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# The Extent to Which Public Universities in Kenya Experience Managerial and Environmental Challenges

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**Abstract**
The environment in which organisations operate is continuously changing, thereby posing challenges to the organisations, and higher education institutions are no exception. This study was undertaken to understand the managerial and environmental challenges faced by public universities in Kenya. The study design was descriptive and utilized a cross-sectional survey of all the public universities in Kenya through administration of a structured questionnaire to the top management team. Secondary data were collected from published works and, universities and government documents in public domain in order to corroborate the data collected from the primary sources. Positive responses were received from 63 respondents out of 91, yielding a 69.4 percent response rate. Of the respondents, 76 percent had basic training in the sciences and only 3 percent in business; 79 percent had no training in management and only 8 percent each had training in management at postgraduate diploma and postgraduate degree levels. The universities faced managerial challenges 'to a greater extent' than they faced environmental challenges. The control function of management, and competitive and economic macro-economic factors posed the highest challenges. A significant difference ($p<0.05$) in the managerial and environmental challenges existed between new and old universities, and rural and urban universities, respectively. There was significant difference ($p<0.05$) and no significant difference ($p<0.05$) among the three categories of public universities (old, new and university colleges) in managerial and environmental challenges, respectively. The results indicate that the managerial and environmental challenges experienced by public universities in Kenya could be related to lack of training in management. The results further indicate that public universities in Kenya are dependent on the environment in which they operate and, therefore, the study contributes to the environment-dependence theory of organizations.
**Keywords:** Environmental challenge, environment-dependence theory, higher education institutions, Kenya, managerial challenge, public university

## 1. Introduction

The business world today is undergoing rapid transformation, and is operating in a highly turbulent and dynamic environment that calls for businesses to plan and anticipate any uncertain future. This scenario has posed various challenges to organizations, including public institutions. Indeed, business firms that do not foresee this are doomed to fail. The challenges that modern businesses face, among them managerial, have been brought about by the ever dynamic and turbulent environment. In order for an organisation to remain successful in its business, therefore, there is need to understand the challenges, opportunities and threats that are provided by the external environment, so that the organisation can take advantage of the opportunities and avoid threats (Xu, Lahaney, Clarke and Duan, 2003).

Universities in Kenya today are operating in a highly turbulent and dynamic environment as a result of liberalization of the higher education industry, resulting in an influx of many players. As a result, this has brought about managerial challenges to higher education institutions (HEIs), especially public universities. The external changes have to be assessed thoroughly so as to keep abreast of the variables underpinning current and future business operations. Ansoff and McDonnell (1990) assert that organisations are environment-serving; they interact with the environment in such a way that they get inputs from the environment, process and give back to the environment in the form of goods and services. A major escalation in environmental turbulence means a change from the familiar world to that of new things, new technologies, new competition, new customers and a new dimension of social control (Ansoff and McDonnell, 1990). The environment in which organisations operate is never constant and given its composition and forces therein, it presents unique challenges to organisations and their management. Indeed, it is when there are 'radical and discontinuous' environmental changes that organisations are most challenged to adapt, and public universities are no exception. Therefore, organisations need the environment while the environment needs the organisations, none can exist without the other, that is, they are interdependent. For this reason, this study was guided by the environment-dependence theory of organisations since the managerial functions of public universities are influenced by the environment and at the same time the public universities influence the environment by supplying it with the needed manpower and skills.

 

Education forms the basis upon which economic, social and political development of any nation is founded. Investment in education can help to foster economic growth, enhance productivity, contribute to national and social development, and reduce social inequality (World Bank, 1998). Higher education plays a crucial role in the supply of high level manpower for the socio-political and economic development of a nation (Ekundayo and Ajayi, 2009). It is the realization of this fact that there has been a rising demand for higher education in Kenya in the recent past that is driven by an ever changing labour market dynamics coupled with an ambitious and bulging youth population. To combat this trend, the government upgraded several middle level colleges to university college status and also recently elevated many public university colleges to fully-fledged universities, many of them removed from urban centres. Until 2007, Kenya had only seven public universities; however, in preparation for the increased number of students transiting to university as a result of free primary and secondary, a number of tertiary institutions were upgraded to university colleges. This was despite the fact that some did not have the basic infrastructure for university training but this shortcoming was overtaken by political influence. This action is bound to bring about many challenges among them competition, human resource management, financial management, quality assurance, operations, infrastructural, change management and strategic management among others. In Kenya, most decisions about higher education development have been politicized. The consequences of politicized university governance have been unplanned growth of university education and diminished democratization of decision-making within university leadership (Odhiambo, 2013). The rise of 'self-funded' and even 'for-profit' HEIs indicates that the battle for student numbers, skilled human resource and a quantum of grants/publication pie is on. In this respect, three business models emerging in higher education are brick (physical campus), brick and click (physical as well as virtual campuses) and click only (virtual campus) (Pathak and Pathak, 2010). Thus, despite the rapid increase in the number of public universities and university colleges in Kenya, no comprehensive study has probed the managerial and environmental challenges faced by these institutions in the ever changing and turbulent environment in the higher education sub-sector, with a view to improving performance, efficiency and effectiveness. The objective of this study was, therefore, to establish the environmental and managerial challenges experienced by public universities in Kenya

## 2. Theoretical Framework

### *2.1. Concept of management*

The concept of management is not fixed; it changes according to time and circumstances (Sharmaa, 2010), that is, it is contextual. The concept of management has been used in integration and authority, and different authors on management have given different concepts. Management is that field of human behavior in which managers plan, organize, staff, direct and control human and financial resources in an organized group effort in order to achieve desired individual and group objectives with optimum efficiency and effectiveness (Jones and George, 2008; Subedi, 2010). According to Sharmaa (2010) there are five main concepts of management: First, functional concept: according to this concept management is what a manager does and is principally the task of planning, coordinating, motivating and controlling the effort of others towards a specific objective. It is the process by which the elements of a group are integrated, coordinated and/or utilized so as to effectively and efficiently achieve organisational objectives. Second, getting things done through others concept: according to this concept, management is the art of getting things done through others by directing and inspiring people. It is a very narrow and traditional concept of management. Third, leadership and decision-making concept: according to this concept, management is an art and science of decision-making and leadership. Most of the manager's time is consumed in taking decisions and achievement of objectives depends on the quality of decisions. Similarly, both production and productivity can be increased by efficient leadership only. Leadership provides efficiency, coordination and continuity in an organisation. Fourth, productivity concept: according to this concept, management is an art of increasing productivity by securing maximum productivity with a minimum of effort so as to secure maximum prosperity and happiness for both employer and employee, and give the public the best possible service. Fifth, universality concept: according to this concept, management is universal in the sense that it is applicable anywhere whether social, religious, public, business or industrial.

2.2 Environment-dependence theory of organizations

The organisation's environment is the set of forces surrounding an organisation that have the potential to affect the way it operates and its access to scarce resources. All organisations need to properly understand the environment for effective management (Davis and Powell, 1992). Organisations are environment-serving, such that they cannot completely control their own behavior and are influenced in part by external forces (Ansoff and McDonnell, 1990). The open system theory recognizes that organisations exist in the context of a larger environment that affects how the organisation performs and in turn is affected by how the organisation interacts with it. Organisations are ecological entities that have mutual relations with other entities in their environment where they operate as open systems and rely on their environment for their input and market for their end products. Indeed, organisations operate in an environment that is dynamic and turbulent with constant and fast-paced changes that make yester-years strategies irrelevant (Johnson and Scholes, 2002). The relationship

 

between organisations and their environment is a central issue in organisational theory and many scholars have addressed this phenomenon (Xi, Zhang and Ge, 2012). Moreover, the contemporary organisational environment is characterized by four key salient components: complexity, change, ambiguity and uncertainty. Managers are, therefore, challenged by problems of determining causality, managing holistically and adaptation to rapid change (Xi et al., 2012). The environment holds opportunities and threats and skilful managers find market niches that are particularly well suited to the products, services and capabilities that the organisation has to offer (Johnson and Scholes, 2002).

Environments can be uncertain, that is, cannot be accurately predicted. Environment perceived to be highly uncertain will likely be viewed as very risky, as contexts in which a few erroneous decisions could result in severe trouble and possibly put the survival of organisations at risk (Waldman, Ramirez, House and Puranam, 2001). There are various types of perceived uncertainty about environments, including technological uncertainty, consumer uncertainty, competitive uncertainty and resource uncertainty (Beugré, Acar and Braun, 2006). Volatility and complexity make external environment less predictable and influences the organisation and its management. An environmental context that is dynamic is one with a highly unpredictable and unstable rate of change and high levels of uncertainty about the state of the context, the means-ends relationships and/or the outcome of actions (Baum and Wally, 2003; O'Regan, Kling, Ghobadian and Perren, 2012). Dynamic environmental contexts lead to increased competitive aggressiveness, require more efforts on the part of the managers, necessitate the strategic reorientation of the firm and can result in diminished performance if the organisation is unable or slow to respond to the changed environment (Baum and Wally, 2003).

The operating environment is the competitive environment of the organisation. This kind of environment has a greater ramification on firm's supplier profiles, customer profiles, the labour market, the competitive situation and its competitive positioning among others (Thompson, Strickland and Gamble, 2008). The complexity of the modern operating environment in which many organisations operate, in addition to the incredible pace of change in the 21$^{st}$ century increases the likelihood that uncertainty and ambiguity will impact upon management decision making (Xi et al., 2012). Since the introduction of systems theory into organisational research and the emergence of the strategy-structure-performance paradigm in strategic management, conceptualizations of organisational environments have informed researchers (Baum and Wally, 2003). To this end, managers have a role to play in a firm's dynamic capabilities by redefining the growth and boundaries of a firm and by redesigning its competitive environment. In this process, managers utilize environmental scanning to identify new trends and opportunities and integrate new ideas with the firm's existing capabilities, which is instrumental for success in product sequencing (Kor and Mesko, 2013). Substantial changes in environments can undercut the appropriateness of developed routines and the attractiveness of protected positions, leaving organisations vulnerable (Bradley, Aldrich, Shepherd and Wiklund, 2011). However, whereas some organisations falter when their environments change, others thrive. Therefore, understanding why organisations are affected so differently by environmental change is fundamental to theories of competitive advantage and survival (Shane and Stuart, 2002).

## 3. Research Methodology

The research design adopted for this study was descriptive design and the study was a survey in form of a census. For the purpose of this study, the population constituted all public universities in Kenya. Currently there are 31 universities in Kenya, including 22 fully-fledged universities and nine university colleges. In light of this small number and the fact that the respondents were members of the university top management team, the study was conducted in form of a census.

### 3.1 Data collection method

The study collected both primary and secondary data. The primary data were collected by carrying out a cross-sectional survey of the entire population while secondary data were collected from published works, print media and, universities and government documents in public domain. Primary data were collected using a Likert-type scale by administering a structured questionnaire. The Likert-type questions/items in the questionnaire were closed so as to permit more direct comparability of the responses and eliminate question/statement variability. The questionnaire included a nominal scale to collect demographic data and a 5-point Likert-type scale, indicating the extent to which individual questions or statements (items) were operationalized to reflect the intended variables and enable respondents to provide quantifiable information, that is, [1] – not at all; [2] – to a little extent; [3] – to a moderate extent; [4] – to a great extent and [5] – to a very great extent. The respondents were selected using a non-probabilistic sampling technique, in particular judgmental purposive sampling, that is, the conscious selection by the researcher of certain participants to include in the study (Burns and Grove, 2005). For this reason, the respondents to whom the questionnaire was administered comprised all vice-chancellors (VCs) and deputy vice-chancellors (DVCs) of the public universities and, all the principals and deputy principals of the public university colleges. This was guided by the fact that they are the ones who carry out the various managerial functions, and experience managerial and environmental challenges. Distribution of the questionnaire was a combination of mail and 'drop-and-pick-later' methods to ensure reduction in biasing errors, greater

 

degree of anonymity for respondents, greater accessibility to geographically dispersed respondents and to reduce distorted self-reports and social desirability. The number of respondents was 91. A total of 63 completed and returned the questionnaire, giving an effective response rate of 69.4 percent. Table 1 gives the profile of the respondents and the institutions.

3.2 Reliability and validity of the questionnaire

In order to ensure validity and reliability, the questionnaire was composed of carefully constructed statements/items to avoid ambiguity. The questionnaire was pre-tested to evaluate it for clarity, style, meaningfulness and ease or difficult of completion. Revision of the questionnaire was made based on the feedback to ensure consistence and quality prior to final distribution. This assured that the questionnaire was clear and well-understood by potential respondents.

3.3 Data analysis

The data collected fell into nominal and interval measurement scales. The demographic information constituted nominal data and was analyzed by calculating percentages. In the interval measurement scale items, data were subjected to descriptive statistics that is, the mean for central tendency and standard deviation for variability. The data were subjected to further statistical analysis procedures within the Statistical Package for Social Scientists (SPSS). The secondary data from secondary documents was analyzed using content and logical analyses techniques. The study also sought to determine whether significant difference existed with respect to the variables tested in relation to the age of the university, location of the university (urban *versus* rural) and the university status (old, new and university colleges). This was accomplished by utilizing inferential statistics and analyzed using SPSS. The t-test statistic and Analysis of Variance (ANOVA) statistic for comparison were used specifically to find whether there was any significant difference between and among the variables.

## 4. Results and discussion

*4.1 Growth of public universities in Kenya (2003 to 2013)*

In a span of 10 years, the number of public universities and university colleges in Kenya increased to 22 and 9, respectively (Fig. 1). The highest increase in universities was in 2013 when a record 14 university colleges were upgraded to fully-fledged universities. The establishment of new public universities and university colleges in Kenya is increasingly important at a time when the government is seeking ways of admitting at least 40,000 extra students, culminating from the free primary and secondary education. This is a government strategy which will see the universities, all of which had been clustered in urban areas spread their wings to more rural areas and offer locally appropriate courses. Demand for higher education in Kenya has soared as more school leavers dash for university education to enhance their chances in the labour market. It is this sharp rise in demand that has contributed to this rushed expansion of learning institutions, in some instances resulting in eroded quality of study due to inadequate facilities and shortage of qualified and experienced lecturers. The creation of more universities in Kenya has more to do with national pride and domestic politics than any real need for these institutions (Odhiambo, 2013). With Kenya having 47 counties and several ethnic groups, the new universities have been established based on regional and ethno-centric political considerations rather than in response to new educational needs, since most of these universities offer more or less similar programmes.

*4.2 Institution and respondent profile*

The number of respondents was 91. A total of 63 completed and returned the questionnaire, giving an effective response rate of 69.4 percent. Contacts prior to the dispatch of the questionnaire, follow-up calls, text messages and extended time to return the questionnaire probably accounted for the high response rate. Table 1 gives the profile of the respondents and the institutions. Most of the respondents (30 percent) had served for 0 – 4 years. This could be due to the fact that majority of the public universities were established between 2009 and 2013, and many of those appointed had no prior experience in running universities at senior management level. The establishment of new universities, therefore, presented opportunities for serving and/or former deans, directors and chairmen of departments to ascend to positions of principals and deputy principals who eventually became VCs and DVCs of new universities. The majority of the respondents (76 percent) had their basic training in the sciences with only 5 percent having had training in business. Training in management is essential in running any organization, whether private or public.

A high percentage (79 percent) of the respondents had no formal training in management, with majority relying on what they learned through attending workshops and seminars. Only 8 percent of the respondents had postgraduate training in management, specifically Master of Business Administration (MBA) and Executive MBA. Although management skills can be learned through experience or reading, continuous management training is important for management renewal, and even more so in today's ever changing environment. Without it, even the well-resourced organizations may soon become like a 'rudderless ship' in the waters where the tide is ever changing (Dsanzi and Dzansi, 2011). Majority of the respondents indicated that they needed management training 'to a great extent'. This correlates well with the percentage (79 percent) of respondents who had no professional training in management. Acquisition of management skills is expected to enable managers to

 

improve performance, efficiency and effectiveness (Jones and George, 2008) and the respondents indicated that acquisition of these skills would improve their performance, efficiency and effectiveness 'to a great extent'.

Lack of management skills has been identified as one of the main challenges facing public universities in Kenya (Chacha, 2004; Mutula, 2002) and in Nigeria (Ekundayo and Ajayi, 2009). Despite lack of managerial skills among the respondents, most of them indicated that universities are better managed by professional managers rather than academicians only 'to a moderate extent'. A dominant trend in public policy in the west and some more advanced developing countries is the application of private sector management models to the public sector. For instance, the New Public Management model which deals with issues like efficiency, effectiveness, delivery, flexibility, measurement and output has been adopted by many countries (Sirat, 2010). In Kenya this model has been applied in a few parastatals; Kenyatta National Hospital and Kenya Wildlife Service, two parastatals in Kenya have in the past been run by professional managers rather than by professionals in their core mandate, a practice that can be borrowed by public universities. Therefore, new approaches to leadership in higher education are being explored elsewhere as universities face the dual challenges of competing in globally competitive world while at the same time designing opportunities to build and develop sustainable leadership (Jones, Lefore, Harvey and Pryland, 2012), and Kenya is no exception.

*4.3 Extent of managerial and environmental challenges faced by public universities*

The respondents were asked to rank the managerial and environmental challenges they experience in their universities. Among the five main functions of management, the respondents indicated that the control function of management posed challenge 'to a great extent' while organizing function was rated lowest (Table 2A). In planning function, the biggest challenges were physical facilities for training, learning, and students and staff welfare (3.9) particularly students accommodation, strategy communication (3.6) and engagement of employees with strategy (3.7), new management paradigms (3.6) and resource mobilization and planning (3.6). In organizing function, the biggest challenge was operationalization of the university as a system (3.1). In staffing function, competition for experienced and competent teaching staff among public universities (3.9) and poor remuneration and staff motivation (3.6) were the major challenges while in the leading and control functions the biggest challenges were transformational leadership (3.5) and real-time information and control (3.6), respectively. Strategy is an area where most universities found challenge in the planning function, particularly the process of developing strategy, strategy communication and engagement of people with strategy. This agrees very well with what has been reported in the corporate organisations where it has been indicated that the need to provide the link between strategy and operations is paramount in the communication and engagement, particularly at operational level (Brown, 2013). In order to effectively communicate strategy, public universities in Kenya will have to endeavor to find out what employees want to know so that they are not overwhelmed with details. While strategic plans are often developed by the senior management team, their effectiveness depends on the extent of engagement throughout the organisation (Brown, 2013). Many universities, especially the new ones and the university colleges have not put in place information management systems in place; some cannot produce information on the number of registered students, paid up students, those who have passed examinations, who has taken academic leave, who works where among the staff and on financial matters. In other developing countries, for example, Tsai and Beverton (2007) identified some of the management challenges facing Taiwan universities as the lack of consensus and shared vision, limited faculty development, inadequate access to external resources and lack of good leadership.

The environmental factors that may pose challenges in any organisation are political, economic, social, technological, ecological and legal (Pearce and Robinson, 2011). Of the environmental factors, economic factor posed the most challenge (Table 2B). Of concern were undifferentiated unit cost (3.9), financing of education (3.6) and unemployment rate (3.6) which posed challenge 'to a great extent' Apparently, political factor did not seem to have a profound effect on environmental challenges faced, except that of interference by politicians (3.4). The competitive factor posed environmental challenge 'to a great extent', particularly as regards competition among local universities (3.8), suppliers (staff) (3.8) and customers (students) (3.6). Among the social factors, poverty posed the highest environmental challenge (3.5). This could be attributed to the fact that most of the self-sponsored students are drawn from the community surrounding the universities and hence poverty may influence income generation.

The managerial and environmental challenges faced by organizations are influenced by many factors, including the time the organisation has been in the industry. To establish this with respect to public universities, a t-test analysis was carried out between the old and new universities. There was a significant difference ($p<0.05$) in managerial challenges faced by new and old universities with respect to planning, leading and control functions (Table 3A). Overall, there was significant difference ($p<0.05$) in the managerial challenges experienced by the old and new universities. Environmental challenges faced by old and new universities differed significantly ($p<0.05$) at the social and ecological levels, as well as overall (Table 3B).The new universities and university colleges experienced managerial and environmental challenges to a greater extent than the old universities as evidenced by the high means (Table 3A).

 

Further, given that the recently established universities and university colleges are located in the rural area, these universities may face managerial and environmental challenges different from those in the urban centres. This hypothesis was tested by comparing the environmental challenges faced by rural and urban universities. There was a significant difference ($p<0.05$) in staffing, leading and control functions between rural and urban universities (Table 4A). The managerial challenge of staffing could be due to the fact that most of the staff, especially teaching staff would prefer to work in the urban centres where there are many opportunities. This supports the observation regarding the managerial challenge with respect to staffing, where competition for experienced and competent staff contributed 'to a great extent' the managerial challenges experienced by the universities (data not shown). All the same, rural universities experienced managerial challenges to a greater extent than the urban universities as evidenced by the high means (Table 4A). There was a significant difference ($p<0.05$) in environmental challenges related to political, economic and social factors between universities located in rural and urban areas (Table 4B). It is plausible fact that most of the new universities in the rural areas were established on political considerations rather than on need and, therefore, local politicians wish to control them. On the other hand, most of the new universities in the rural area are still setting up structures and relying heavily on the government for financial support. For this reason, they are likely to experience financial challenges compared to the urban universities; further most of the rural universities are yet to build brand identity.

The public universities in this study were categorized as old universities, new universities and university colleges. A one-way ANOVA was conducted to test whether there was any significant difference in the managerial and environmental challenges faced by each of the three categories. Table 5A shows that the category of the public university had no significant effect ($p<0.05$) on the managerial challenges experienced. This may indicate that the management of public universities is homogeneous. With regard to environmental challenges they faced, significant difference ($p<0.05$) existed in economic, social and technological factors among the three categories (Table 5B). Overall there was a significant difference ($p<0.05$) in environmental challenges faced. Previous studies (Oketch, 2004; Otieno, 2004) have shown that Kenyan universities face many challenges, including changing relationship between public universities and government, inadequate funding, poor infrastructure, growth in demand for higher education, increasing societal expectations, shifting demographics and stiff competition and rigid course programmes that are not responsive to the labour market. Other challenges previously reported include attracting and retaining qualified teaching and research staff, financial, quality assurance, paradigm shift in management, global education paradigm shift from teacher-centred to learner-centred (Mutula, 2002; Chacha, 2004; Kitoto, 2005). This study has expanded further the body of knowledge by providing details of managerial and environmental challenges faced by public universities. With the core functions of a university being learning, training, research and service to the community it is evident that these can only be performed effectively and efficiently when high quality academic and non-academic administrative staff are hired and retained. Therefore, human resource which has been identified as a managerial challenge in this study should be managed in an integrated way in order to achieve competitive advantage (Huang and Lee, 2013).

The universities were affected by competition for students and staff 'to a great extent'. It has been observed that university administrators regard increased competition for students as one of the most important drivers of organizational change at their institutions (Kemelgor, Johnson and Srinivasan, 2000) which can be countered through implementation of appropriate response strategies. Mutua (2004) in his case study of the University of Nairobi showed that the university faced many challenges and the greatest of all was the challenge of competition from other institutions that had taken advantage of the insatiable quest for higher education in Kenya. The political and economic contexts of the higher education industry are intricately connected, especially for public institutions. Funding for state public higher education is in large part, driven by available tax revenues, which are in turn influenced by a state's economic climate (Martinez and Wolverton, 2009). In higher education, technological innovation has influenced rivalries on both the teaching and research fronts. Those universities that capitalize on technological innovation enhance their competitive position as they move to the forefront of teaching and research.

*4.4 Test for social desirability*

Social desirability and/or distorted self-reports is where an executive paints himself or herself in good light; however, although reduced through self-administration of the questionnaire in this study, it could not be ruled out. To test this with respect to the managerial and environmental challenges experienced, the responses from the VCs and Principals (CEOs) were compared with those of the DVCs and Deputy Principals (Deputy CEOs). There was no significance difference ($p<0.05$) in the responses from the CEOs and their deputies in the extent they experienced managerial challenges related to management functions (Table 6). A similar observation was observed for environmental challenges related to macro-environmental factors (data not shown). This indicates that there was no social desirability in the responses to the challenges and this can be attributed to self-administration of the questionnaire.

 

## 5. Limitation and Opportunities for Further Research

The challenges facing public universities in Kenya indicate the need for reforms in the management of these institutions. The current study relied on data collected using self-reporting postal and drop-and-pick-later questionnaire, secondary data and content analysis. Ideally, it should be augmented with real-time longitudinal studies to obtain better understanding of causal relationships (both degree and direction) between the various environmental and managerial challenges. There is need to investigate and provide empirical evidence on how the environment influences the kind of leaders in public universities especially in relation to its volatility The most current pressing challenge may be the least challenging in the future. We, therefore, recommend that a longitudinal study or periodical study be undertaken to examine the changes in the relative effects of the various challenges within and outside HEIs. The study focused only on identifying environmental and managerial challenges. There is need to investigate the response strategies adopted by the universities to counter the challenges. The study has shown that majority of the management in public universities have no professional training in management. There is, therefore, need to provide evidence to link/correlate the lack of management training and the managerial challenges. However, public universities in Kenya may face other challenges which may need to be investigated. This is important because some response strategies that the public universities adopts may affect the whole organization and not necessarily respond to a particular challenge. The operations of universities is affected by various stakeholders, including 16 publics (Kotler and Fox, 1995) who have an actual potential interest in or effect on the institutions. Studies are, therefore, required to understand the challenges posed by external and other internal stakeholders as this may further inform managerial decisions and aid survival in a competitive market that education has become. Public and private universities operate in the same environment. However, the results from this study cannot be generalized for all universities in Kenya since public and private universities have different structures. This calls for undertaking of a cross-sector study to ascertain whether private universities experience the same managerial and environmental challenges.

## 6. Conclusion and Practical Implication

The results from this study indicate that public universities experience a multitude of environmental and managerial challenges. The managerial challenges are related to the main management functions while the environmental challenges are related to micro-environmental, industry and macro-environmental factors. The respondents gave more or less honesty answers based on the fact that there was no social desirability, that is, the VCs and principals and their deputies gave more or less similar responses. Although the results indicate a need for change in management style and structure of Kenyan public universities, the higher education sector requires a less hierarchical approach that takes into account its highly specialized and professional context. Faced with many managerial and environmental challenges including intense industry competition, government control and regulation, commoditizing of education, rising costs, highly dynamic environment, and more demanding customers (students, parents and industry), the survival of public universities in Kenya depends greatly upon the development of sustainable response strategies to remain viable and competitive, if not to achieve market leadership in the East African region. The results indicate that there is need for reforms in the management of the public universities in Kenya. Improved governance of public universities benefit a wide range of stakeholders that include, students and employees. The study has tried to link managerial challenges with managerial ability and provides lessons of management practice in public universities. The results reveal that current public universities in Kenya are dependent on the internal, industry and macro-environment in which they operate. Thus, the theoretical framework developed in this study is an integration of the environment-dependence and resource-based theories of competitive advantage to explain strategic management of HEIs. They are complementary in explaining the effects of external industry structure and internal resources on institutional performance.

The majority of the management currently running public universities in Kenya have no basic or professional training in management. Although lack of training in management could not directly be linked to the environmental and managerial challenges, the government may need to set requirements for appointment of university managers beyond academic qualifications and administrative experience to include, training in management. The study has linked managerial challenges with managerial ability and provides lessons of management practice in public universities. Further, the public universities should disband the rigid traditional governance models that stifle reforms to more pro-customer models that enable the institutions treat students, parents and industry as customers and adopt corporate management style of the universities because they have actually become so. Besides, there is need for universities to re-engineer themselves into centres of excellence in selected disciplines and thereby eliminate unnecessary competition for students and staff which at times leads to lowering of quality.

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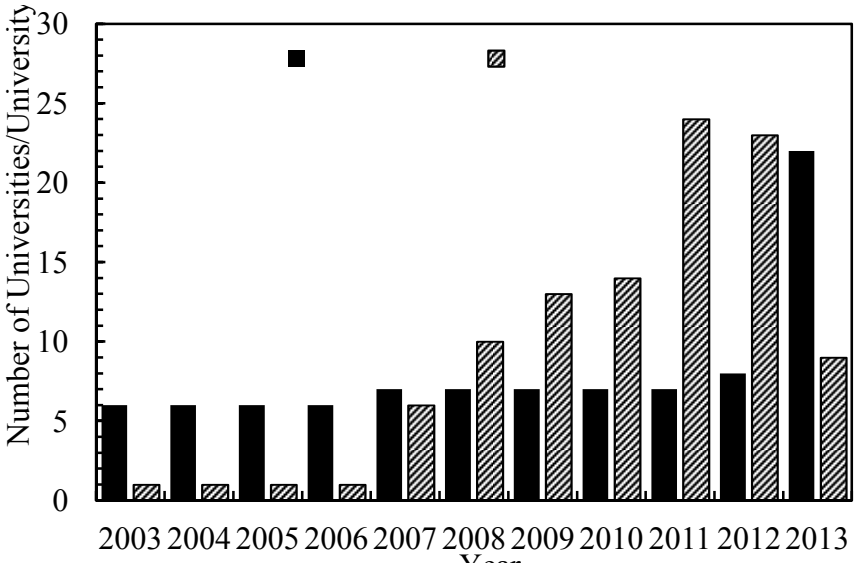


Figure 1. Increase in the number of universities and university colleges in Kenya between 2003 and 2013.

 

Table 1. Institution and respondent profile

| Demographic characteristic | Category | Total | Percentage |
|---|---|---|---|
| Age group | 40 – 44 years | 0 | 0 |
| | 45 – 49 years | 6 | 9.7 |
| | 50 – 54 years | 30 | 46.8 |
| | 55 – 59 years | 21 | 33.9 |
| | 60 – 64 years | 6 | 9.7 |
| | 65 – 69 years | 0 | 0 |
| | Above 70 years | 0 | 0 |
| Area of training | Science | 48 | 75.8 |
| | Liberal arts | 8 | 13.0 |
| | Business | 3 | 4.7 |
| | Others | 4 | 6.5 |
| Level of training in management | None | 50 | 79.2 |
| | Diploma | 3 | 4.5 |
| | Postgraduate diploma | 5 | 8.1 |
| | Postgraduate degree | 5 | 8.4 |
| Position | Vice-Chancellor | 13 | 20.6 |
| | Deputy Vice-Chancellor | 33 | 52.4 |
| | Principal | 7 | 11.1 |
| | Deputy Principal | 10 | 15.9 |
| Experience in university management | 0 – 4 years | 19 | 30.6 |
| | 5 – 9 years | 15 | 24.2 |
| | 10 – 14 years | 13 | 19.4 |
| | 15 – 19 years | 15 | 24.2 |
| | Above 20 years | 1 | 1.6 |
| Location | Urban | 24 | 38.1 |
| | Rural/Semi-urban | 39 | 61.9 |

Table 2A. Mean and standard deviation of the extent to which the respondents experienced managerial challenges related to management functions

| Function | Mean* | Standard deviation | Verbal interpretation |
|---|---|---|---|
| Planning | 3.6 | 0.56 | To a moderate extent |
| Organizing | 2.9 | 0.44 | To a moderate extent |
| Staffing | 3.6 | 0.75 | To a moderate extent |
| Leading/Directing | 3.4 | 0.59 | To a moderate extent |
| Control | 3.8 | 0.82 | To a great extent |
| **Overall** | 3.6 | 0.83 | To a moderate extent |

Table 2B. Mean and standard deviation of the extent respondents experienced environmental challenges related to macro-environmental factors

| Factor | Mean* | Standard deviation | Verbal interpretation |
|---|---|---|---|
| Political | 2.8 | 0.94 | To a little extent |
| Economic | 3.6 | 0.73 | To a moderate extent |
| Social | 2.7 | 0.66 | To a moderate extent |
| Technological | 3.2 | 0.94 | To a moderate extent |
| Ecological | 2.9 | 0.84 | To a little extent |
| Legal | 3.1 | 0.71 | To a moderate extent |
| Competitive | 3.6 | 0.80 | To a moderate extent |
| **Overall** | 3.2 | 0.43 | To a moderate extent |

n = 63

* The analysis is based on the ranges 1 – 1.5: Not at all, 1.6 – 2.5: To a little extent, 2.6 – 3.5: To a moderate extent, 3.6 – 4.5: To a great extent and 4.6 – 5: To a very great extent

 

Table 3A. The difference between old and new universities in the extent the respondents experienced managerial challenges related to management functions

| Function | Category | n | Mean* | Standard deviation | t | *p* |
|---|---|---|---|---|---|---|
| Planning | Old | 18 | 2.9 | 0.58 | | |
| | New*** | 45 | 3.4 | 0.91 | 2.207 | 0.031** |
| Organizing | Old | 18 | 2.6 | 0.76 | | |
| | New | 45 | 3.0 | 0.97 | 1.559 | 0.124 |
| Staffing | Old | 18 | 3.0 | 0.57 | | |
| | New | 45 | 3.4 | 0.80 | 1.753 | 0.085 |
| Leading/ | Old | 18 | 2.9 | 0.72 | | |
| Directing | New | 45 | 3.4 | 0.82 | 2.190 | 0.033** |
| Control | Old | 18 | 3.0 | 0.78 | | |
| | New | 45 | 3.6 | 0.97 | 2.194 | 0.032** |
| **Overall** | Old | 18 | 2.9 | 0.65 | | |
| | New | 45 | 3.4 | 0.86 | 2.133 | 0.037** |

Table 3B. The difference between respondents from old and new universities in the extent they experienced environmental challenges related to macro-environmental factors

| Factor | Category | n | Mean* | Standard deviation | t | *p* |
|---|---|---|---|---|---|---|
| Political | Old | 18 | 2.0 | 0.64 | | |
| | New*** | 45 | 2.5 | 0.78 | 1.878 | 0.065 |
| Economic | Old | 18 | 3.1 | 0.66 | | |
| | New | 45 | 3.5 | 0.74 | 1.695 | 0.095 |
| Social | Old | 18 | 2.4 | 0.67 | | |
| | New | 45 | 2.8 | 0.62 | 2.517 | 0.015** |
| Technological | Old | 18 | 3.0 | 0.89 | | |
| | New | 45 | 3.3 | 0.95 | 1.097 | 0.277 |
| Ecological | Old | 18 | 2.1 | 0.56 | | |
| | New | 45 | 2.6 | 0.90 | 2.182 | 0.033** |
| Legal | Old | 18 | 3.0 | 0.62 | | |
| | New | 45 | 3.1 | 0.74 | 0.673 | 0.503 |
| Competitive | Old | 18 | 3.1 | 0.71 | | |
| | New | 45 | 3.4 | 0.81 | 1.761 | 0.084 |
| **Overall** | Old | 18 | 2.7 | 0.49 | | |
| | New | 45 | 3.0 | 0.56 | 2.440 | 0.018** |

* The analysis is based on the ranges 1 – 1.5: Not at all, 1.6 – 2.5: To a little extent, 2.6 – 3.5: To a moderate extent, 3.6 – 4.5: To a great extent and 4.6 – 5: To a very great extent

** Significant difference at $p<0.05$; *** Includes new universities and university colleges

Table 4A. The difference between respondents from urban and rural universities in the extent they experienced managerial challenges related to management functions

| Function | Category | n | Mean* | Standard deviation | t | *p* |
|---|---|---|---|---|---|---|
| Planning | Urban | 24 | 3.1 | 0.63 | | |
| | Rural*** | 39 | 3.4 | 0.96 | 1.709 | 0.093 |
| Organizing | Urban | 24 | 2.8 | 0.74 | | |
| | Rural | 39 | 3.0 | 1.03 | 0.784 | 0.436 |
| Staffing | Urban | 24 | 3.0 | 0.58 | | |
| | Rural | 39 | 3.5 | 0.80 | 2.573 | 0.013** |
| Leading/Directing | Urban | 24 | 3.1 | 0.83 | | |
| | Rural | 39 | 3.6 | 0.98 | 2.077 | 0.042** |
| Control | Urban | 24 | 3.1 | 0.83 | | |
| | Rural | 39 | 3.6 | 0.98 | 2.077 | 0.042** |
| **Overall** | Urban | 24 | 3.0 | 0.67 | | |
| | Rural | 39 | 3.4 | 0.89 | 1.938 | 0.058 |

 

Table 4B. The difference between the extent respondents from urban and rural universities experienced environmental challenges related to macro-environmental factors

| Factor | Category | n | Mean* | Standard deviation | t | *p* |
|---|---|---|---|---|---|---|
| Political | Urban | 24 | 2.1 | 0.67 | 2.079 | 0.042** |
| | Rural*** | 39 | 2.6 | 1.03 | | |
| Economic | Urban | 24 | 3.2 | 0.80 | | |
| | Rural | 39 | 3.6 | 0.65 | 2.156 | 0.035** |
| Social | Urban | 24 | 2.5 | 0.62 | | |
| | Rural | 39 | 2.8 | 0.66 | 2.081 | 0.042** |
| Technological | Urban | 24 | 3.1 | 0.93 | | |
| | Rural | 39 | 3.3 | 0.95 | 0.901 | 0.372 |
| Ecological | Urban | 24 | 2.4 | 0.79 | 0.399 | 0.692 |
| | Rural | 39 | 2.5 | 0.88 | | |
| Legal | Urban | 24 | 3.0 | 0.65 | | |
| | Rural | 39 | 3.1 | 0.75 | 0.669 | 0.506 |
| Competitive | Urban | 24 | 3.2 | 0.82 | | |
| | Rural | 39 | 3.4 | 0.78 | 0.862 | 0.392 |
| **Overall** | Urban | 24 | 2.8 | 0.48 | | |
| | Rural | 39 | 3.0 | 0.60 | 1.847 | 0.070 |

* The analysis is based on the ranges 1 – 1.5: Not at all, 1.6 – 2.5: To a little extent, 2.6 – 3.5: To a moderate extent, 3.6 – 4.5: To a great extent and 4.6 – 5: To a very great extent

** Significant difference at $p<0.05$

*** Includes both semi-urban and rural universities/university colleges

Table 5A. One-way ANOVA test for the differences among the three categories of universities in the extent respondents experienced managerial challenges related to management functions

| Function | Source | Sum of squares | df | Mean squares | *F* | *p* |
|---|---|---|---|---|---|---|
| Planning | Between groups | 3.65 | 2 | 1.822 | 2.579 | 0.085 |
| | Within groups | 40.28 | 60 | 0.707 | | |
| | **Total** | 43.93 | 62 | | | |
| Organizing | Between groups | 3.13 | 2 | 1.565 | 1.873 | 0.163 |
| | Within groups | 47.63 | 60 | 0.836 | | |
| | **Total** | 50.76 | 62 | | | |
| Staffing | Between groups | 2.43 | 2 | 1.217 | 2.223 | 0.118 |
| | Within groups | 31.21 | 60 | 0.548 | | |
| | **Total** | 33.64 | 62 | | | |
| Leading/ directing | Between groups | 4.09 | 2 | 2.046 | 2.364 | 0.103 |
| | Within groups | 49.32 | 60 | 0.865 | | |
| | **Total** | 53.41 | 62 | | | |
| Control | Between groups | 4.09 | 2 | 2.046 | 2.364 | 0.103 |
| | Within groups | 49.32 | 60 | 0.865 | | |
| | **Total** | 53.42 | 62 | | | |
| **Overall** | Between groups | 3.20 | 2 | 1.600 | 2.421 | 0.098 |
| | Within groups | 37.68 | 60 | 0.661 | | |
| | **Total** | 40.88 | 62 | | | |

 

Table 5B. One-way ANOVA test for the differences among the three categories of universities on each factor of environmental challenge

| Factor | Source | Sum of squares | df | Mean squares | *F* | *p* |
|---|---|---|---|---|---|---|
| Political | Between groups | 4.168 | 2 | 2.084 | 2.488 | 0.092 |
| | Within groups | 47.744 | 60 | 0.838 | | |
| | **Total** | 51.912 | 62 | | | |
| Economic | Between groups | 4.401 | 2 | 2.200 | 4.643 | 0.014** |
| | Within groups | 27.012 | 60 | 0.474 | | |
| | **Total** | 31.413 | 62 | | | |
| Social | Between groups | 2.700 | 2 | 1.350 | 3.335 | 0.043** |
| | Within groups | 23.076 | 60 | 0.405 | | |
| | **Total** | 25.776 | 62 | | | |
| Technological | Between groups | 5.952 | 2 | 2.976 | 3.685 | 0.031** |
| | Within groups | 46.040 | 60 | 0.808 | | |
| | **Total** | 51.992 | 62 | | | |
| Ecological | Between groups | 3.797 | 2 | 1.898 | 2.839 | 0.067 |
| | Within groups | 38.116 | 60 | 0.669 | | |
| | **Total** | 41.913 | 62 | | | |
| Legal | Between groups | 0.254 | 2 | 0.127 | 0.246 | 0.783 |
| | Within groups | 29.376 | 60 | 0.515 | | |
| | **Total** | 29.630 | 62 | | | |
| Competitive | Between groups | 3.356 | 2 | 1.678 | 2.807 | 0.069 |
| | Within groups | 34.070 | 60 | 0.598 | | |
| | **Total** | 37.426 | 62 | | | |
| **Overall** | Between groups | 2.253 | 2 | 1.127 | 3.934 | 0.025** |
| | Within groups | 16.327 | 60 | 0.286 | | |
| | **Total** | 18.580 | 62 | | | |

** Significantly different at $p<0.05$

Table 6. The differences between positions of top management members (VCs /principal – CEO versus DVCs/deputy principals) on the extent they experienced managerial challenges related to management functions

| Function | Position | n | Mean* | Standard deviation | t | *p* |
|---|---|---|---|---|---|---|
| Planning | VC/Principal | 20 | 3.3 | 0.99 | 0.15 | 0.881 |
| | DVC/Deputy Principal | 43 | 3.3 | 0.80 | | |
| Organizing | VC/Principal | 20 | 3.0 | 1.04 | | |
| | DVC/Deputy Principal | 43 | 2.8 | 0.87 | 0.627 | 0.533 |
| Staffing | VC/Principal | 20 | 3.3 | 0.79 | | |
| | DVC/Deputy Principal | 43 | 3.3 | 0.74 | 0.156 | 0.878 |
| Leading/Directing | VC/Principal | 20 | 3.4 | 1.11 | | |
| | DVC/Deputy Principal | 43 | 3.5 | 0.87 | 0.242 | 0.809 |
| Control | VC/Principal | 20 | 3.5 | 1.11 | 0.242 | 0.809 |
| | DVC/Deputy Principal | 43 | 3.4 | 0.87 | | |
| **Overall** | VC/Principal | 20 | 3.3 | 0.96 | 0.309 | 0.758 |
| | DVC/Deputy Principal | 43 | 3.2 | 0.76 | | |

* The analysis is based on the ranges 1 – 1.5: Not at all, 1.6 – 2.5: To a little extent, 2.6 – 3.5: To a moderate extent, 3.6 – 4.5: To a great extent and 4.6 – 5: To a very great extent