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Influence of Quality Management Systems on the Relationship between Funding Mobilization and Performance of Kenyan Public Universities

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Abstract:-*In recent years, there have been attempts to import business models from the private sector into higher education systems and institutions in an attempt to improve their performance. This has led to the emergence of a debate on the applicability of Quality Management Systems (QMS) principles, methodologies and tools to the higher education sector and their relationship with performance of those institutions. There exists a lot of research on the importance of Quality Management Systems and how it impacts on performance of organizations in general. However, there is little research that specifically focuses on the influence of QMS on the relationship between internal factors and performance of Kenyan public universities. This study sought to establish the influence of Quality Management Systems on the relationships between funding mobilization and the performance of Kenyan public universities. The study adopted a survey research design. Seven certified public sponsored universities published by the Commission for Higher Education in Kenya were sampled. Structured questionnaires were used in the collection of data. A pilot study was conducted to check for the reliability and validity of the research instruments. SPSS software was used in analyzing and interpreting data that was collected. The findings of this study demonstrated that QMS played a significant influencing role between funding mobilization and the performance of Kenyan public universities, with an 98.4% coefficient of determination (R2) rating. These results will be beneficial to a range of beneficiaries; scholars in the subject of management; researchers who will use the results as a contribution towards the advancement of knowledge in the subject area; Government officials and university management will in particular, benefit from the knowledge on the linkages between QMS and its influence on internal factors and the performance of public universities in Kenya. The study recommended that for public universities to realize the dreams of a majority of Kenyans as envisioned in Vision 2030 and the Kenyan constitution, they should proactively adopt QMS in their operations across all internal factors in order to improve their performances. The study proposed two future studies.*

Keywords: - *Internal factors, Organizational Performance, Public Universities, Quality Management Systems and Strategy*

Introduction

Evolution of QMS IN public Universities

In the last decades, several factors have contributed to raising public concern over quality of education in higher institutions of learning. This has led to the emergence of quality measurement and improvement of in the flowing areas; development of performance indicators, programme accreditation, programme and institutional assessment and quality audits. According to Redmond, Curtis, Noon and Keenane (2008), a Quality Management System in its basic concept seeks to; recognize the external quality related requirements specified in Licenses to Trade, guidelines, specified customer requirements, and the chosen management system standard(s). The authors argue that for the system to be effective, all requirements have to be documented within the management system in the appropriate location in

terms of defined specific system requirements and confirm that employees receive applicable training in the quality system requirements. Redmond et al. (2008) affirm that performance processes should be aligned, where applicable, to the quality system requirements; at the same time produce records of evidence that system requirements have been met. The authors say that measuring, monitoring and reporting the extent of compliance with those performance procedures, analyzing changes to the requirements and conformance that all changes are reflected in the specific requirements when necessary should be monitored and evaluated.

In recent years, there have been attempts to import models from the private sector into higheR education systems and institutions in the attempt to improve the performance (Sarrico, Rosa, Teixeira and Cardoso, 2010). This move has led to the emergence of a debate on the applicability of quality management systems, methodologies and tools in the higher education sector. Several voices have been heard about the non-applicability of those management models, especially because they are derived from industry and have nothing to do with the higher education ethos (Harvey, 1995; Kells, 1995; Birnbaum, 2000; Massy, 2003; Pratasavitskaya and Stensaker, 2010). Other authors gave a more nuanced view on the subject, claiming that although higher education institutions were not private business enterprises, some of the basic principles and tools could be applied as long as they were instruments at the service of institutions and their governance and management boards, subject to the institutions' academic mission, goals and strategies (Williams, 1993; Harvey, 1995; Dill, 1995).

Matsui and Chi (2006) who conducted their study in Vietnam argued that ISO 9000 implementation has been accepted worldwide as a useful first step towards Total Quality Management (TQM). The implementation of ISO 9000 is a critical organizational change that requires a transformation in the organizations' processes, strategic priorities, and culture. The result of the research showed that with the implementation of ISO 9000, quality management system is strengthened with more effectiveness in responsibility and authority, product standardization and process control. The research found that ISO 9000 requirements helped companies in Vietnam to improve quality performance, especially the internal process quality. The United Kingdom (UK) government, in spring 2011 announced that the UK Border Agency would be requiring all private colleges that provide higher education for UK degree-awarding bodies to undergo a standards and quality review by Quality Assurance Agency (QAA). In 2011, QAA, in consultation with the higher education sector, began to replace the Academic Infrastructure with a new suite of documents setting out UK national expectations about standards and quality in higher education. In 2012, there was a launch of a corresponding review method for higher education awarding bodies in England and Northern Ireland, called Institutional Review for England and Northern Ireland as reported in the Browne Commission Report of 2010.

In Africa, most heads of state have maintained tight control over their public universities (Oso, 2002). African presidents have traditionally been the chancellors and appointing officers of all the university chief officers. Government representatives have dominated the university councils and heavily dictated their budgets. These arrangements have infringed on the academic freedom and autonomy of the universities thus compromising the quality of the performance. In East Africa, the notion of Quality Assurance (QA) in higher education is an issue of great concern among all stakeholders, including policy makers, parents, employers, and students. A number of factors have contributed to this phenomenon. East Africa has experienced rapid expansion of the number and enrollment levels in higher learning institutions in recent times. This has been triggered by the exponential increase in demand of access to higher education in each of the countries in the region. As a result, the Inter-University of East Africa (IUCEA) felt the need to ensure that the rapid expansion of higher education in the region did not compromise quality of the very education

being delivered. Furthermore, in recent years, student mobility within East Africa has increased tremendously, necessitating the need to institute mechanisms for comparability of the quality of education in universities in East Africa. It is important to note that education has become a tradable commodity across borders and hence there have been efforts to institute international safeguards that would ensure maintenance of international quality standards. These efforts are being implemented within regional and international QA frameworks.

On the local scene, Kenya developed and adopted higher education reforms in 2012 aimed at streamlining and improving the management of university affairs. The Universities Act of 2012, finally signed into law by the then President, Mwai Kibaki introduced far-reaching changes. Public universities were subjected to quality assurance overseen by the Commission for University Education (CUE) a role previously prevented by university acts. In an effort to introduce professionalism in the recruitment of university chancellors in Kenya, such officers are now, constitutionally, picked by the university community and alumni. This brings to an end an era in which university leaders were appointed by the president of Kenya. This change has been welcomed by a number of scholars who are of the view that change programs in organizations such as institutions of higher learning largely depend on an organization's human resources (Jackson & Schuler, 2000; Weigl, Hartmann, Jahns, & Darkow, 2008). These authors viewed organizational development and change programs as part of an organization's internal systems, including quality management systems. Internal factors utilize the theories of change and their relationship to an organization because change affects individuals, groups and organizations. Internal systems have been positioned as a strategic partner in many organizations for facilitating organizational change (Jackson & Schuler, 2000; Dessler, 2003; Joy-Matthews, Megginson, & Surtees, 2004). These internal systems for managing change in organizations embrace a multi-disciplinary approach (Nafukho, Hairston & Brooks 2004) and "levels of analysis" perspective in organizations.

According to Torracco & Hoover (2005), learning has for long been acknowledged as a major determinant of institutional success. From the behavioral sciences, learning has been studied at the individual level and connected with change in behavior. Organization theorists have studied the concept from an organizational perspective. In both perspectives the aspect of change is not an ingredient in the learning process. Scholars in internal factors borrow from this change perspective to advance a case for the adoption of a learning orientation in order to respond to environmental dynamics (Bates and Chen, 2005). Human resource development scholars have cited learning in institutions as a source of competitive advantage in the context of change. Learning in an environment of change positions people as a source of distinctive competence and makes them become the only source of differentiation and sustainable competitive advantage (Kontoghiorghes, Awbrey & Feurig, 2005; Storberg-Walker & Gubbins, 2007; Collin, 2007). The resource based view to competitive advantage on the basis of human resources identifies the critical conditions that bring about this distinctiveness as employees who add value, are rare and cannot be copied (Jackson & Schuler, 2000; Golding,2007). Lopez, Peon & Ordas (2005), argue that organizational learning constitutes a source of competitive advantage, and identify particular human resource activities that promote learning such as recruitment and selection activities, training programs and design of compensation systems that reward knowledge acquisition and learning. Prevailing change demands new ways of working which can only be supported through not only extensive training in new skills but also completely new ways of thinking about work and relating with one another.

Historical Development of Public Universities in Kenya

University education system in Kenya started way back in the colonial period with a significant influence at the initial stages from the colonial

masters. Initially, there was only one public university chartered in 1970, but over time the system has expanded with a rise in the number. Currently, there are twenty-two accredited public universities, seven of them chartered with nine constituent colleges (Commission University Education, 2012). The historical experience of the development of the University system in Kenya bears resemblance to the situations faced in most developing countries with regard to the basic orientation reflecting the influence of the colonial forces (Mwiria et al., 2007; Oanda, et al., 2008). According to Sohn (2005), universities were established under such settings as part of education systems on the premise of supplying manpower to maintain existing industrial facilities developed during the colonial period and, therefore, play the significant role of contributing to the expansion of the nations, science and technical human resources.

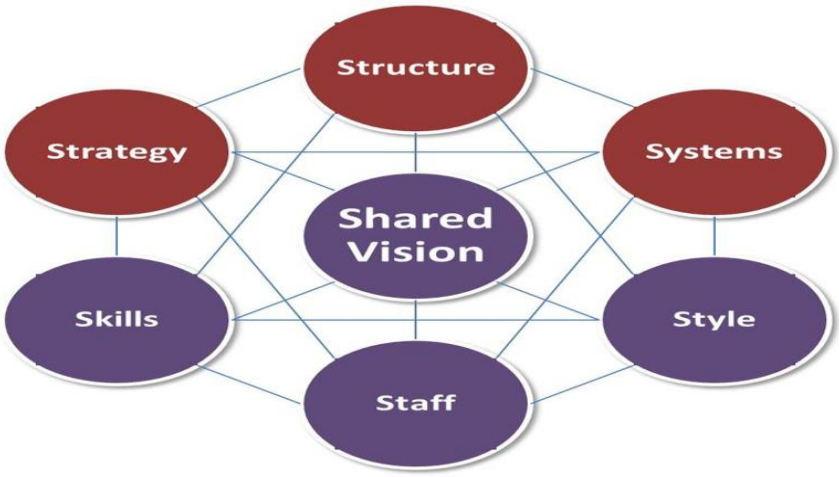
Internal Factors in Public Universities

Factors such as funding, administration, infrastructure and admission systems play a vital role in the networks that focus on uncompromised performance in the competitive world. Through the universities' orientation towards change, creativity and innovation, funds, administration, infrastructure, admissions are considered core aspects of the business of the university systems. It is this context that has placed universities and the entire institutions of Higher Learning as the centers of technological change whose source is science. Scholars agree that science is one of the factors that bring about technological change alongside other factors such as the input of labour and capital. Universities host the academia whose impact on the development of science is significant. Carrin et al., (2003), using experiences gained from biotechnology shows how the academia can contribute to technological change that will have profound effects on industrial development. To attain the great performance and remain relevant in the dynamic world, good procedures must be established giving the requirements for funds, administration, teaching, admissions, enrolments and the retention systems.

According to UNESCO (2009), higher education institutions, through their core functions (research, teaching and service to the community) carried out in the context of institutional autonomy and academic freedom, should increase their interdisciplinary focus and promote critical thinking and active citizenship. This would contribute to sustainable development, peace, wellbeing and the realization of human rights. Menger (2001) argues that to sustain innovation, institutions must develop and implement internal practices that encourage innovation and entrepreneurial behaviour. Institution's leadership must determine, develop and implement an infrastructure that actively encourages and supports innovation. Gillay et al., (2002) identified ability to coach, reward, communication, motivation, involvement and supporting others as factors that promote teamwork which leads to excellent performance. Fey and Furu (2008), advocate that development of incentive structures that promote knowledge creation and sharing at the institutional level should be determined, developed and implemented as this leads to improved performance. Thompson (2001) agrees that the essence of the firm is its ability to create, transfer, assemble, integrate, protect and exploit knowledge assets. They all contend that knowledge is the most important source of competitive advantage and sustained superior performance.

The diagram below identifies the 7s model by McKinsey as a strong agent that could facilitate successful re-alignment of internal factors if the QMS is established and followed. By aligning the seven factors, improved and sustainable performance is possible. Summary highlights within each area are provided as follows: Strategy- which focuses on customers and service created by common vision that is communicated; Structure – which is planning from bottom up and top down in terms of functioning; Systems – which defines the flow of information, capital budgeting, quality control and performance standards; Staff – the staff being provided with incentives and rewards, clear understanding, reduced tension between management and employees; Style – these includes

collaborative team building, balanced stakeholder interests, building trust and stress competition; Skills – these includes, knowledge, encourage innovation, staff training, IT support. All the six lead to Shared Values which is an achieved consensus in valuing customers and social responsibility's role and increased performance.



Source: Strickland et al., (2010)

Figure 1: McKinsey's 7Ss Model

The above diagram implies that all the internal factors must be coordinated well and the procedures should be set which clearly determine, develop and implement the roles of each and how they all work together towards attaining the common goal which is the shared value. Without determination of quality objectives that are in line with the quality policy of an institution, it would be impossible to realize the end product at the same time competing effectively and efficiently in the dynamic world.

Statement of the Problem

According to the United Nations Educational Scientific and Cultural Organization (UNESCO) World Conference on Higher Education (1998, 2009), low funding from the exchequer, increased enrolment, limited access compared to the population level, increased enrolment without commensurate improvement in the available facilities, gender inequality, and low research capacities are some of the problems facing public universities across Africa. These challenges have led to the fears that the quality of education is on a downward trend in most of these universities. UNESCO World Conference on Higher Education (2009) in a follow up of the 1998 Conference stated that, the current economic downturn may widen the gap in access to quality education between developed and developing countries as well as within countries, presenting additional challenges to countries where access is already restricted. The conference argued that expanding access to institutions of higher learning poses challenges to the quality of education. Quality assurance is a vital function in contemporary higher education and must involve all stakeholders. Quality requires both the establishment of quality assurance systems and patterns of evaluation as well as promoting a quality culture within institutions. It is in this context that the research sought to investigate how the quality of performance could be established and maintained in the Kenyan public universities.

Mwiria & Njuguna (2007) in their study found out that universities in Kenya bear resemblance to the situations faced in most developing countries with regard to the basic orientation reflecting the influence of the colonial forces. However, their study did not research on the relationship between the internal factors and QMS on the performance of the universities in Kenya. Oanda, Chege & Wesonga (2008), argued that the emergence of the private sector education in the African continent was a response to the increasing demand by industries for technically competent labour force to manage their expanding industrial operations. Sohn (2005) concurred with Oanda et al., (2008) that

universities worldwide were established as part of the education systems on the premise of supplying manpower to maintain existing industrial facilities developed during the colonial period.

In the recent past, several public universities have been accredited across Kenya that have the potential to release huge numbers of graduates into the employment market. Employers are, however, concerned with the quality of training offered to these graduates at the various public universities as these graduates are in most cases unable to undertake basic industry assignments. This challenge points fingers to poor internal infrastructure and quality management systems implemented by public universities across the country. The influence of Quality Management Systems (QMS) on the relationship between internal factors and performance of institutions of higher learning remains largely unexplored. Various studies focusing on QMS within institutions indicate that there are clear gaps with regard to the linkages on the relationships between the internal infrastructures and quality management systems. A study by Chacha (2004) on Higher education in Kenya argued that there was tremendous expansion in the number of students in public universities which has congested the education facilities that initially were designed to accommodate only a few students. He argued that the rising student numbers had compromised working conditions in public universities in the country. This necessitated a further research to show how the quality of performance in these public universities could be maintained. Internal infrastructure and quality management systems of public universities in Kenya, therefore, are expected to influence quality performance of these universities within the contexts in which they support national initiatives for development. This influence should arise from the development and establishment of appropriate internal factors and the implementation of quality management systems which are seemingly lacking currently. The design of internal infrastructure and the pursuit of the implementation of quality management systems are constrained by the existing national cultural contexts in which the universities operate. Based on the foregoing, it is evident that the influence of quality management systems on the relationships between internal factors and performance need investigation and explained through an empirical research, the main objective of this study.

Objectives of the Study

The main objective of the study was to determine the influence of Quality Management Systems on the relationship between internal factors and the performance of Kenyan public universities. The Specific objective of the study was to establish the influence of QMS on the relationship between funding mobilization and performance of Kenyan public universities.

Study Methodology

This study adopted a survey research design. This entailed collecting of primary data from the sampled universities with the aid of a questionnaire. Secondary data was obtained using questionnaires and secondary data was collected through books, journals, and internet sources, among others. The population of the study comprised of all the 7 public universities in Kenya operating in their first cycle of QMS certification of three years. A base sample size of 221 respondents was targeted from the 7 public universities. A rate of 68.3% responses (or 151 responses) was achieved. A likert scale with the ranges 1-5 was used during data collection. This was appropriate because it allowed participants to provide feedback that was slightly more expansive than a simple close-ended question, and much easier to quantify than a completely open-ended response.

Significance of the Study

This study sought to investigate the influence of quality management systems on the relationship between internal factors and the performance of the Kenyan public universities. The results of this study will be beneficial across several spectrums. First, scholars in the subject of management and researchers will find the results of this study useful as they will contribute to the advancement of knowledge in the subject area. In particular, scholars will benefit from the knowledge on the

linkages between internal factors and quality management systems on performance. The findings will also support and enrich the theories and models of strategic management of public and private universities. Researchers in the thematic area of advanced education will also benefit from the research gaps identified by this study

The findings of this study will further help to inform policy makers of both the national government and institutions of higher learning on the relationships between QMS and internal factors on performance of public universities. It will also enable government and learning institutions to know how to determine, establish, develop and maintain informed and effective procedures and systems in the universities geared towards improved performance. The findings have brought out important and strategic issues that require high levels of attention in enhancing the competitiveness of institutions of higher learning in Kenya. The Kenyan public will, on the other hand, benefit from the empirical information on the critical factors to be closely monitored and implemented to ensure enhanced performance of public universities in Kenya. The study will create greater awareness among public universities on the importance of having properly established, implemented and monitored quality management systems as vehicles to institutional efficiency and effectiveness of service delivery that will influence high performance.

Empirical Literature Review

Qms and Organizational Performance

A study conducted by Sayeda, Rajendran and Lokachari (2010) explored the adoption of quality management practices in engineering educational institutions (EEIs) in India from management's perspective. The study adopted a descriptive research design and used questionnaires as instruments for data collection based on a literature review of research in quality management and based on the responses of the pilot survey among senior faculty/management staff. The psychometric properties of this instrument examined using tests of reliability and validity. Correlation and multiple regression analyses were used to analyze the impact of total quality management (TQM) dimensions on institutional performance effectiveness. The findings of this study highlighted 27 critical factors/dimensions of quality management which influenced the relationships between QMS dimensions and institutional performance. These critical factors/dimensions of quality management included, top management's commitment to institutional processes, strategic planning and execution, support infrastructure (external and internal services), core infrastructure (facilities and layout), Human resources excellence (faculty and staff focus), student academic development (programme development), Research and development, continuous improvement, exposure (networking) and other factors. Among the conclusions of this study was the fact that institutional performance should be based on five key elements namely; institutional reputation and image, infrastructure quality, faculty excellence, research and industry exposure, and stakeholder (internal and external) satisfaction.

The study by Sayeda et al., (2010) had significant relevance to this study in several ways. The study used a descriptive research design and used questionnaire as instruments of data collection, similar the design adopted in this study. Further striking similarity is noted in the specific independent variables studied. The scope of this study was within the EEIs in India, which is a totally different environment from the Kenyan environment. Besides, the study did not examine aspects such as funding mobilization, admission. The study carried out examined the extent to which QMs influences, factors similar to those studied in the Indian case within a Kenyan context.

Burli, Bagodi, and Kottureshettar (2012) investigated the dimensions of TQM, analyzed interrelationships and their combined influence on the results achieved in ISO certified engineering institutions in India. The study adopted a descriptive research design and used questionnaire surveys of a sample of 216 faculty members serving in various ISO

certified institutes of southern states of India. Data was obtained using a questionnaire that was in line with the self-assessment philosophy of the European Foundation for Quality Management Excellence Model (EFQM) discussed under section 2.3.1 of this study. The data set was subjected to exploratory factor analysis using SPSS programme for windows. The factor analysis confirmed the existence of ten important dimensions of TQM that guide ISO certified institutions in their quality journey. Leadership of top management was recognized as the most important of the ten main driving forces for establishing an effective quality management system (QMS) in engineering institutes in India. The other nine important dimensions include, People Management, Policy and Strategy, Infrastructure Management, Education Process, Administration Process, People results, customer results and society results. The results obtained from this study are expected to encourage academic leaders to implement TQM concepts in their institutions to achieve higher levels of stakeholder satisfaction.

Clearly, the study by Burli et al., (2012), similar to that one by Sayeda et al ((2010), has significant resemblance in several respects with the study carried out. Besides similarities in the descriptive nature of the research design and the use of questionnaire for data collection, the study used SPSS to analyze and interprets the data results. The internal factors studied in the reviewed research are highly similar to those in the study carried out, with the exception of funding. The study examined all the factors used in the study reviewed, including funding, in order to understand how QMs influences internal factors (all those mentioned above) in the Indian case within a Kenyan context.

A study conducted in South Africa by Malukeke (2008) sought to find out the employees' perceptions of the effect of the Quality Management System intervention that was implemented at one of South Africa's government departments. The findings of this study indicated that a Quality Management System can be used to improve the level of service delivery in the public sector. The Quality Management System should be planned developed and implemented over a period of time in five phases i) - Determination of the scope of Quality Management System implementation ii) – Training iii) – Development of Procedures iv) – Pilot implementation of procedures v) – Evaluation of Quality Management System and rollout. It usually takes three or more years to establish an organization's-wide Quality Management System, although technical improvement to the workflow can be as quickly as six to eight months. The findings of this third study by Malukeke (2008) did not provide room for continuous improvement. The findings ended at the evaluation and did not go further. The study further did not show the inter-linkages between the QMS and the internal factors and how this can improve performance. The study carried out, is one of the very few studies in the discipline of strategic management, aimed at aligning quality management systems and internal factors for improved performance in Kenyan public universities.

Pelagidis (2008) investigated the effectiveness of spin-offs' human resource organization quality and capacity within existing four Greek Science and Technology Parks (GSTPs). A critical number of questionnaires was distributed to the spin-offs and then analyzed quantitatively the data collected to examine whether firms born within parks developed a functional human resource organization and performance. Among the results of this study were, that all organizations are open, some extent, to rapid technological and social change. The study concluded, therefore, that a strong culture based on values that support the functions of managing change, organizational achievement, customer orientation and coordinated teamwork would provide greater stability of organizational functioning.

The study by Pelagidis (2008) found a relatively weak human resource situation among the spinoffs. The recommendations were not possible to validate given that the study only used descriptive statistics. The study did not link the quality management and how it could improve on the performance and

quality of education. In spite of the attempts made on the studies done, there seems to be a lack of empirical effort to show linkages between the learning orientation and the aspect of quality management. The theory so far developed has attempted to demonstrate the possible links between learning and development at both individual and organizational levels. There seems to be lack of empirical effort to extend this identified theoretical link into the level of development at the organizational level.

Internal Factors and Organizational Performance

Internal factors are the strengths of an institution that enables it to operate in an alien country. In the strength, weakness, opportunities and threats (SWOT) analysis, these factors represent the strengths or weaknesses depending upon their force on customer's wants and needs. Internal factors in a business environment refer to the strengths and weaknesses born within an organization. These factors include: customer service, production, development, marketing and sales resource mobilization, management systems, infrastructure and how Admission systems are structured. According to Smith & Cronje (2002) there are three levels of analysis recognized by the Organizational Behaviour model, namely individual, group and organizational for the application of various independent variables discussed in the study. The Organizational behaviour is concerned with the performance outcomes of individuals whose performance contributes to group performance which eventually contributes to organizational performance. The individual level according to Robbins considers ability, values, perception, attitudes, learning and individual decision-making while group level considers communication, group structure, leadership, power and politics in decision making. When all the three levels are satisfied, it leads to organizational performance which results in the effectiveness of an organization that is reflected through job satisfaction, psychological growth, economic benefits, security, efficiency, innovation, productivity, contribution to culture and adaptation to change.

Funding Mobilization and Organizational Performance

As discussed earlier, RBV is an economic tool used to determine the internal strategic resources available to an institution, funding being one of those resources. With resources, an institution could be able to develop and maintain sustainable levels of competitive advantage in a dynamic world. Smith & Rupp (2002) argue that an institution is able to attain sustainable competitive advantage when different resources are employed and these resources cannot be imitated by competitors which ultimately creates a competitive barrier. The RBV theory postulates that an institution's sustainable competitive advantage is reached by virtue of unique characteristics which these resources have that are rare, valuable, unequaled, non-tradable, non-substitutable as well as firm specific (Barney et al., 2001; Makadok, 2001). Helfat & Peteraf (2003), argue that varying performance between firms is a result of heterogeneity of assets and the factors that cause these differences to prevail.

According to Bok (2013) a research carried out in America on funding mobilization states that, academic leaders are under constant pressure to raise increasing amounts of money. It further states that due to this, they may be tempted to accede too readily to the desires of those on whom they depend on for support. The researcher further affirms that while direct donors have influence over academic decisions, also they undoubtedly have a pronounced effect on the nature and shape of universities. Faculties and departments with wealthy alumni, such as leading business schools and elite colleges, attract a lot of support. Those that prepare students for modestly paid professions and occupations do much less well. Academic leaders can try to offset these tendencies by "taxing" more prosperous faculties to subsidize less-fortunate programs or by making extra efforts to help raise money for parts of the university that lack wealthy patrons.

Bok (2013) further says that competition intensifies the ambiguous role of money in higher education. The struggle for financial advantage creates a potent incentive to emulate the successful practices of rival institutions. This process improves performance when the practices involved enhance the quality or lower the cost of education. This struggle can also cause universities to adopt inappropriate methods of their rivals if they appear to be effective. Thus, a number of uncertain practices have spread widely under the pressure of competition, such as compromising academic standards either to admit the children of wealthy parents or to achieve athletic success. No one can predict how much effect such behavior has on the reputation of universities and the respect they command from faculty, students, and the public. But it is surely unwise and unworthy to test the limits, for trust, reputation, and self-respect are assets of great value that are hard to restore once they have been lost. This can happen to the Kenyan universities if there is no establishment, documentation and implementation of the QMS procedures guiding the institution's operations.

For the institution to cope with the ever increasing demand for search of education, little space and detaching from total dependence to the government, institutions should diversify their functions as a form of strategy of networking to get more business outside their current products and markets. Oyedijo (2012) observes that there has been a major interest on diversification as a subject of research and other scholarly interest in order to enable managers respond better to the question; what other business should the institution be in? The main objective of diversification for an institution therefore, is to gain an extra market share and seek opportunities which may generate synergy (Thompson, 2001).

There is a trend among institutions of higher learning in which most of these institutions are shifting from their traditional areas of focus to embrace other new academic programs and other none academic activities. Huisman, Meek and Wood (2007) refer to this trend as diversification and can be demonstrated by various activities and factors at universities which includes; teaching and research, degrees awarded, geographical distribution, modes of study among others. Varghese and Puttman (2011), observes that diversified institutions are characterized by different academic programs, semi-autonomous units, different sources or forms of funding, varied styles of instructions, presence in different geographical locations, different groups of students and staff.

Among the frequently asked questions within the European Union member states imply that Governments as principal funders of European universities have a difficult job to cater for these institutions. A major difficulty arises in the desire of policymakers to mandate outcomes, which they often approach by creating separate funding streams to support separate outcomes: the graduating students, the research excellence, the number of patents and start-up companies and the policy contracts among others. Success in any one of these areas, or particularly attractive funding streams can so persuade a university to concentrate its efforts in that direction that there is detriment to the creative balance in its core. Without proper establishment, documentation and implementation of a proper and appropriate system of management procedures used for monitoring institution's performance, suffering could be experienced in learning institutions.

Results of the Study

Performance of Public Universities in Kenya

The study sought to find out the descriptive statistics of performance of the universities. The findings were presented in Table 1. The Table shows that, 48.3% rated Student Growth as good, 54.3% rated Quality of Programmes as good, and 43.7% rated Knowledge creation and innovation as good. From the table, it shows that 37.7% rated University National rating as good, 37.7% rated Financial Sustainability of the University as good while 39.7% rated University international rating as good. The table further indicates that 48.3% rated the number of curriculum changes effected as good, 44.4% rated the level of success in the financial year as good, 43% rated the number of self-sponsored students as good, while 41.1% rated the

number of new businesses developed as good. From the findings, it can be established that the general performance of the university was good as all the listed performance indicators were rated as good by the respondents, as it is shown on Table 1.

Table1: Performance of Public Universities

Statements	Low		Slightly		Moderate		Good		High		Total %
	F	%	F	%	F	%	F	%	F	%	
Student Growth	1	.7	3	2	20	13.2	73	48.3	54	35.8	100
Programmes	1	.7	2	1.3	25	16.6	82	54.3	41	27.2	100
Knowledge	0	0	5	3.3	38	25.2	66	43.7	42	27.8	100
National Rating	2	1.3	7	4.6	33	21.9	57	37.7	52	34.4	100
Finance Sustainability	5	3.3	6	4	44	29.1	57	37.7	39	25.8	100
Intern'l Rating	7	4.6	6	4	47	31.1	60	39.7	31	20.5	100
Curriculum	3	2	6	4	36	23.8	73	48.3	33	21.9	100
Success Level	4	2.6	9	6	40	26.5	67	44.4	31	20.5	100
Self-Sponsor Students	0	0	1	.7	31	20.5	65	43	54	35.8	100
Businesses Developed	9	6	12	7.9	39	25.8	62	41.1	29	19.2	100

Student Population Growth in Public Universities over the Past Five Years

The study sought to find out if the population of the students had increased in the past five years. The findings were presented in Figure 2. From the figure, 54.46% of the respondents strongly agreed that the student population had increased significantly in the past five years. Additionally, 30.61% agreed, 10.88% were neutral, and only 1.36% and 0.68% disagreed and strongly disagreed that the student population had increased significantly. Therefore, the findings show that majority of the universities had an increased population in the past five years. Hence, it could be concluded that they were performing well.

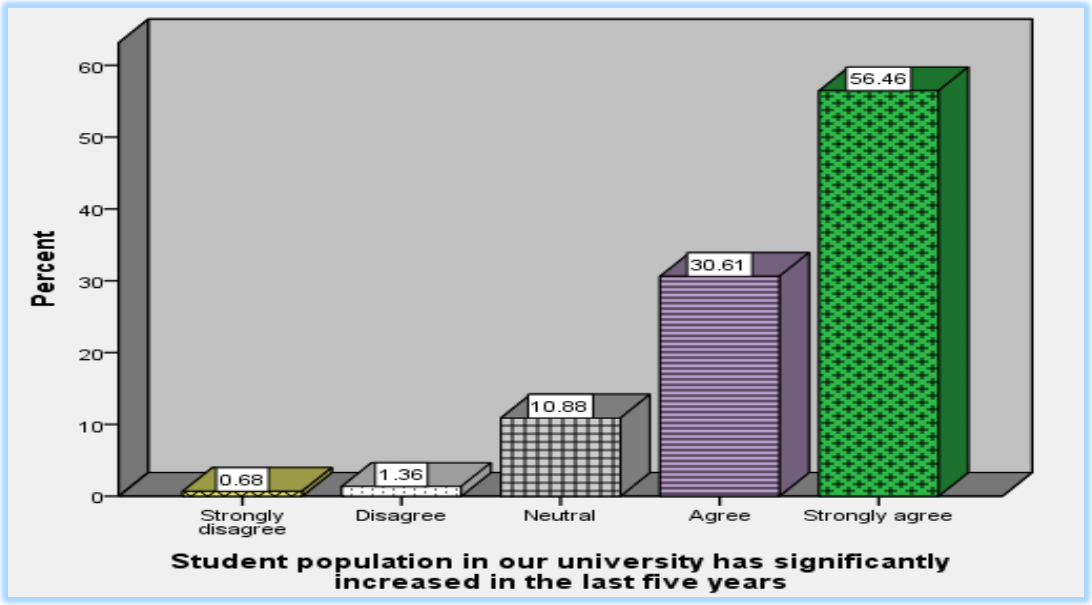


Figure2: Student Population Growth in Five Years

Graduation of Students Initially Admitted

The study went out to find if all the admitted students graduate on time. The findings were presented in Table 2. The Table shows that 3.4% of the respondents strongly disagreed that all the admitted students graduate at the right time. Further, 6.1% disagreed, and 19.7% remained neutral. On the other hand, a majority (50.3%)

agreed, and 20.4% strongly agreed. Therefore, the findings show that all the students in majority of the public universities graduated on time as majority of the respondents either agreed or strongly agreed to the statement, as is indicated in Table 2.

Table 2: All the Admitted Students Graduate at the Right Time

	Frequency	Percent	Cumulative Percent
Strongly Disagree	5	3.4	3.4
Disagree	9	6.1	9.5
Neutral	29	19.7	29.3
Agree	74	50.3	79.6
Strongly Agree	30	20.4	100.0
Total	**147**	**100.0**	

Quality of Programmes in Public Universities

The study sought to find out the number of academic programmes that have been accredited by the Commission of University Education in the universities. The findings were presented in Figure 3. Majority (37.06%) said their universities had more than 10 accredited programmes, 25.87% said they did not know, 18.18% said their universities had less than 5 accredited programmes, 16.08% said their universities had less than 10 accredited programmes, and only 2.8% said that their universities had no accredited programmes. The findings showed that majority of the universities had more than 10 accredited programmes. Therefore, this might have contributed positively to the increase in population and subsequent good performance overall.

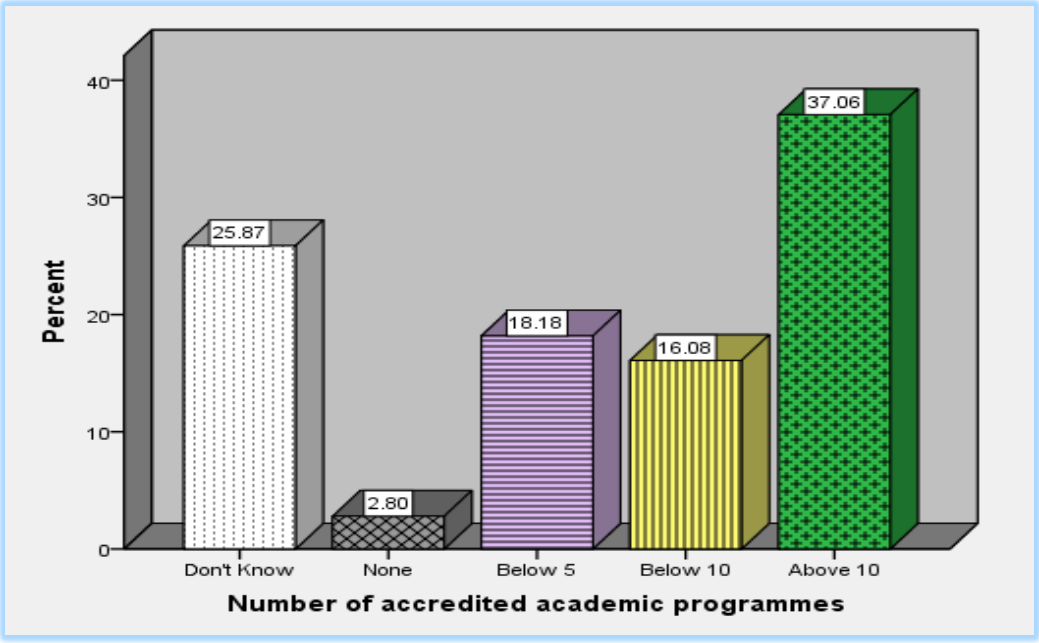


Figure 3: Approximate Number of Accredited Programmes

Knowledge Creation and Innovation

The research sought to know the number of innovations that had been patented from the universities in the past 3 years. The findings are tabulated in Table 3. The Table shows that, 40.4% of the respondents said they did not know, 4.8% said none, 23.3% said at least three, 11.6% said at least five, and 19.9% said more than five. The findings indicated that majority of the respondents were not aware of their universities innovations patents or they did not understand the question.

Table 3: Number of Innovations Patented in the 3 years

	Frequency	Percent	Cumulative Percent
Don't Know	59	40.4	40.4
None	7	4.8	45.2
At least 3	34	23.3	68.5
At least 5	17	11.6	80.1
More than 5	29	19.9	100.0
Total	**146**	**100.0**	

Influence that quality management system on Funding Mobilization

The study sought to find out the influence that quality management system had on the relationship between funding mobilization and performance of Kenyan public universities. The findings of the study were discussed in this section.

Reliability Test on Funding Mobilization

Reliability test was done on funding mobilization so as to check for internal consistency between the indicators of funding mobilization. The findings were presented in Table 4. From the Table, the Cronbach's Alpha Coefficient was .68 which was very close to .7 thresholds. It was concluded from the data that it was reliable as it had internal consistency.

Table 4: Reliability Test on the Funding Mobilization Reliability Statistics

Cronbach's Alpha	No of Items
.680	5

Factor Analysis of Funding Mobilization

Factor analysis was done on funding mobilization and there were no factor loadings less than 0.4 as discussed in this article and therefore, no factor was dropped from the analysis.

Descriptive Results of the Study

Responses were sought from five different questions on the subject of funding mobilization in relation to the performance of public universities in Kenya. Table 5 presents the detailed descriptive statics on this variable. On the question of whether there were well established procedures on sourcing for funds as presented, 80.8% (sum of 45.7% and 35.1%) of the respondents agreed that this was the case to a large and very large extents, 11.3% were moderate, 6.6% were to a little extent and 1.3% said not at all. On the question of whether the universities had expanded their programmes to other geographic regions as a means of improving their funding, 75.5% (29.1% plus 46.4%) said this was the case to a large and very large extents, 16.6% were moderate, 6% and 2% were to a little extent and no extent at all respectively. On the whether the universities invest in other opportunities not related to academics to supplement its income, 56.3% (27.2% plus 29.1%) said this was the case to a large and very large extents, 27.8% were moderate while 11.9% and 4% were to a little extent and to no extent at all respectively. On whether the government was the main source of funding to the universities, 77.5% (31.8% and 45.7%) said this was the case to a large and very large extents, 17.9% were moderate while 2% and 2.6% were to a little and no extent at all respectively. On the final question relating to whether QMS was adopted in order to improve funding mobilization efforts of the universities, 56.3% (23.8% and 32.5%) responded that this was the case to a large and very large extents, 23.2% were moderate while 14.6% and 6% were to a little and no extent at all respectively.

In each of the questions relating to the funding mobilization variable, over 50% in each question responded in the affirmative, indicating that they agreed to the questions to a large or a very large extent. These findings concur with the findings of Helfat & Peteraf (2003) in their article "capability lifecycles Strategic Management", where they

argued that varying performance between institutions is a result of heterogeneity of assets (financial and otherwise) and the factors that cause these differences to prevail. Institutions should diversify their functions as a form of strategy of networking to get more business outside their current products and markets, argued Oyedijo (2012). He further observed that there has been a major interest on diversification as a subject of research and other scholarly interest in order to enable managers respond better to the question; what other business should the organization be in. Thompson (2001) concurred and further argued that the main objective of diversification for an organization is to gain an extra market share and seek opportunities which may generate synergy.

Based on these, it is evident that to attain financial sustainability status and achieve high quality performance, an institution may, as of necessity, develop and establish QMS practices, as demonstrated by over 56.3% of the respondents to underpin all its operations including funding mobilizations.

Table 5: Descriptive Statistics for Funding Mobilization

Statements	Not at all		Little extent		Moderate extent		To a large extent		A very large extent		Total %
	F	%	F	%	F	%	F	%	F	%	
Financial resources	2	1.3	10	6.6	17	11.3	69	45.7	53	35.1	100
Geog. Expansion	3	2	9	6	25	16.6	70	46.4	44	29.1	100
Other Investment	6	4	18	11.9	42	27.8	44	29.1	41	27.2	100
GoK Funding	4	2.6	3	2	27	17.9	69	45.7	48	31.8	100
QMS adoption	9	6	22	14.6	35	23.2	49	32.5	36	23.8	100

Scatter Plot for Performance against Funding Mobilization

Scatter dots were plotted for performance and funding mobilization as indicated in Figure 4. From the figure, it can be concluded that performance and funding mobilization form a positive linear relationship.

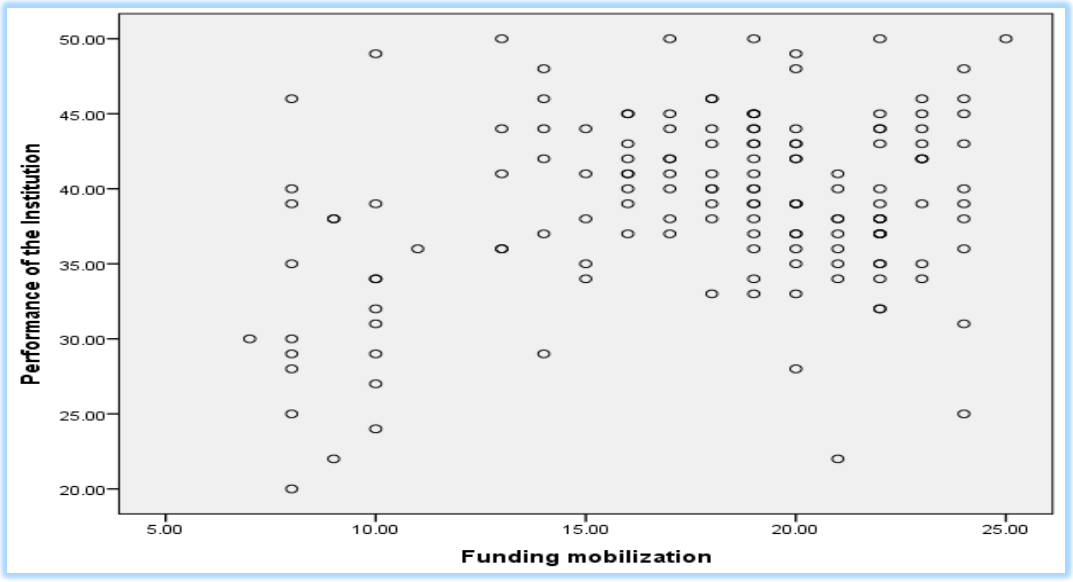


Figure 4: Scatter Diagram for Performance and Funding Mobilization

Regression and Correlation Analysis of Performance and Funding Mobilization

Regression analysis was done between performance and funding mobilization and findings were presented below:

Line of Best Fit between Performance and Funding Mobilization

The line of best fit between performance and funding mobilization showed that there was a positive linear relationship, as is shown in Figure 5. Therefore, increasing funding mobilization will positively affect performance of universities.

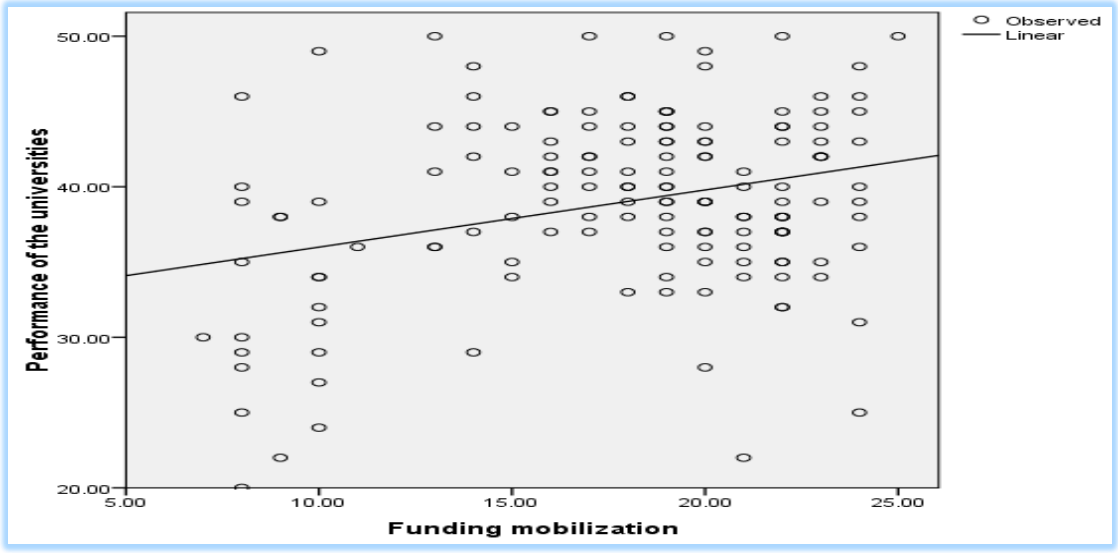


Figure 5: Line of Best Fit for Performance against Funding Mobilization

The Moderating Effect of QMS on the Relationship between Funding Mobilization and Performance

The researcher carried out a linear regression analysis to find out the influence Quality Management System had on the relationship between performance of the universities and funding mobilization. The findings were discussed under this section.

Model Summary

The model summary Table 6 indicated that R2 for the first model was .088, meaning that funding mobilization, on its own, contributed 8.8% to the change in the performance of the Kenyan Public Universities. However, the nature of this relationship between Funding mobilization and the performance of Kenyan universities significantly changes with the introduction of QMS. Table 6 indicates that the coefficient of determination, R2 before the introduction of QMS was .088. However, upon the introduction of QMS, the coefficient of determination, R2 significantly changed from .088 (8.8%) to .984 (98.4%). This means that with the introduction of QMS, funding mobilization can explain up to 98.4% of the performance of Kenyan public universities,

Table 6: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.297	.088	.082	5.75284
2	.992	.984	.983	5.09513

Figure 6 clearly demonstrates the significant effect of the moderating variable, QMS on the relationship between funding mobilization and performance of the Kenyan Public Universities. This significant moderation effect is demonstrated by the fact that the two lines, performance versus QMS and

Performance and funding mobilization intersect at the top right hand corner of the graph. It is also noted that the relationship between the two lines is significantly positive, which further confirms that QMS makes a direct positive contribution on the relationship between funding mobilization and the performance of Kenyan public universities.

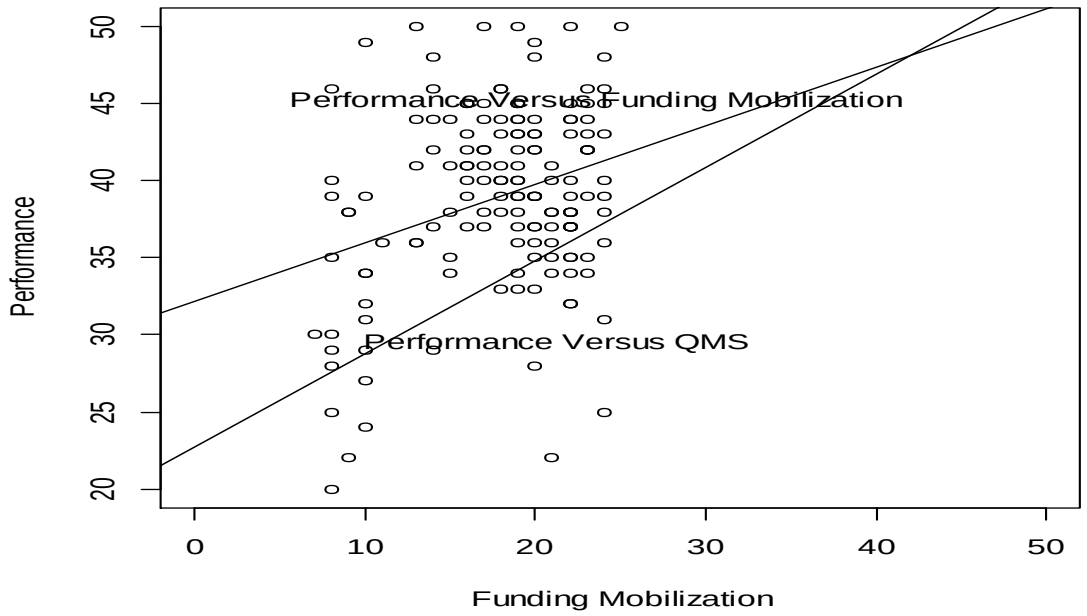


Figure 6: Effect of QMS between Funding Mobilization and Performance

ANOVA

Table 7 shows that the predictor variable, funding mobilization has a P-value equal to .000. This demonstrates that the variable in this model is statistically significant in influencing the change in performance of Kenyan public universities considering that its P- value is less than .05 at the 95% level of confidence.

Table 7: ANOVA

Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	478.584	1	478.584	14.461	.000
	Residual	4931.178	149	33.095		
	Total	**5409.762**	**150**			
2	Regression	230770.874	3	76923.625	2963.124	.000
	Residual	3842.126	148	25.960		
	Total	**234613.000**	**151**			

Coefficients

Model 1 of Table 8 shows the relationships between the coefficients of funding mobilization and performance of Kenyan public universities. Model 2 of the table shows the moderating effect of QMS on the relationships between the coefficients of funding mobilization and performance of the Kenyan Public Universities. Based on model 1, the study shows that for every unit increase in performance of the Kenyan public universities (Y), funding mobilization (X1) contributes 0.38 units only, i.e. Y = 32.196+.38X1. However, with the introduction of QMS (model 2), the study shows that for every unit increase in performance of the Kenyan public universities (Y), funding mobilization (X1), contributes 1.259 units plus 1.219 units of X5 less .034 units of result of X1X5; i.e. Y = 1.259X1+1.219X5 - 0.034X1X5. This demonstrates that the introduction of QMS leads to

a significant change in the performance of Kenyan public universities. The P-values of funding mobilization, both before and after the introduction of QMS is less than .005, meaning that funding mobilization is statistically significant in explaining the change in performance of Kenyan public universities.

Table 8: Performance and Funding Mobilization Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	32.196	1.839		17.505	.000
	Funding mobilization	.380	.100	.297	3.803	.000
2	Funding Mobilization	1.259	.126	.589	10.012	.000
	Quality Management System	1.219	.061	.846	20.057	.000
	QMS and Funding Mobilization	-.034	.005	-.436	-6.242	.000

Summary of the Study

The study established that when controlling for QMS as a moderating variable, the coefficient of determination, R2 of funding mobilization on the performance of Kenyan public universities was 8.8%. This meant that funding mobilization alone as a predictor variable contributed up to 8.8% of the change in the performance of Kenyan public universities. When QMS was uncontrolled, the coefficient of determination, R2 of funding mobilization on the performance of Kenyan public universities improved to 98.4%, meaning that with the influence of QMS, funding mobilization contributed up to 98.4% of the change in the performance of Kenyan public universities. It was also established that there was a 29.7% positive correlation, R, between funding mobilization and the performance of Kenyan public universities when QMS was controlled. The correlation between funding mobilization and the performance of public universities nearly doubled to 99.2% with the introduction of QMS. In both of these cases, the p-value between the independent variable and the dependent value was less that .05 at 95% level of confidence. This meant that funding mobilization was statistically significant in the change in the performance of Kenyan public universities.

Whereas the Theory of Resource Based value (RBV) helps strategic decision makers by addressing concerns such as, what are the constitutes of resources, the competitive advantage, the barriers imitation of resources and how to develop these resources for future towards improving the performance, it does not explain how this is done. The theory further leaves a gap on how each of these constituents affects performance as a variable. The theory further does come out clear on how to establish the methods of acquiring, maintaining and monitoring the resources in institutions and how they contribute towards improved performance. The study further established that: there was a positive linear relationship between funding mobilization and the performance of Kenyan public universities; over 80.8% of the respondents said their universities had well established procedures on sourcing of funds; over 75.8% said that their universities had expanded regionally as a means of improving their funding; over 56.3% said that their universities had ventured into other investment opportunities not related to academics as a way of raising supplementary income even though most of them still relied on government as a major source of funding as shown by over 77.5% of the respondents that were affirmative that this was indeed the case. Finally,56.3% respondents said that the introduction of QMS enhanced the universities' funding mobilization efforts. These findings, thus; led to the rejection of the first null hypothesis that QMS had

no influence on funding mobilization and performance of Kenyan public universities.

The study seemed to agree with the theoretical underpinning of the relationship between funding mobilization and performance from the viewpoint of the scholars. Mahoney & Pandian (1992) and Smith & Rupp (2002) explain that an institution is able to reach sustainable competitive advantage when different resources are employed and these resources can't be imitated by competitors which ultimately creates a competitive barrier. RBV further argues that an institution's sustainable competitive advantage is reached by virtue of unique characteristics which these resources have, which are rare, valuable, non-imitable, non-tradable, non-substitutable and are firm specific (Barney et al., 2001; Makadok, 2001).

Conclusions of the Study

QMS has a significant moderating influence on funding mobilization systems and that this has a direct positive impact on the performance of the Kenyan public universities. This means, therefore, that for Kenyan public universities to realize the dreams of a majority of Kenyans as envisaged in the country's vision 2030 and the Kenyan Constitution of 2010, there is need to inculcate the quality management systems which have been known to provide guidance in producing good results. Funding mobilization plans must not be seen as the work of the top management alone; otherwise implementation of quality management systems and realization of enhanced performance will be futile. Involving everyone in the implementation diversification of funding strategies, and the use of QMS as a vehicle will avoid process owners from reacting to change and instead be pro-active in the process. As a result of being pro-active, stakeholders will be motivated in working towards the improvement of the university as well as provide strong incentives to employees and management to achieve universities' state vision and mission.

Research Recommendations

For Kenyan public universities to realize the dreams of a majority of Kenyans as envisaged in the country's vision 2030 and the Kenyan Constitution of 2010, they should proactively adopt QMS in their funding mobilization operations in order to achieve good results; funding mobilization must be the role of all stakeholders in the organization with the leadership of top management; all staff must be involved in the implementation of QMS and diversification of funding strategies, universities should motivate stakeholders in working towards the improvement of university as well as provide strong incentives for employees and management to achieve universities' state vision and mission.

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