assessment is done through quality assurance units while external assessments are carried out by commission for University Education (CUE) and professional bodies. Mainly, quality assurance in Kenyan higher education is geared towards accreditation and adherence to set standards and specifications (CUE, 2012). Basically these are operational and efficiency strategies; of greater concern is if indeed the quality assurance mechanisms provide direction to universities on issues of strategic positioning, specifically for sustainable competitive advantage in the global arena.

The Commission for University Education (CUE) pays keen interest to institutional factors when accrediting universities, these include; -infrastructure , quality management, strategic planning , relevance of curricula, quality of academic staff, quality of students, performance contracts, ISO certification and quality audits

Quality assurance system in Kenya focuses more on operational factors, beyond benchmarking and meeting standards vis-à-vis continuous improvement. However an aspect of sustainable competitive advantage is crucial. Essentially, this study will endeavor to look at which strategic factors and contextual factors influence sustainable competitiveness in Kenyan universities.

Indeed Higher education sector plays a fundamental role in social, economic and political development of any nation (World Bank, 2005). In Africa, university education plays a vital role in capacity building and professional training (Materu, 2006). The research database from postgraduate studies creates a powerful resource for economic development. In Kenya, the government has a vision to get industrialized by year 2030 as a response to implementation of Millennium Development Goals (MDGs).In regard to this vision, there has been deliberate move to expand university education through creation of more universities and expansion of programs offered (University Act, 2012).

However, despite this effort to revamp university education, Kenyan universities continue to be ranked low internationally. For instance, in a survey conducted by webometrics in 2011, only University of Nairobi and Strathmore were ranked among the top fifty out of 12,000 institutions in Africa. In another survey by Academic Ranking of world universities in 2012, no Kenyan university was ranked among the top thousand. Thus the competitiveness of Kenyan universities has become a point of concern following these low positions in ranking. The bigger question remains, what is it that other world universities do so as to offer competitive higher education?

Are there strategic factors that they embrace so that they attain sustainable competitive advantage? Ultimately, this becomes a point of departure for this study.

Arguably, the question of achieving sustainable competitive advantage in any firm centers on strategy which is the act of aligning a firm and its dynamic environment (Porter, 1991). Nevertheless, it is observed in the strategy theory, firms in the same industry with similar resources perform differently (wade and Hulland, 2004). This scenario is conspicuously observed among universities in Kenya. However, some universities seem to consistently perform better than others and this creates scholarly curiosity to find out what is it that they do better than others.

It is with such a concern that this study sought to look at strategic factors that influence sustainable competitive advantage in Kenyan universities. Indeed studies on sustainable competitive advantage have been done in other parts of the world (Mazzarol and Soutar, 2009; Phichai and Pharuke, 2009; Nguyen, 2008; Al-swidi and Mahmood, 2011; and Ramadan, 2010). However; empirical research is insufficient on the moderating effect of quality assurance mechanisms on the relationship between strategic factors and sustainable competitive advantages in universities in Kenya. It is hoped that embracing the strategic factors that positively influence sustainable competitive advantage will lead to improved services and quality higher education in the short run, and advance on universities’ competitiveness internationally in the long run.

Research Objective
The purpose of the study was to examine the moderating effect of quality assurance
mechanisms on the relationship between strategic factors and sustainable competitive advantage in Kenyan universities. Specific study objectives included the following:

1. To examine the relationship between strategic drivers and sustainable competitive advantage in Kenyan universities.
2. To investigate the relationship between strategic managerial choices and sustainable competitive advantage in Kenyan universities.
3. To appraise the relationship between strategic initial firm conditions and sustainable competitive advantage in Kenyan universities.
4. To examine the moderating effect of quality assurance mechanisms on the relationship between strategic factors and sustainable competitive advantage.

Literature Review

It is important to note that the theory on strategy is still a debate and crafting of the theory is ongoing. This study will be inclined to Resource Based View (RBV) and Dynamic Capabilities (DC) theory whose propositions address variables under study.

Empirical studies on strategic factors and sustainable competitive advantage

The issue of strategic factors that influence sustainable competitive advantage is broad and for purpose of this study, a scope has been defined as indicated in the objectives of the study. Thus the focus of the literature review will be as per each objective.

Relationship between strategic factors and sustainable competitive advantage

As indicated earlier, the strategic drivers will be considered as dynamic capabilities that include: Knowledge management improvement, entrepreneurial expansion and Networking expansion. Initial firm conditions considered in this study include: University type, university age and quality of firm infrastructure. For purposes of this study, managerial choices under concern include: type of leadership, type of finance management and community involvement.

As discussed in the resource based view, the competitiveness and performance of a firm are dependent on its valuable, rare, imperfectly imitable, and non-substitutable resources (Barney, 1986, 1991; Teece et al., 1997). Conventionally, the firm’s resources can be classified into tangible and intangible. While tangible resources are the infrastructural objects such as capital, locations, building, warehouses, and other facilities, intangible resources comprise knowledge, skills, efficient practices and processes, and intellectual capital like entrepreneurial orientation and other assets that cannot be placed on the balance sheet (Mathews, 2006). Besides, intangible resources might be considered strategically as more important than the tangible resources for the firm’s progress. To achieve the highest advantages of these unique resources, RBV emphasizes on the match between the organizational capabilities and the available opportunities (Wang et al. 2007).

Generally, the RBV emphasizes on the importance of resources in creating and sustaining the competitive advantage of the firm, an organization should develop its mechanism to select its distinctive available resources with great potential value (Makadok, 2001). In addition, the awareness of the internal as well as the external environment has been greatly emphasized and competitors to be able to create and sustain its competitive advantage (Barney, 1986). More so, the RBV is related to the organizational capabilities. The organizational capabilities are the skilled, talented, experienced humans, information driven and specific processes that can be fully utilized to produce high quality and innovative outcomes that exceed the customers’ expectations (Amit and Schoemaker, 1993). The organizational capabilities increase the value of the available resources and help in coordination the effective use of these resources (Prahalad and Hamel, 1990; Wernerfelt, 1984). The process of creating the competitive advantage should be dynamic so that the organization can survive and grow in the dynamic and turbulent business environment (Teece et al., 1997).

Based on these arguments, it is therefore presumed that strategic factors such as knowledge management, entrepreneurial expansion, marketing capability development, quality assurance mechanisms, managerial choices and initial conditions of universities as defined in this study can be looked at as organizational resources and capabilities that constitute a main source of the competitive advantage of organizations, including universities.

In summary, strategic resources such as
"core competencies" (Prahalad and Hamel 1990) or core capabilities (Leonard-Borton, 1992) are those which create sustainable competitive advantage (SCA) and lead the organization to above-normal performance. According to Barney (1991), competitive advantage is defined as a function of a set of firm-specific resources and capabilities that are valuable, rare, and imperfectly imitable and for which there are no commonly available substitutes (VR1S) or VRIO - Value, rareness, inimitability, and organizational support.

Relationship between entrepreneurial expansion and sustainable competitive advantage
Entrepreneurial Orientation (EO) in the past literature has been reported to have a positive impact on the firm success. Inherently, Entrepreneurial behavior has more propensity to seek innovative future prospects and enhance competitive advantage (Keh, Nguyen and Ng, 2007). Fundamentally, innovation is central to entrepreneurship and leads to sustainable development of an organization (Miller, 1983; Lumpkin and Dess, 1996). Other researchers (for example, Al-Swidi and Mahmood, 2011b), have reaffirmed that Entrepreneurial Orientation (EO) adds a value to any organization due to its emphasis on solutions to customers’ dissatisfaction. Lumpkin and Dess in 1996 alluded that Entrepreneurial Orientation can improve the competitive strategic position of an organization and if the opportunities for value-creation are taken into consideration to create the desired competitive advantage over its rivals (Hamel and Prahalad 1989).

The above reviewed literature and supporting arguments lead to postulation of the following null hypothesis:
There is no statistically significant relationship between Entrepreneurial expansion and sustainable competitive advantage in Kenyan universities

Relationship between knowledge management and sustainable competitive advantage
Halawi et al. (2005) ascertained that sustainable competitive advantage is dependent on building and exploiting core competencies. This Knowledge is seen as a strategic asset with the potential to be a source of competitive advantage for an organization.
Established in this study, was a model that examines how and why knowledge management (KM) could be used to create competitive advantage from the R.B.V of the firm.

The conclusion of this study was that knowledge management infrastructure, knowledge quality and knowledge management system properties are positively related to sustainable competitive advantage; sustainable competitive advantage is the function of knowledge management infrastructure, knowledge quality, knowledge management system properties, organization environment, task environment and general environment.

According to Njuguna (2009), through organizational learning a firm can develop hard to imitate knowledge resources and capabilities (human capital as well as organizational capital) that create value which intern leads to superior performance. Batool (2012) studies on effects of employee training on organizational competitive advantage also revealed positive relations between training and development and competitive advantage.

Gupta and McDaniel (2002) studies on knowledge management (KM) and competitive advantage established a vital link between the management of knowledge in contemporary organizations and the development of a sustainable competitive advantage. Knowledge management in this study was conceptualized in terms of organizational effectiveness, efficiency, core competency, costs; knowledge harvesting, filtering, configuration, dissemination and application.

In Kenya, knowledge management has been associated with sustainable competitive advantage. A comparative assessment of Egerton University farms and private commercial farms (Kibet et al, 2009) established that the private farms acquired and stored information for their competitive advantage from various sources compared to Egerton university farms, a situation which made the private firms to be more competitive than the university.

To sum up, conceptually and empirically, resources are the foundation for attaining and sustaining competitive advantage and eventually superior firm’s performance. Thus this study examined the following hypothesis:
There is no statistically significant relationship between knowledge management and sustainable, competitive advantage.
Relationship between network expansion and sustainable competitive advantage

According to Cook and Emerson (1978), a network comprises a set of connections with different organizations, including customers, suppliers; competitors, or public research institutions. Relationships are linked with each other and thus create a wider network. On the other hand, the network expansion capability is defined as an improvement of ability to use inter-firm relationship to share various resources with various partners, such that firms with increased dynamic capabilities will have stronger ability of learning from partners, incorporating external information and converting it into firm-embedded knowledge (Wang and Ahmed, 2007).

Networks help firm to expand network capability in order to cope with the increasing environment dynamism. Networking capability is a firm’s “ability to develop and utilize inter-organizational relationships to gain access to various resources held by other actors in the market” (Walter et al., 2006). Thus resources and capabilities advance intra-organizational and reciprocal exchange between different firms. In addition, there is a need to maintain cooperative agreements crucial for access to external resources and capabilities. Strategic planning for this network expansion is indeed a capability that is crafted uniquely by an organization depending on the prevailing culture (Khalifa and Liu, 2003). Pichai and Pharuke, 2009, established that there is a positive relationship between dynamic capabilities and network capability expansion; and that the relationship between dynamic capabilities and network capability expansion is mediated by situational change strategy.

In the current era of ICT, network expansion is highly supported if a firm embraces this innovation to enhance its capability. Dehning and Stratopoulos (2003) looked at determinants of sustainable competitive advantage due to an IT-enabled strategy. The study examined factors that are believed to lead to a sustainable competitive advantage due to an IT-enabled strategy. Findings showed that managerial IT skills are positively related to sustainability; and competitors’ knowledge of competitive advantage is negatively related to sustainability.

In another study, Maringa and Leah (2011), focused on the use of ICT in Kenya hotels that resulted in improved performance. The study showed that hotels gain competitive advantage through the application of information and communication technology.

These arguments and empirical studies lead this study to hypothesize that:

There is no statistically significant relationship between network expansion and sustainable competitive advantage.

Relationship between marketing capability development and sustainable competitive advantage

Day, 1994, defines marketing capability as the integrative methods intended to apply the shared knowledge, skills, and resources of the firm to meet market needs of the industry, enabling the business to add value to its goods and services and to meet competitive demands. For purposes of this study, marketing capability development will be considered as the firm’s ability to expand and adjust marketing capabilities to meet customers’ needs as opposed to the creation of new products.

Firm strategy is key to the development of various capabilities in the face of a changing environment (Wang and Ahmed, 2007). Marketing development capability is one of the dynamic capabilities that indirectly contribute to increased firm output as ingrained in the operational activities (Helfat and Peteraf, 2003). In fact, Nielsen (2006) observed that dynamic capabilities are a vehicle for developing organizational capabilities of the firm (including marketing). Inherently, dynamic marketing strategy swiftly applies resources to improve market position and a willingness to engage in competition, including analyzing and targeting competitors (Lumpkin and Dess 1996). In an additional view, Schmid and Schurig, 2003 indicated that marketing capability development is driven by firms’ contextual change strategy.

A significant model developed for higher education institutions emanates from Mazzarol and Soutar (1999); in their study on sustainable competitive advantage for educational institutions. In this study, variables that strengthen the competitive advantage of an education institution within an international market include: the institutions’ quality image, the institutions’ market profit, coalition formation, the degree of forward integration into the expert channel, the organizational expertise and quality staff, the possession of a client oriented/innovative culture and the effective use of information technology. The model demonstrated that marketing strategy dynamism in terms of
integration of internal, external and foreign strategy has positive relationship with competitive advantage in short run and sustainable competitive advantage in the long run.

As such, these views lead to the formulation of the null hypothesis that:

*There is no statistically significant relationship between marketing capability development and sustainable competitive advantage in Kenyan universities.*

In higher education, quality assurance mechanisms take different paths including internal and external methods. In previous studies; quality assurance mechanisms have mainly adopted Total Quality management (TQM) system as a vehicle to sustainable competitive advantage. For instance, Deming (1982) defined the objective of TQM to be the development of a sustainable efficiency expressed in cost reduction and customer satisfaction.

More so, it has been widely established in the management works that TQM strategy has a substantial role in building the competitive advantage of a firm as supported by superior financial performance (Lemak *et al.*, 1997). TQM strategy boosts the competitive advantage of an organization through the additional values to the customers (Kroll *et al.*, 1999).

Externally, TQM strategy aids in establishing an effective direct connection with the customers. TQM strategy emphasizes on human resources practices and this ensures that the employees will be continually trained and empowered to improve their participation and to gain their commitment. In effect these practices will lead to operative socialization linkages and knowledge sharing and in turn effect sustained competitive advantage (Al-Swidiand Mahmood, 2011).

In a recent study by Awino *et al.* (2012) on total quality management and competitive advantage of firms in the horticultural industry in Kenya, it was confirmed that Total Quality Management (TQM) has a strong and positive impact on competitive advantage. It was discovered that the level of implementation of TQM is low and those certified companies/institutions (1S0 9001) do not understand the philosophy behind quality management, and therefore cannot implement it effectively.

It can be determined from the literature of quality management that there is no empirically confirmed evidence that TQM implementation leads to competitive advantage in Kenyan universities. Hence, the need to study this construct further by testing the hypothesis:

*There is no statistically significant relationship between quality assurance mechanisms and sustainable competitive advantage in Kenyan universities.*

**Conceptual Framework**

The conceptual model for this study was adapted from Michael Porter’s model of 1998. This model integrated the Resource Based View and Dynamic Capabilities ideas in explaining the determinants of competitive advantage. Thus, in this study, sustainable competitive advantage in universities was the dependent variable while strategic factors, initial conditions, managerial choice and drivers were the independent variables. Moderator variables were quality assurance mechanisms and organizational culture. Informed by the existing theory and results from empirical studies, the predicted relationship was that the identified independent variables may have a positive and significant relationship with the dependent variable. The relationship between these variables is conceptualized in figure 1.

**RESEARCH METHODOLOGY**

The underlying epistemology of this research was positivist which focused on examining earlier established theories under the assumption that reality is objectively given and can be described by measurable properties independent of the observer and his instruments.

The study used descriptive and explanatory designs conducting quantitative analysis. The study was done in fifty four (54) public and private chartered universities in Kenya. The target population was all the senior managers in fifty four (54) chartered universities in Kenya.

A census survey was used since all the universities were studied. The total number of 54 private and public universities was manageable within the researchers’ available time and financial resources. In addition, six key senior managers in each of these universities were purposefully selected to respond to a questionnaire making the total respondents equal to 324. The key managers were purposively selected because they run day to day managerial activities and thus have
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Figure 1: Strategic factors influencing sustainable competitive advantage in Kenyan universities

- a better understanding of the status of the institutions. In the study, these included: the Vice chancellor as the CEO (or on his/her behalf deputy vice chancellor academics), Dean of a school/Head of a Department), the Director Finance, the Director Human Resources, the Director Marketing and the Director Quality Assurance.

- The researcher used questionnaires which were administered to six managers in each of the fifty four universities in Kenya. The study adopted structured closed ended questions and a five-point Likert Scale. The questionnaire had a cover letter introducing the researcher and the title of the research to the respondents, a brief on the purpose of the study and assurance of adherence to ethical and legal issues in research. The study instruments were tested and refined on the basis of a pilot test exercise.

Reliability Measures

Reliability estimates are used to evaluate (1) the stability of measures administered at different times to the same individuals or using the same standard (test–retest reliability) or (2) the equivalence of sets of items from the same test (internal consistency) or of different observers scoring a behavior or event using the same instrument (Kimberlin and Winterstein, 2008).

Piloting of the study instruments was done using second year Master of Business Administration at Kenya Methodist University whose pre-requisite experience, knowledge and previous skills in management are a requirement for admission.

In this study, tools which were used by other researchers to measure sustainable competitive advantage (Weerawardena, 2003, Day and Wesley’s 1988) were adapted. Organizational dynamic capability measures were adapted from (Gibson and Birkinshaw’s 2004, Lane, Koka and Pathak, 2006 and Wang and Ahmed 2007). Cronbach’s alpha (a function of the average inter-correlations of items and the number of items in the scale) was used in this study to measure internal consistency of questionnaire items. The study tools were accepted since they yielded a coefficient of 0.75. This was acceptable since it indicates satisfactory internal consistency reliability (Nunnally and Bernstein, 1994).

Validity Measures

Validity is often defined as the extent to which an instrument measures what it purports to measure (Davies and Dodd, 2000; Mishler,
According to Joppe (2000), validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are. In other words, does the research instrument allow you to hit "the bull’s eye" of your research object? Four categories of validity were addressed in this study: construct validity, content validity, criterion validity and external validity.

Construct validity is normally evidenced if we can establish convergent, discriminant and nomological validities in a study as it was the case in this particular study. In addition, the literature review cited a number of studies from which the study instruments were adapted meaning theoretically the study components are supported. Convergent validity was established through correlation coefficients which seemed to point at the same trend of results as other previous studies and this is discussed in the results of the study objectives in chapter four and five. Nomological validity which is about theoretical soundness was established through Pearson’s’ moment correlation matrix for constructs yielding an acceptable coefficient ($r=0.76$). Discriminant validity was checked by testing the study items using Orthogonal varimax rotation method in factor analysis. Only factors with Eigenvalue loading greater than 1.0 were extracted.

Content validity addresses how well the items developed to operationalize a construct provide adequate and representative sample of all the items that might measure the construct of interest. The content validity of this study was determined by first discussing the items in the instrument with the supervisors, and research experts who indicated against items (with a rating scale of 1-4) whether it measured what it was meant to measure or not in relation to the research objectives. Content validity index of 0.802 was computed. Neuman (2000) recommends a content validity index of above 0.5, indicating that the validity of the instrument was acceptable.

Criterion validity provides evidence about how well scores on the new measure correlate with other measures of the same construct or very similar underlying constructs that theoretically should be related. As such, in this study criterion validity was checked by application of correlation using SPSS software giving acceptable Pearson correlation coefficient of 0.75.

External validity considers the extent to which study results can be generalized to theory. In this study constructs hypothesized in other studies were used (Phichai and Pharuke, 2009) and in fact were developed from existing theories (RBV and CA).

The study hypothesis testing was done using multiple regression analysis.

**DISCUSSION OF STUDY RESULTS AND FINDINGS**

**Findings**

The findings of the study were analysed with the use of Statistical Package for Social Sciences (SPSS) version 18. Both descriptive and inferential statistics were used to analyse qualitative and quantitative data. Descriptive statistic indices that were used to describe variable characteristics included measures of central tendency specifically mean and measures of dispersion precisely standard deviation. In order to analyze relationships between variables, bivariate correlations using Pearson’s’ product moment correlation was used. The moderating effect of quality assurance mechanisms between strategic factors and sustainable competitive advantage was tested using stepwise regression analysis. Multiple regression and stepwise regression analysis was used to test the predictive power of the hypothesized model.

**Model formulation and estimation**

This study was assumed a linear model based on knowledge from reviewed literature on the relationship between sustainable competitive advantage and strategic factors (initial factors, managerial choices and strategic drivers). Sustainable competitive advantage was assumed to be a function of strategic factors:

$$SCA = f(\text{strategic factors})$$

$$y = f(\chi_i, \beta)$$

Where; $\beta$ is the intercept

$\chi_i$ the independent variables

$y$ the dependent variable

Thus, the regression model is

$$y=\beta_0+\beta_1 \chi_1+\beta_2 \chi_2+\beta_3 \chi_3+\varepsilon........(1)$$

It is assumed that the error $\varepsilon$ is independent with constant variance (homoscedastic).

Where;

$\chi_1$ is the strategic drivers,

$\chi_2$ is initial factors

$\chi_3$ is managerial choices

$\beta_0$ is $y$ - intercept and

$\varepsilon$ is extraneous variables (error).
However, the relationship between strategic factors and sustainable competitive advantage is moderated by quality assurance mechanisms.

First the regression model for the moderating effect of quality assurance is formulated as follows:

\[ y = a_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 z + \varepsilon \]  

Where; 
\( a_0 \) is the least squares estimate of the intercept 
\( b_1 \) is the least squares estimate of the population regression coefficient for strategic factors 
\( z \) is a moderating variable - quality assurance mechanisms 
\( b_2 \) is the least squares estimate of the population regression coefficient for \( z \) 
\( x_1, x_2, x_3 \) are the strategic factors 
\( y \) is the dependent variable - sustainable competitive advantage 
\( \varepsilon \) is the error estimate

In order to test for Moderated Multiple Regression (MMR), another equation is formed by creating a new variable that is, the product between the predictors and then include it in the regression model;

\[ y = a_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 z + b_5 (x_1 z) + \varepsilon \]  

Thus the coefficients of determination (squared multiple correlation coefficients \( R^2 \)) are compared for equations 2(i) \( R_1^2 \) and 2(ii) \( R_2^2 \); and 3(i) \( R_1^2 \) and 3(ii) \( R_2^2 \) respectively.

The null hypothesis tested: \( H_0: \psi_2^2 \cdot \psi_1^2 = 0 \) which is also written as \( \psi^2 = 0 \).

This hypothesis tested if the product term to the regression equation in each case improves the proportion of explained variance in \( y \), hence it answers whether the moderating effect of \( z \) helps to improve the prediction of \( y \) above the first order effects. Essentially this tries to explain the effect of the addition of the product term or if it improves the fit of the model predicting \( y \).

In order to test the \( H_0: \psi_2^2 \cdot \psi_1^2 = 0 \) for the moderating variable, an F statistic was computed with an acceptable level of significance of 5 per cent and degrees of freedom determined as: \( k_2 - k_1 \) and \( N - k_2 - 1 \).

Model Assumptions
The postulated regression model made various assumptions. Specifically, the assumptions of linearity, reliability of measurement, homoscedasticity, and normality was of the essence.

In order to resolve violations of assumptions and outliers, the researcher first ran regression using all the data. Secondly, testing of the dependent variable for normality was done. If it did not meet the criteria for normality without transformation, substitution with the transformed variable in the remaining tests that required use of the dependent variable was effected. Thirdly, testing for normality, linearity, homoscedasticity using scatter plots was done followed by substitution of transformations and ran a regression entering all independent variables.

Response Rate
A total of 324 questionnaires were given out to managers of fully registered universities in Kenya out of which 320 were returned giving a response rate of 98.77 per cent. According to Mugenda and Mugenda (1999) a 50 per cent response rate is adequate, 60 percent good and above 70 percent is rated as very good. Based on this assertion the response rate for this study can be said to be very good at 98.77 percent.

Piloting, data cleaning and factor analysis
A factor analysis was conducted to isolate the factors that significantly influence sustainable competitive advantage in Kenya universities. Descriptive statistics (Mean and standard deviation) derived both after pilot study and after data collection imply a normal distribution which is good for analysis using the methods of data analysis stated in this study.

Factor analysis was done using the principal component extraction method as deduction from theory points that these factors are independent. The objective was to determine whether strategic factors had relationship between each other and also to avoid extreme multicollinearity. The correlation matrix after data collection showed a determination of 0.578 meaning multicollinearity was not a problem. It was also noted that there were no cases of singularity (\( R > 0.9 \)) in the correlation matrix. In addition, there were no cases of variables that do not relate (\( R < 0.00 \)).

Under strategic drivers, factor analysis indicated that this factor explains (50.96 per
Descriptive Results
The study analysed background data to verify information in relation to existing reality and literature. Aspects analysed and discussed in this subsection included: the age of the institution, main campus location, type of leadership, type of university, quality of facilities, years the respondent had worked in the institution and position of the respondent. Statistics of all the background aspects showed theoretical soundness in their use for reliable information.

Strategic factors-drivers
As indicated earlier, the strategic drivers were considered as dynamic capabilities that include: Knowledge management improvement, entrepreneurial expansion and Networking expansion.

The study found it vital to determine the influence of innovative-entrepreneurial capability, marketing capability development, networking and ICT expansion and knowledge management as the strategic drivers on the sustainable competitive advantage. Entrepreneurial Orientation (EO) in the past literature has been reported to have a positive impact on the firm success. Inherently, Entrepreneurial behavior had more propensity to seek innovative future prospects and enhance competitive advantage.

From the study findings the respondents agreed with the statement of the willingness to take risks into new ventures by the institutions as indicated by (Mean = 2.38, SD = 1.20). The respondents also agreed when asked if their institutions developed new products more rapidly than competitor as indicated by (Mean = 2.79, SD = 1.16). The respondents neutral to the statement that firms have inertia in exploiting emerging opportunities (Mean = 3.51, SD = 1.09). They further disagreed that their institutions embrace technology to speed up/expand entrepreneurial activities as indicated by (Mean=3.45, SD = 1.09). This implies that some universities are willing to take risks into new ventures and embraces technology to speed up/expand entrepreneurial activities and involved in developing new products rapidly than competitors and the inertia in exploiting emerging opportunities. Fundamentally, innovation is central to entrepreneurship and leads to sustainable development of an organization (Miller, 1983; Lumpkin and Dess, 1996).

Other researchers (for example, Al-Swidi and Mahmood, 2011b; Ramadan, 2010), have reaffirmed that Entrepreneurial Orientation (EO) adds a value to any organization due to its emphasis on solutions to customers' dissatisfaction. Lumpkin and Dess, 1996 alluded that Entrepreneurial Orientation can improve the competitive strategic position of an organization and if the opportunities for value-creation are taken into consideration to create the desired competitive advantage over its rivals (Hamel and Prahalad, 1989).

The study further sought to measure the influence of marketing capability development as a strategic driver on sustainable competitive advantage in universities.

The study findings indicate that majority of the universities were neutral when asked if they deliberately invested in new markets as indicated by (Mean = 2.90, SD =1.42). The findings further indicated that there was an agreement with the statement that universities had effective personnel in marketing (Mean = 2.39, SD =1.30). The majority of the respondents also disagreed with the statement that universities are good at setting strong financial support in marketing as indicated by (Mean = 2.71, SD =1.29). This depicts that in terms of marketing capability development, most universities did not engage in activities related to sustainable competitive advantage to their full potential. Firm strategy is key to the development of various capabilities in the face of a changing environment (Wang and Ahmed, 2007).

Marketing development capability is one of the dynamic capabilities that indirectly contribute to increased firm output as ingrained in the operational activities (Helfat and Peteraf, 2003). In fact, Nielsen, 2006
observed that dynamic capabilities are a vehicle for developing organizational capabilities of the firm (including marketing). Inherently, dynamic marketing strategy swiftly applies resources to improve market position and a willingness to engage in competition, including analyzing and targeting competitors (Lumpkin and Dess, 1996). In an additional view, Schmid and Schurig, (2003) indicated that marketing capability development is driven by firms’ contextual change strategy.

As regards Networking and ICT expansion, the study findings indicate that universities have the ability to develop and use inter-organizational relations to access resources as indicated by (Mean = 2.72, SD = 1.47). Further majority also agreed that universities have mutual trust and commitment among partners as indicated by (Mean = 2.77, SD = 1.32). Majority of the respondents also agreed with the statement universities have enabled access to data mines as indicated by (Mean = 2.3, SD = 1.13). The respondents however were neutral that there was sharing of knowledge and technology expertise (Mean = 2.53, SD = 1.32), shared common language/media for communication (Mean = 3.03, SD = 1.25) and adequate bandwidth, access to computers and software (Mean = 2.52, SD = 1.32). This implies that ICT expansion and development has not fully adopted in Kenyan universities and therefore considering its vital role in management related functions, the study may depict that lack of its full adoption may have contributed to low sustainable competitive advantage.

Networks help firm to expand network capability in order to cope with the increasing environment dynamism. Networking capability is a firm’s “ability to develop and utilize inter-organizational relationships to gain access to various resources held by other actors in the market” (Walter, Auer and Ritter, 2006). Thus resources and capabilities advance intra-organizational and reciprocal exchange between different firms.

In addition, there is a need to maintain cooperative agreements crucial for access to external resources and capabilities. Strategic planning for this network expansion is indeed a capability that is crafted uniquely by an organization depending on the prevailing culture (Khalifa and Liu, 2003). Pichai and Pharuke 2009, established that there is a positive relationship between dynamic capabilities and network capability expansion; and that the relationship between dynamic capabilities and network capability expansion is mediated by situational change strategy.

The study also found it important to measure knowledge management practice in Kenyan universities.

The findings indicated that majority of the respondents were neutral with the statement that there is presence of organization culture that facilitate creation and transfer of new knowledge across structural boundaries in universities as indicated by (Mean = 2.84, SD = 1.32). Further majority agreed with the statement that senior management supports the role of knowledge management as indicated by (Mean = 2.59, SD = 1.35). The respondents were neutral to the statement that people from multiple locations can learn as a group using IT as shown by (Mean = 2.73, SD = 1.44) and storage of knowledge (Mean = 2.57, SD = 1.15). The respondents agreed that universities have processes of using knowledge in developing of new products/services as indicated by (Mean = 3.25, SD = 0.76). Most universities also did not have processes to protect knowledge from inappropriate use inside/outside the organization as shown by (Mean = 3.57, SD = 1.15). The respondents disagreed with the statement that universities use knowledge management to widen the array of services without increasing costs (Mean = 3.34, SD = 0.96). This implies that the majority of the universities in Kenya have either partially or not fully adopted some activities related to knowledge management in sustaining their competitive advantage in their operations. In Kenya, knowledge management has been associated with sustainable competitive advantage. A comparative assessment of Egerton University farms and private commercial firms (Kibet et al., 2009) established that the private farms acquired and stored information for their competitive advantage from various sources compared to Egerton university farms, a situation which made the private firms to be more competitive than the university.

**Strategic factors-managerial choices**

The study also found it important to determine the relationship between managerial choices and sustainable competitive advantage in Kenyan universities taking into account factors such as type of financial management, community involvement and type of leadership with their respective influential statements. The study first sought to measure the type of
finance management in Kenyan universities. From the study findings respondents were neutral to statement that universities have clear policies on finance processes as shown by (Mean = 3.30, SD = 1.35). Finance processes easily support business operations is a statement that was agreed upon by majority of the respondents as indicated by (Mean = 2.60, SD = 1.48). Majority of the respondents neutral to the statement that universities responsibly make use of funds for designated vote heads as indicated by (Mean = 2.94, SD = 1.37). They disagreed with the statement that universities engage in income generation to hasten response to market opportunities (Mean = 3.52, SD = 1.20).

The study further sought to determine the relationship between community involvement and sustainable competitive advantage among Kenyan universities. From the study findings respondents were neutral to all statements on community engagement as: -there are established community projects (Mean = 3.38, SD = 1.05), there is participation in community activities (Mean = 3.51, SD = 0.98), offer courses to address immediate community needs (Mean = 3.29, SD = 1.00), share facilities with community (Mean = 3.35, SD = 1.09).

This implies that universities have not prioritized the aspect of community engagement and hence the neutral position by most respondents. Community involvement is a customer relationship strategy that can foster goodwill, support and more recruitment from local areas. Consistent flow of student registration becomes a priori to sustained income flow which subsequently may support other factors for sustainable competitive advantage.

Leadership in any organization is very important, the study sought to determine its influence in Kenyan universities as far as sustainable competitive advantage is concerned. From the findings majority of the respondents were neutral that university leadership involves members in decision making as indicated by (Mean = 3.50, SD = 1.07). They disagreed that their leadership is open and flexible to new ideas as indicated by (Mean = 3.50, SD = 1.29). They were also neutral that their leadership listens to staff grievances as shown by (Mean = 3.16, SD = 1.33) but disagreed that their leadership positively takes advice as indicated by (Mean = 3.54, SD = 1.24). This depicts that majority of leadership in universities is not democratic thus respondents did not conspicuously agree with the above statements on leadership style. Indeed this is a factor that may influence managerial choices and overall university strategy. These findings point to similar conclusions arising from leadership type. As such this confirms that the respondents gave honest information since these results did not contradict.

**Strategic factors-initial factors**
The study also found it important to determine the influence of initial factors on sustainable competitive advantage in Kenyan universities. The study first sought to determine the type of universities.

The study findings indicate a neutral position that majority of the universities are owned by individuals that is, Private as indicated by (Mean = 3.17, SD = 1.21). The respondents were also neutral that universities get subsidy from Government as indicated by (Mean = 3.27, SD = 1.11). They disagreed that universities also get subsidy from Church as shown by (Mean = 3.50, SD = 1.26). The respondents neutrally indicated that they get fewer students from the Joint Admissions Board having scored (Mean = 3.37, SD = 1.19).

This implies that majority of the universities in Kenya are private and moreover majority also run their own budgets through sourcing funds from alternative sources except the public universities who get subsidies from the government to meet their operations.

The study also found it of great importance to determine the quality of firm infrastructure and their influence on sustainable competitive advantage in Kenyan universities. The findings indicated that the majority were in disagreement that there is availability of modern buildings (Administration, Tuition, Labs) in their universities as indicated by (Mean = 3.64, SD = 1.15). Majority were neutral that there is adequacy of space in their universities as indicated by (Mean = 3.33, SD = 1.18). The respondents disagreed about having good conditions and Hygiene /safety in universities as indicated by (Mean = 3.57, SD = 1.16). In addition, they disagreed that there is provision of quality hospitality facilities by their universities as indicated by (Mean = 3.51 SD = 0.98).

Quality assurance was also crucial for the study and therefore it was important for the study to establish its effect on sustainable competitive advantage.

From the study findings majority agreed that
the universities have developed internal tools /reports for assessment as indicated by (Mean = 2.80, SD = 1.11). They were neutral to the statement that there is availability of External assessment reports as indicated by (Mean = 3.07, SD = 0.98). Neutrality was observed in the statement that there is an evidence Quality management system (TQM/ISO certificate) as indicated by (Mean = 2.71, SD = 1.07). Integration of IT with quality assurance procedures was neutral a statement that majority rated it neutral in the universities as indicated by (Mean = 2.87, SD = 1.01). There was evident disagreement (Mean = 3.45, SD = 1.01) to the aspect of budgetary allocation to Quality mechanisms. More so, it has been widely established in the management works that TQM strategy has a substantial role in building the competitive advantage of a firm as supported by superior financial performance (Lemak et al., 1997). TQM strategy boosts the competitive advantage of an organization through the additional values to the customers (Kroll et al., 1999).

Further the study sought to determine the different leadership styles used in the universities. From the study findings majority of the respondents indicated agreement that universities have mentoring, facilitating and nurturing as indicated by (Mean = 1.2844, SD = 0.06). Further majority of the respondents indicated that leaders are entrepreneurial, innovative, risk taking as indicated (Mean = 2.21, SD = 0.02). Majority agreed that their leaders are no-nonsense, aggressive, results oriented as indicated by (Mean = 2.29, SD = 0.86). Coordinating, organizing, efficiency oriented was agreed by a majority of the respondents as indicated by (Mean = 1.17, SD = 0.86).

**Measurement of sustainable competitive advantage**

The study sought to establish the relationship between strategic factors, quality assurance mechanism, organizational culture and sustainable competitive advantage. First the study found it of paramount to establish the relationship between knowledge management capability and sustainable competitive advantage.

The study findings indicates that majority agreed with the statement that knowledge management capability is a strategy for sustainable competitive advantage in their institution and is valued by all as indicated by (Mean = 2.84 SD = 1.13). There was agreement with the statement that in relation to my institution competitors, this strategy is rare as indicated by (Mean = 2.85, SD = 1.03). There was also agreement with the statement that competitors cannot easily imitate my institutions ‘approach to knowledge management as indicated by (Mean = 2.47, SD = 1.03). Further, majority agreed with the statement that their institutions’ approach to knowledge management is superior and cannot be substituted as indicated by (Mean =2.55, SD= 1.24). It can therefore be deduced that Knowledge management capability is one of the strategies used by universities to gain competitive advantage.

The study further sought to establish the relationship between information technology integration in marketing, entrepreneur and knowledge management process and sustainable competitive advantage. The study findings indicate that a majority of the respondents agreed information technology integration in marketing, entrepreneur and knowledge management process is a strategy for sustainable competitive advantage in my institution and is valued by all as indicated by (Mean = 2.48, SD = 1.29). Further majority were neutral to the statement that in relation to my institution competitors, information technology integration in marketing, entrepreneur and knowledge management process strategy is rare as indicated by (Mean 2.74 =, SD = 1.42). Moreover respondents agreed that competitors cannot easily imitate my institutions ‘approach to information technology as indicated by (Mean = 2.35, SD = 1.27). Majority were also neutral to the statement that their institutions” approach to information technology is superior and cannot be substituted as indicated by (Mean = 3.15, SD = 1.23). It therefore emerges that innovative entrepreneurial capability development is used as a sustainable competitive advantage strategy.

Additionally, the study sought to establish the relationship between marketing process and sustainable competitive advantage.

From the study findings respondents were neutral that marketing capability development is a strategy for sustainable competitive advantage in their institution and is valued by all as indicated by (Mean = 3.04, SD =1.26). Further majority neutrally indicated that in relation to their institution competitors, this strategy that is, of marketing capability development is rare as indicated by (Mean = 3.19, SD = 1.11). Further respondents agreed
that competitors cannot easily imitate their institutions’ approach to infrastructure and their approach is superior as indicated by (Mean = 2.49, SD = 1.11) and (Mean = 2.74, SD = 1.32) respectively. In general these results indicate that the aspect of marketing capability development is not strongly agreed upon as a strategy for sustainable competitive advantage.

The study sought to measure sustainable competitive advantage as relates to quality assurance mechanisms. The study findings indicated that majority were in disagreement that quality assurance/quality management system is a strategy for sustainable competitive advantage in their institution and is valued by all as indicated by (Mean = 4.33, SD = 1.04). Majority of the respondents agreed that in relation to their institution competitors, this strategy is rare as indicated by (Mean = 1.31, SD = 0.99). As far as quality assurance/quality management system is concerned, the majority of the respondents also agreed that competitors cannot easily imitate their institutions’ approach to Quality assurance is as indicated by (Mean = 1.49, SD = 0.10). Majority also agreed with the statement that their institutions’ approach to Quality assurance is superior and cannot be substituted as indicated by (Mean = 1.48, SD = 0.03). These results point to general agreement that quality assurance mechanisms have been crafted but not as a strategy for competitive advantage.

The study also sought to determine the relationship between quality infrastructure and sustainable competitive advantage.

From the study findings majority agreed that quality infrastructure is a strategy for sustainable competitive advantage in their institution and is valued by all as indicated by (Mean = 2.55, SD = 1.14). Further majority agreed that in relation to their institution competitors, this strategy that is, quality infrastructure is rare as indicated by (Mean = 2.74, SD = 1.15). Further majority were neutral that competitors cannot easily imitate their institutions’ approach to infrastructure as is indicated by (Mean = 3.33, SD = 1.17). Respondents were neutral that their institutions” approach to infrastructure is superior and cannot be substituted as indicated by (Mean = 2.99, SD = 1.072). These results imply that university managers have identified provision of quality infrastructure as a strategy to create a sustained competitive edge.

Community involvement is crucial as a corporate social responsibility in any organization and therefore the study sought to determine its relationship with the organizations’ sustainable competitive advantage. The study findings clearly indicate that majority of the respondents were neutral (all means range between 3.22 and 3.38) about all the aspects concerning community involvement and sustainable competitive advantage. This implies that university managers do not strongly embrace community involvement as a strategy for sustainable competitive advantage.

Type of finance management was measured as another aspect in relation to sustainable competitive advantage. The findings showed that majority were neutral that this is a strategy for sustainable competitive advantage in their institution and is valued by all as indicated by (Mean = 2.74, SD = 1.32). Majority agreed that in relation to their institution competitors, this strategy is rare as indicated by (Mean = 2.39, SD =1.20). The study neutrally indicated that competitors cannot easily imitate their institutions’ approach to finance management as indicated by (Mean = 2.82, SD =1.14). Further respondents were also neutral that their institutions” approach to finance management is superior and cannot be substituted as indicated by (Mean = 3.29, SD =1.22).

Type of leadership is crucial in any organization and therefore the study sought to determine its relationship with the organizations’ sustainable competitive advantage.

The study findings indicates that majority of the respondents were neutral that type of leadership is a strategy for sustainable competitive advantage in their institution and is valued by all as indicated by (Mean = 3.24, SD = 1.43). The respondents were in agreement that in relation to their institution competitors, type of leadership strategy is rare as indicated in Table 4.27 by (Mean = 1.40, SD = 0.22). They also agreed with the statement that competitors cannot easily imitate their institutions’ approach to leadership as indicated by (Mean = 1.23, SD = 0.27). However majority were neutral that their institutions’ leadership is superior and cannot be substituted as indicated by (Mean = 3.47, SD = 0.53). From these results it implied that type of leadership is not a strongly identified strategy for sustainable competitive advantage, an aspect that can affect
organizational culture, managerial choices and intertwiningly, the strategic drivers. The study also found it of essence to determine University Age in relation to organizations’ sustainable competitive advantage. The findings indicates that majority of the respondents were neutral that this is a strategy for sustainable competitive advantage in their institution and is valued by all as indicated by (Mean = 3.58, SD = 0.90). The respondents on the other hand disagreed that this strategy is rare as indicated by (Mean = 2.69, SD = 1.40). There was neutral opinion that competitors cannot easily imitate their institutions’ approach (Mean = 2.79, SD = 0.19). There was also neutral position that their institutions’ age is superior as a sustainable competitive advantage approach and cannot be substituted as indicated by (Mean = 3.23, SD = 1.20). Essentially, the results tend towards a general neutral position indicating that the age of an institution is not necessarily a strategy for SCA. Rather this may be foreseen as an added advantage as it gives opportunity for university establishment.

In general, it can be summarized that universities have reasonably identified the following aspects as strategy for SCA: use of Innovation initiatives Institutionalization of Quality management system, Development of knowledge management systems, Development/nurturing of unique competencies, Offer of unique Courses and Flexibility to meet market needs. On the other hand, universities have to some weak extent embraced the following aspects: Research and publication Collaborations, Opening of centers and campuses, Development of IT infrastructure Scholarships/sponsorships for students/staff, Income generating activities or fund raising strategies Strategic planning/implementation/Monitoring and Evaluation, Formation of working teams and Leadership training and development. Finally the respondents did not embrace the following aspects as strategy for SCA: Community projects and Environmental preservation.

In a nutshell there were emergent strategies apart from the ones addressed in this study. These include: Development/nurturing of unique competencies, Offer of unique Courses and Flexibility to meet market needs.

Cross tabulation
The researcher conducted a cross tabulation between the background data and the study variables and the results showed that the location of the main campus, types of facilities, type of leadership, university type, quality of facilities, position of person filling the questionnaire and years worked in that institution had confounding effect on the study variables since their P-Value was less than 0.05.

However, age of the institution did not have an effect on the study variables since its P-Value against the study variables was more than 0.05 although it had an effect on the managerial choice having scored a P-Value of less than 0.05. This implies that well established universities in terms of age make better choices of managerial choices than newly established institutions when it comes to financial management and leadership.

Main campus location had an effect on managerial choices and initial factors having scored a P-Value of 0.000 and 0.010 respectively. This explains that main campus location affects the financial management in terms of income generation to hasten response to market opportunities and quality of firm infrastructure.

Associations between sustainable competitive advantage and the study variables
The researcher conducted a Pearson’s product moment correlation analysis for all the study variables to establish their relationships. Pearson’s product moment correlation tests were chosen in order to assess whether there is a relationship between the study variables. There existed a strong and positive correlation between strategic factors-drivers and sustainable competitive advantage with a correlation coefficient of 0.623 at precision level of 99per cent, and 0.686 at precision of 95per cent. This meant that strategic factors-drivers were statistically significant to the study.

There also existed a strong and positive correlation between managerial choices and sustainable competitive advantage having scored a correlation coefficient of 0.587 at precision level of 99per cent, and 0.652 at precision level of 95per cent. This meant that
Table 1: Model summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension 1</td>
<td>.755*</td>
<td>.570</td>
<td>.566</td>
<td>9.38179</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Initial factors, Strategic Drivers, Managerial Choices

Table 2: Analysis of variance

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>3</td>
<td>12270.569</td>
<td>139.410</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>315</td>
<td>88.018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>318</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Initial factors, Strategic Drivers, Managerial Choices

Table 3: Coefficients of determination

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>43.31</td>
</tr>
<tr>
<td></td>
<td>Strategic Drivers</td>
<td>.402</td>
</tr>
<tr>
<td></td>
<td>Managerial Choices</td>
<td>.339</td>
</tr>
<tr>
<td></td>
<td>Initial factors</td>
<td>.622</td>
</tr>
</tbody>
</table>

Dependent Variable: NEWSCA

initial factors were statistically significant to the study. A positive correlation between quality assurance mechanism and sustainable competitive advantage with a correlation coefficient of 0.536 at precision level of 95 per cent was found. This meant that quality assurance is statistically significant to the study. There also existed a fairly strong and positive correlation between organizational culture and sustainable competitive advantage having scored a correlation coefficient of 0.508 and a significance level of 0.05. This correlation was statistically significant to the study. The combined strategic factors were related to sustainable competitive advantage and yielded a correlation coefficient of 0.752 at a precision of 95%.

Factors influencing sustainable competitive advantage and model estimation

A multivariate regression model was applied to determine the relative importance of each of the five variables with respect to sustainable competitive advantage.

Using the enter method, a significant model emerged ($F_2, 315 = 139.410, p < 0.0005$) adjusted R square of = 0.566. The resulting model is presented in table 1.

From table 1, the adjusted R square value tells that the model accounts for 60 per cent variance in SCA.

From table 2, it can be deduced that the overall model was significant since p value was less than 0.05.

Judging from the standardized coefficients in table 3, it can be seen that strategic drivers had the greatest influence ($b=0.435$) towards sustainable competitive advantage, followed by initial factors ($b=0.286$) and finally managerial choices ($b=0.23$). They all had a P-Value of less than 0.05 and therefore found to be significant to the model.

Stepwise regression analysis

These results indicate that addition of quality assurance mechanisms to the model significantly and positively influences it. Thus the strength of the relationship between strategic factors and sustainable competitive advantage is positively and significantly moderated by quality assurance mechanisms. The null hypothesis that the strength of the relationship between sustainable competitive advantage and strategic factors is not positively moderated by organizational culture in Kenyan universities is then rejected. Conclusion is then made that the strength of the relationship between strategic factors and sustainable competitive advantage is positively and significantly moderated by Quality assurance mechanisms.
Research on Total Quality Management (TQM) as a quality management mechanism was done by Wruck and Jensen in 1998 and concluded that TQM strategy aids in establishing an effective direct connection with the customers. This, in turn, leads to satisfied and loyal customers, an aspect that can ensure sustained flow of income to support strategy implementation. Al-Swidi and Mahmood in 2011 also arrived at a similar stance that TQM practices will lead to operative socialization linkages and knowledge sharing and in turn effect sustained competitive advantage.

Awino et al. (2012) worked on total quality management and competitive advantage of firms in the horticultural industry in Kenya, it was confirmed that Total Quality Management (TQM) has a strong and positive impact on competitive advantage. The findings of this study do not negate these earlier findings.

**DISCUSSION**

The key findings according to objectives and hypothesis of the study are explained as here below:

**Relationship between of strategic driv ers and sustainable competitive adv antage in kenyan universities**

The researcher’s first objective was to examine the relationship between strategic drivers and sustainable competitive advantage in Kenyan universities. From the study findings, the correlation analysis established that there existed a strong correlation between strategic drivers and sustainable competitive advantage in the Kenyan universities having scored a correlation coefficient of 0.686 at a precision level of 95 per cent.

This is an indication that Entrepreneurial Orientation (EO), knowledge management capability development, Network/ICT expansion and marketing capability development are indeed predictors of sustainable competitive advantage in Kenyan Universities. Markedly, this is consistent with the work of Keh et al., 2007 that Entrepreneurial behavior has more propensity to seek innovative future prospects and enhance competitive advantage. Al-Swidi and Mahmood, (2011b) reaffirmed that Entrepreneurial Orientation (EO) add a value to any organization due to its emphasis on solutions to customers’ dissatisfaction.

Therefore the study findings reject the hypothesis that there is no statistically significant relationship between Entrepreneurial expansion and sustainable competitive advantage in Kenyan universities.

Consistency is also observed as regards the study findings and prior studies on Knowledge management capability. According to Njuguna (2009), through organizational learning a firm can develop hard to imitate knowledge resources and capabilities (human capital as well as organizational capital) that create value which intern leads to superior performance. Gupta and McDaniel (2002) studies on knowledge management (KM) and competitive advantage established a vital link between the management of knowledge in contemporary organizations and the development of a sustainable competitive advantage. Kibet et al., 2009 in his comparative study on Egerton university farm versus private farms also eluded to this conclusion hence the study findings reject the hypothesis that there is no statistically significant relationship between knowledge management and sustainable, competitive advantage.

Walter, Auer and Ritter, 2006 purported that Networking capability is a firm’s “ability to develop and utilize inter-organizational relationships to gain access to various resources held by other actors in the market which is in line with Wang and Ahmed, 2007 position that firms with increased dynamic capabilities will have stronger ability of learning from partners, incorporating external information and converting it into firm-embedded knowledge. The study finding of strong relationship between networking/ICT capability and SCA is an add on to these previous studies (including works of Dehning and Stratopoulos 2003; Maringa and Leah 2011). To this end the study findings indeed reject the hypothesis that there is no statistically significant relationship between network expansion and sustainable competitive advantage.

The study also evidently found out that there is a significant relationship between marketing capability development and SCA. This is also consistent with reviewed literature on previous studies (Wang and Ahmed, 2007; Helfat and Peteraf, 2003; Lumpkin and Dess 1996; Mazzarol and Soutar 1999). As such the study findings imply that the hypothesis that there is no statistically significant relationship between marketing capability development and sustainable competitive advantage in Kenyan universities is rejected.
The concluded finding is coherent with previous studies conducted by Prahalad and Hand (1990) and Leonard-Borto (1992) on core capabilities. They concluded that strategic resources such as core competencies are those which create sustainable competitive advantage (SCA) and lead the organization to above-normal performance. In agreement to this stance was Barney (1991) study that poised competitive advantage as a function of a set of firm – specific resources and capabilities that are valuable, rare, and imperfectly imitable and for which there are no commonly available substitutes (VR1S) or VRIO - Value, rareness, inimitability, and organizational support.

Halawi et al. (2005) also ascertained that sustainable competitive advantage is dependent on building and exploiting core competencies. Thus Knowledge is seen as strategic asset with the potential to be a source of competitive advantage for an organization. On aspect of knowledge management, other researchers (Mohammad et al., 2011; Batool, 2012); Gupta and McDaniel (2002) who have studied the aspects of capabilities made similar conclusions with this study.

Schmid and Schurig, (2003) studies indicated that marketing capability development is driven by firms’ contextual change strategy while Helfat and Peteraf, (2003) concluded that marketing development capability is one of the dynamic capabilities that indirectly contribute to increased firm output as ingrained in the operational activities. Mazzarol and Soutars’ 1999 study on sustainable competitive advantage for educational institutions arrived at a model demonstrating that marketing strategy dynamism in terms of integration of internal, external and foreign strategy has positive relationship with competitive advantage.

Relationship between managerial choices and sustainable competitive advantage in Kenyan universities

The second objective of the research was to investigate the relationship between managerial choices and sustainable competitive advantage in Kenyan universities. Based on the research findings, the correlation analysis established that there existed a very correlation between managerial choices and sustainable competitive advantage having scored a correlation coefficient of 0.642 at a significance level of 0.05. This shows consistency with the Resource Based View theory and as purported by previous studies (Barney, 1986, 1991; Teece et al., 1997) that competitiveness and performance of a firm is dependent on its valuable, rare, imperfectly imitable, and non-substitutable resources. Managerial choices and initial conditions of universities as defined in this study can be viewed as organizational resources and capabilities that constitute a main source of the competitive advantage. To this end, the study findings lead to the rejection of the Hypothesis that there is no statistically significant relationship between managerial choices and sustainable competitive advantage in Kenyan universities.

The study findings seem to agree with other studies that Managerial choices are also inherent in firms’ dynamic and unique capabilities. For instance, this is in tandem with porters’ 1998 dynamic theory of strategy that appropriately adapting, integrating, and re-configuring internal and external organizational skills, resources, and functional competencies toward a changing environment edges towards competitive advantage. Dehning and Stratopoulous (2003) also arrived at the conclusion that managerial IT skills are positively related to sustainability.

Relationship between initial firm conditions and sustainable competitive advantage in Kenyan universities

The third objective of the research was to appraise the relationship between initial firm conditions and sustainable competitive advantage in Kenyan universities. Based on the correlation analysis, it emerged that there is a strong correlation between initial factors and sustainable competitive advantage having scored a correlation coefficient of 0.652 at a precision level of 95per cent. Similarly, as is the case of managerial choices, initial factors are also tangible capabilities that are supported by the resource based view as drivers to competitive advantage. Conclusively then the Hypothesis that there is no statistically significant relationship between initial factors and sustainable competitive advantage in Kenyan universities is also rejected.

This finding is consistent with Barney, 1986, 1991 and Teece et al., 1997 work based on resource based view that the competitiveness and performance of a firm is dependent on its
valuable, rare, imperfectly imitable, and non-substitutable resources. Wang et al. 2007 studies highlighted that in order to achieve the highest advantages of these unique resources, there should be a match between the organizational capabilities and the available opportunities (initial factors). Prahalad and Hamel, (1990) and Wernerfelt, (1984) studies poised that organizational capabilities increase the value of the available resources and help in coordination of the effective use of these resources. Similarly this study concludes that initial factors suited with unique leadership (capability), will thus lead to sustainable competitive advantage.

Since this study focused on the combined strategic factors, correlation test between strategic factors and sustainable competitive advantage was done and yielded a strong correlation coefficient of 0.752 at significance level of 0.05. This finding leads to conclusion that strategic factors have positive and significant relationship with sustainable competitive advantage.

**Objective one**
The researcher’s first objective was to examine the relationship between strategic drivers and sustainable competitive advantage in Kenyan universities. From the study findings, the correlation analysis established that there existed a strong correlation between strategic drivers and sustainable competitive advantage in the Kenyan universities having scored a correlation coefficient of 0.686 and a precision level of 95per cent. Therefore the study findings reject the hypothesis that there is no statistically significant relationship between strategic drivers and sustainable competitive advantage in Kenyan universities.

**Objective two**
The second objective of the research was to examine the relationship between strategic managerial choices and sustainable competitive advantage in Kenyan universities. Based on the research findings, the correlation analysis established that there existed a very strong correlation between managerial choices and sustainable competitive advantage having scored a correlation coefficient of 0.642 at a significance level of 0.05. To this end, the study findings lead to the rejection of the Hypothesis that there is no statistically significant relationship between managerial choices and sustainable competitive advantage in Kenyan universities.

**Objective three**
The third objective of the research was to appraise the relationship between strategic initial firm conditions and sustainable competitive advantage in Kenyan universities. Based on the correlation analysis, it emerged that there is a strong correlation between initial factors and sustainable competitive advantage having scored a correlation coefficient of 0.642 at a precision level of 95per cent. Similarly, as is the case of managerial choices, initial factors are also tangible capabilities that are supported by the resource based view as drivers to competitive advantage. Conclusively then the Hypothesis that there is no statistically significant relationship between initial factors and sustainable competitive advantage in Kenyan universities is rejected.

**Objective four**
The fourth objective was to examine the moderating effect of quality assurance mechanisms on the relationship between strategic factors and sustainable competitive advantage.

The fourth objective was to examine the moderating effect of quality assurance mechanisms on the relationship between strategic factors and sustainable competitive advantage. From the correlation analysis, it showed that there existed a strong correlation between quality assurance and sustainable competitive advantage having scored a correlation coefficient of 0.536 at a precision level of 95per cent. Deming (1982); Lemak et al., 1997 and Kroll et al., (1999) posit that TQM strategy boosts the competitive advantage of an organization through the additional values to the customers. Other studies in Kenya (Magutu et al. (2010); Awino et al., 2012) seem to support the same stance that quality management is key to better services, customer satisfaction and interwoven with strategic drivers boosts sustainable competitiveness in organizations. Thus the hypothesis that there is no statistically significant relationship between quality assurance mechanisms and sustainable competitive advantage in Kenyan universities is rejected.

**CONCLUSIONS**
Conclusions about the key findings of the study are as here below:
moderating effect of quality assurance mechanisms on the relationship between strategic factors and sustainable competitive advantage. From the correlation analysis, it showed that there existed a strong correlation between quality assurance and sustainable competitive advantage having scored a correlation coefficient of 0.536 at a precision level of 95 per cent. The study results also showed a positive and statistically strong moderating effect of quality assurance mechanisms (explained variance 1.3% (R square change); beta = 0.125 and p value < 0.05. Thus the hypothesis that the strength of the relationship between strategic factors and sustainable competitive advantage is not positively moderated by quality assurance mechanisms in Kenyan universities is rejected.

Further, the study has established that quality assurance mechanisms positively moderate the relationship between strategic factors and sustainable competitive advantage in Kenyan universities. Indeed this study posits that Universities in Kenya can achieve competitive advantage by ensuring proper quality assurance mechanisms are put in place.

Finally, the study sought to find out other strategies that universities have identified with aim of achieving SCA. From the study findings, the following factors emerged as most frequent that is, development of IT infrastructure, innovation initiatives, flexibility to meet market needs, strategic planning/implementation/monitoring and evaluation, Scholarships/sponsorships for students/staff and construction of modern physical facilities. On the other hand, the following aspects do not seem to be embraced in Kenyan universities as pivots for SCA: Unique human resource policies, Environmental preservation and Training in pedagogy.

Recommendations
This study recommends to the Ministry of Higher education the need to make as part of its policy, an inclusion of Quality assurance mechanisms as part of requirements for establishment of a university. The current practice is establishment of Quality assurance long after university is on board. For practice, the study recommends a chronological order for strategic driver implementation. As found out, Universities may start with strategic drivers (crafting strategy), then work on firm conditions (infrastructure) and use quality informed leadership for achievement of sustainable competitive advantage.

Additionally, a number of other factors were identified but not empirically tested (development of IT infrastructure, use of variety of IT media, income generating activities or fund raising strategies, training in pedagogy, innovation initiatives, development/nurturing of unique competencies, leadership training, and flexibility to meet market needs ). Further research to empirically test these factors’ influence on SCA particularly in Kenya would add more information to the body of knowledge.

Although this study has brought forth valuable findings that can positively influence university management practice. However, it had some weaknesses in regard to methodology. First, the study used cross-sectional data but longitudinal studies should provide more confidence in the study results. Secondly data was collected from single industry (universities) but this information may not be adequate to generalize in other firms or industries. Further research may explore use of more dimensions in each of the strategic factors’ clusters to increase precision in prediction of sustainable competitive advantage.

REFERENCES


