

**RESPONSE STRATEGIES ADOPTED BY PUBLIC
UNIVERSITIES IN KENYA TO ENVIRONMENTAL AND
MANAGERIAL CHALLENGES**

BY

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DECLARATION

This research project is my original work and has not been presented for award of any degree in this or any other university

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This research project has been submitted for examination with my approval as the University Supervisor

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DEDICATION

This research project is dedicated to my late father, Mwalimu Joel Mathooko Nthenge who never lived long enough to see me earn this degree and, who in my eyes and mind was the greatest teacher of all times.

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OPERATIONAL TERMS

- Environment:** The combination of internal, industry and external factors/forces that influence an organization's operating situation and functions. Such forces include customers, competitors, suppliers, distributors, industry trends, substitutes, economic conditions, employees, response strategies, set of regulations, government activities, innovation, and technological development, demographic, social and cultural factors.
- Response strategies:** The processes employed by management of an organization in order to deal effectively and efficiently with everything that affects the growth and profitability of the organization so that it can position itself optimally in its competitive environment by maximizing the anticipation of environmental change.
- Public university:** Represents both fully-fledged universities and university colleges.
- Module II students:** All self-sponsored students.
- Managerial:** Of or relating to a manager or to the functions, responsibilities, or position of management and comprising activities such as planning, organizing, staffing, leading or directing, and controlling an organization effort for the purpose of accomplishing its goals.

LIST OF ABBREVIATIONS/ACRONYMNS

ANOVA	Analysis of Variance
CATS	Credit Accumulation Transfer System
CEO	Chief Executive Officer
CPA (K)	Certified Public Accountant (Kenya)
CUE	Commission for University Education
DVC	Deputy Vice-Chancellor
HEIs	Higher Education Institutions
JAB	Joint Admissions Board
JKUAT	Jomo Kenyatta University of Agriculture and Technology
KCSE	Kenya Certificate of Secondary Education
MBA	Master of Business Administration
PFCF	Porter's Five Competitive Forces
PPP	Public-Private Partnership
SPSS	Statistical Package for Social Scientists
VC	Vice-Chancellor

ABSTRACT

The environment in which organizations operate is continuously changing, thereby posing challenges to organizations, and higher education institutions are no exception. The objective of this study was to understand how public universities in Kenya respond to environmental and managerial challenges and the factors that influence the choice of the response strategies. The study design was descriptive and utilized a cross-sectional survey of all the public universities in Kenya by administering a structured questionnaire to the top management team by mail and drop-and-pick-later methods. Additional primary data were collected through observations and interviews. 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. Statistical Package for Social Scientists (SPSS) was used to generate data that were analyzed using descriptive statistics. Content and logical analyses techniques were also used for data analysis. Positive responses were received from 63 respondents out of 91, yielding a 69.4% response rate. Of the respondents, 76% had basic training in the sciences and only 3% in business; 79% had no professional training in management and only 8% each had training 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 challenge. A significant difference ($p < 0.05$) in the managerial and environmental challenges existed between new and old universities, and rural and urban universities. 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 public universities adopted Porter's generic competitive strategy model, of cost leadership, differentiation and focus to counter the challenges experienced, and in particular cost leadership and differentiation. The extent of adoption of differentiation strategy was significantly different ($p < 0.05$) between the old and new universities and not among the three categories of public universities. Grand strategies adopted were diversification in related business, expansion and strategic alliances. The major operational strategies adopted included, management leadership in the formulation of response strategies, distributed leadership, benchmarking, and mounting of evening and weekend programmes. Some of the operational strategies adopted by some universities were, however, unethical and may compromise quality. Porter's five competitive forces (PFCF) framework influenced the choice of response strategies adopted by the universities, particularly threat from new entrants, especially local private universities. The influence of the choice of the response strategies by PFCF framework was independent of the time the university was established and its status. Pressure from stakeholders, changes in government funding, reforms in the higher education sub-sector and location of the university also influenced the choice of response strategies. The results indicate that public universities in Kenya experience a multitude of environmental and managerial challenges and have adopted response strategies to cope with the challenges. The response strategies adopted and the factors influencing their choice are more or less similar to those applied by corporate organizations among them, grand strategies, Porter's generic competitive strategy and PFCF framework. The results further indicate that the current 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.

CHAPTER ONE: INTRODUCTION

1.1. Background of the Study

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 environmental and managerial challenges to organizations. Indeed, business firms that do not foresee this are doomed to fail. Therefore, the survival, growth and prosperity of any organization depends on how it responds to changes taking place in the environment. In view of this, strategic management plays a key role in positioning businesses in their quest to achieve sustainable competitive advantage. The firm's management style is, however, determined not only by its ability to respond to the changing environment but also by its unique managerial approaches, control systems, decision-making styles and communication modes (Lavie, Haunschild and Khanna, 2012). Therefore, for organizations to remain truly competitive over time as the environment changes, they have to learn to adapt and reorient themselves to the changing environment. For this reason, there has to be a deliberate and coordinated leaning to a gradual systematic realignment between the environment and the organization's strategic orientation that results in improvement in performance, efficiency and effectiveness.

The challenges that modern businesses face, among them managerial have been brought about by the ever dynamic and turbulent environment. In order for an organization to remain successful in its business, there is need to understand the challenges, opportunities and threats that are provided by the external environment, so that the organization can take advantage of the opportunities and avoid threats (Xu, Lahaney, Clarke and Duan, 2003) by applying appropriate response strategies. It is, therefore, only those firms that have put in place appropriate response strategies that will survive and achieve sustainable competitive advantage. 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.

Regardless of the industry, organizations operate in a dynamic and turbulent environment, hence unpredictable. These 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 organizations 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. For an organization to survive in such an environment, its strategies, therefore, need to focus on its customers to deal with emerging environmental challenges. 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 organizations operate is never constant and given its composition and forces therein, it presents unique challenges to organizations and their management. Indeed, it is when there are 'radical and discontinuous' environmental changes that organizations are most challenged to adapt. Therefore, organizations need the environment while the environment needs the organizations, none can exist without the other, that is, they are interdependent. For this reason, this study will be guided by the environment-dependence theory of organizations 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.

1.1.1. Concept of strategy

Strategy is an action that managers take to attain one or more of the organization's goals. It gives a general direction for the company and its various components to achieve a desired state in the future. Strategy, therefore, results in utilizing and allocating the scarce resources within the organizational environment so as to meet the present objectives (Pearce and Robinson, 2011). Ronda-Pupo and Guerras-Martin (2012) have extended recent reflection on the evolution of strategic management by analyzing the field's object of study: strategy. Despite its wide diffusion and the application of central models and concepts, there are many definitions of the strategy concept and strategic management, most of which lack an integrating nature (Nag, Hambrick and Chen, 2007). Further, although strategy is one of the most taught and studied concepts, it is paradoxically also one of the least understood (Ronda-Pupo and

Guerras-Martin, 2012). In order, therefore, to understand the nature of strategic management and response strategies it is important to understand what strategy is, since the strategic management process means defining and managing the organization's strategy.

Organizational strategies are classified into three different levels, corporate, business and functional levels. Each level has distinct characteristics. For example, the corporate level strategy is concerned with domain selection or which industry sector(s) to compete in, whereas the business level strategy is concerned with the domain navigation which include how to compete in a selected market segment. Functional-level strategies are derived from the business-level strategy and focus on the maximization of resource productivity (O'Regan, Kling, Ghobadian and Perren, 2012). In management, the concept of strategy is taken in broader terms. According to Jauch and Glueck (2010), strategy is the unified, comprehensive and integrated plan that relates the strategic advantage of the firm to the challenges of the environment and is designed to ensure that basic objectives of the enterprise are achieved through proper implementation process. In general, corporate-level strategy is too aggregated to enable satisfactory understanding of strategic responses to environmental influence, while functional-level strategies rarely indicate a strategic response on their own (O'Regan et al., 2012). Most of the theory development on strategy framework assumed that it occurs in the for-profit sector. This leaves the non-profit organizations (like universities) to either interpret the empirical findings regarding strategy framework to fit the non-profit sector or reject the findings as inapplicable (Phipps and Burbach, 2010). Available evidence suggests that strategic approaches in non-profit organizations may be different (Thach and Thompson, 2007). Strategy as a matter of fact is a management game plan to outwit competitors through offering goods and services beyond the customers' expectations and also through creating and innovating new goods and services as per new demands and reposition the firm more competitively in the market.

1.1.2. 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 organizational 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 organization. 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.

1.1.3. Organization and its environment

The organization environment is the set of forces surrounding an organization that have the potential to affect the way it operates and its access to scarce resources. The organization needs to properly understand the environment for effective management (Davis and Powell, 1992). Thus, environment are the influences that an organization must manage and is composed of the institutions or forces outside the organization that potentially affect the organization's performance. These typically include, suppliers, competitors, customers, government regulatory agencies and public

pressures (Rao, 2008). Organizations seek to manage the uncertainty imposed by their interdependence with the environment in two ways: (a) through internal strategies of adaptation and adjustment or organizational design and (b) through external strategies or modes of interaction (Davis and Powell, 1992).

Environmental conditions are important in effective strategic responses (Mitchell, Shepherd, and Sharfman, 2011; Hough and White, 2003). Environment not only moderates the relationship between decision-level factors highlighted in previous studies (Hough and White, 2003) but it also impacts the consistency of the direction themselves (Mitchell et al., 2011). Further, the environment determines the structure of an organization and the two basic factors that define an organization environment are complexity and stability (Hough and White, 2003). Depending on the mix of complexity and stability, an organization may develop specific roles and departments to manage the organizational environment. The degree of instability in an environment is captured in the volatility dimension. When there is a high degree of unpredictable change, the environment is dynamic. Organizations which operate in environments characterized as scarce, dynamic and complex face the greatest degree of uncertainty. This is because they have little room for error, high unpredictability and diverse set of elements in the environment to monitor constantly (Rao, 2008). As the environment changes, organizations find themselves in an unfamiliar environment and have to respond by integrating change and internalizing the ability to adapt to the new environment for survival and growth. Organizations respond to turbulence in the environment by formulating new strategies (Pearce and Robinson, 2011).

1.1.4. Environmental and managerial challenges

In their quest to remain competitive, organizations have to overcome various challenges, among them managerial and those brought about by changes in the external environment. The environment within which an organization operates can be classified into external (remote and industry) and internal environments. The external environment refers to those factors outside the organization's influence but which affect the organization's operations. It presents the opportunities that the organization can exploit and poses threats which can hinder the organization's activities (Johnson et al., 2008). The remote environmental factors that bring about the challenges emanate from politics, economy, technology, social, legal and ecology (Johnson,

Scholes, and Whittington, 2008; Thompson, Strickland and Gamble, 2008). The internal (operating) environment refers to those factors within an organization which the organization exercises a great deal of control and which affect the organization's operations, that is, strengths and weaknesses (Johnson and Scholes, 2002; Thompson et al., 2008). These environmental challenges are likely to bring about managerial challenges, and, therefore, the need to integrate them. Therefore, the organization has to know how and what to respond to, know whether the actions should be proactive or reactive in order to increase market share and safeguard customers. This requires new skills to help counter these challenges in the environment (Pearce and Robinson, 2011). For this reason, organizations being environmentally-dependent need to employ response strategies in order to adapt to the changing environment.

Writing (2010), indicated that there are various challenges facing businesses in the fast-paced, globally-oriented markets of today's world, among them financial, quality, performance, human resource management, process, operations and change management among others. These hinder the organization from achieving the desired efficiency and effectiveness and hence its performance and profitability. One of the biggest, and also one of the hardest to solve, is how to effectively manage across the various functions of a business without micromanaging and without causing excessive delays or conflicts within these functions. Several different functions of a business may need to be integrated into a management plan, and there are numerous schools of thought on how to accomplish these challenges. A second management challenge facing businesses is the idea of human capital management, what is the best way to meet the needs of these employees and also best utilize their skills and talents to keep the business functioning smoothly.

Further, Drucker (1999) outlined other challenges that face managers, including, the challenge of new management paradigms that include, management practice does not just apply to businesses but all organizations, there is no "right" or "wrong" organizational structure, the object is to develop a structure that fits the task, managers want to lead people rather than manage them and the only way to do that is to make use of the strengths and knowledge of each individual and the scope of management is not limited solely to the organization itself, but should address the entire process by which added value is delivered to consumers. Others are the challenge of new business

strategies and uncertainties; the challenge to lead change in which managers lack a willingness to attempt to make the future, systematic methods to identify and anticipate changes and techniques for introducing internal and external changes; the challenge of the availability of more information; the challenge of knowledge worker productivity and the challenge of being able to manage oneself, where managers are unable to identify their unique strengths, where they add the most value and what their specific contributions are.

1.1.5. Public universities in Kenya

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 elevated many public university colleges to fully-fledged universities, many of them removed from urban centres. Until 2007, Kenya had only seven public universities, namely, University of Nairobi, Moi University, Kenyatta University, Egerton University, Jomo Kenyatta University of Agriculture and Technology, Maseno University and Masinde Muliro University of Science and Technology. In 2003 when the NARC government came into power, it introduced free primary education and later free secondary education. In preparation for the increased number of students transiting to university, 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.

As at the fourth quarter of 2012, Kenya had 24 university colleges but in quick succession 15 of these university colleges were elevated to full-fledged university status by March 2013, their readiness to this status notwithstanding. This action is bound to bring about both environmental and managerial challenges among them

competition, human resource management, financial management, quality assurance, operations, infrastructural, change management and strategic management among others. Since HEIs are viewed as ‘non-profit making’ organizations, the dwindling government funding and competition from private universities, has forced these institutions to look for other means of funding. The increased competition has created fundamental shift in economic environment whereas no organization, including universities can hope to stay afloat if it fails to come up with appropriate strategic responses (Ansoff and McDonnell, 1990). To address this, many of these institutions have strategic plans to guide their future direction and cope with the challenges that they face.

The management of universities is effected by various stakeholders, including 16 publics who have an actual potential interest in or effect on the institution (Kotler and Fox, 1995; Figure 1.1). Since the university is a manifestly complex institution, the management of universities can be looked at from two dimensions, namely the external and internal levels (Ekundayo & Ajayi, 2009). The external control in Kenya is the control by the Commission for University Education (CUE), a body charged with the coordination of university education in the country. There is also management control by the university councils. On the other hand, the internal management of each of the university is represented by the organizational structure. Both the external and internal factors dictate how the university is managed and pose unique challenges.

1.1.6. Response strategies

Response strategies are those choices made by managers that commit important resources, set important precedents and/or direct important firm-level actions. They are processes that shape a firm’s direction (Dean and Sharfman, 1996). Response strategies in any organization are formulated and implemented as an activity within the broad strategic management activities. Strategic management serves as a framework within which choices are made concerning the nature and direction of the organization (Stoney, 2001). This framework helps in the allocation of resources in order to enhance financial and strategic performance (Ofori and Atiogbe, 2012). Strategic management further ensures that the organization has appropriate structures, processes and culture or mindset to carry through a programme of change (Stoney,

2001). It can depend upon the size of an organization, and the proclivity to change of its business environment. However, no single strategic managerial method dominates, and the concept of strategic management remains a subjective and context-dependent process (Nag, et al., 2007). On the other hand, strategy is the direction and scope of an organization over a long period of time which achieves advantage for the organization through its configuration of resources within a changing environment, to meet the needs for the market and fulfil stakeholders' expectations (Johnson et al., 2008). Strategy can, therefore, be seen as matching of resources and activities of an organization to the environment in which it operates and the strategic fit (Porter, 1980).

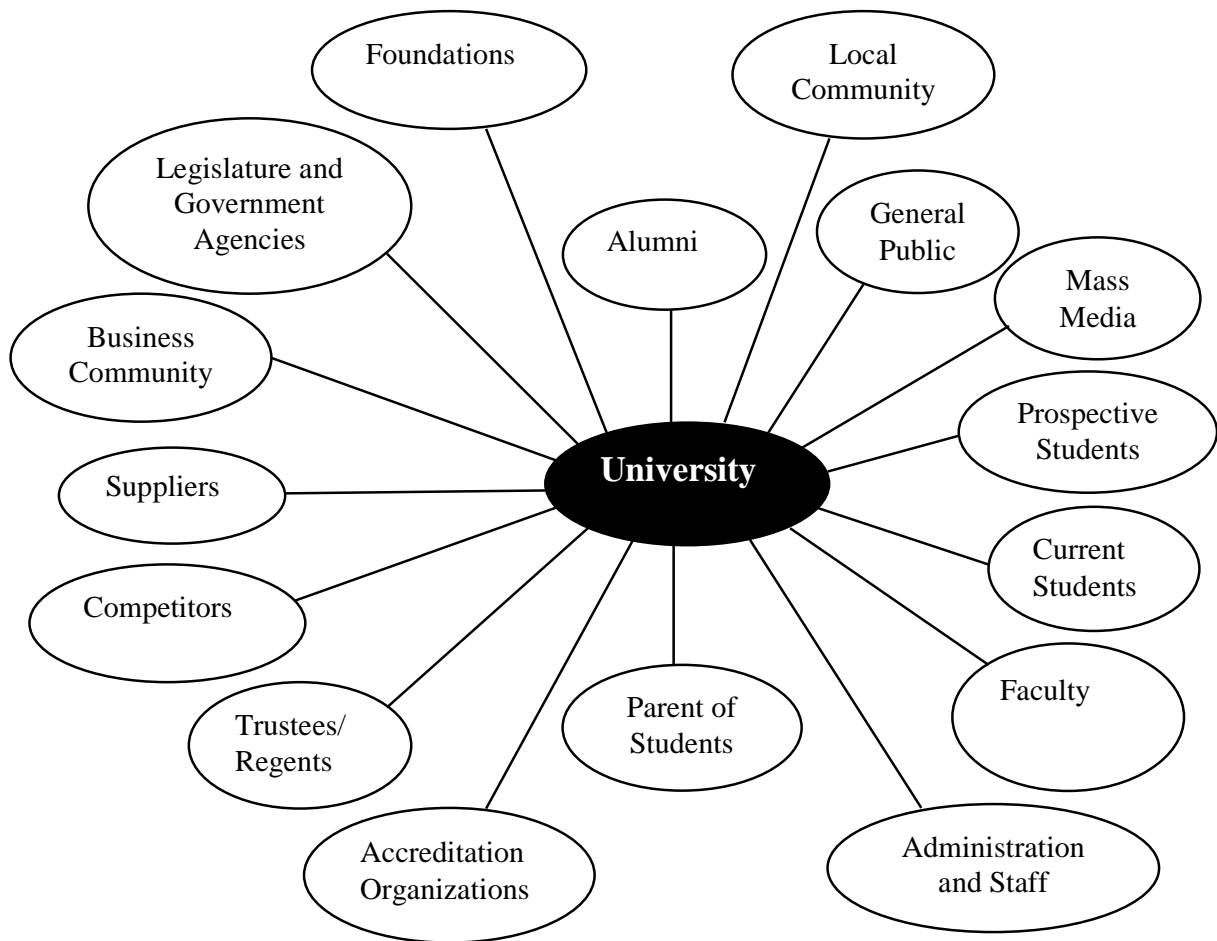


Figure 1.1. Stakeholders that have an actual potential interest in universities.

Source: Kotler and Fox, 1995

Executives of firms employ response strategies in order to deal effectively with everything that affects the growth and profitability of the firm so that it can position itself optimally in its competitive environment by maximizing the anticipation of environmental change (Pearce and Robinson, 2011). There are two types of response strategies, namely, strategic responses and operational responses (Ross, 2011). Strategic responses are fundamental and directional, and over-arching while operational responses primarily affect the day-to-day implementation of strategic decisions. Response strategies involve putting in place appropriate strategies, in order to counter changes in the external environment. An organization is considered efficient and operationally effective if it is characterized by coordination between objectives and strategies. Therefore, there has to be an integration of the parts into a complete structure. While planning a response strategy, it is essential to consider that decisions are not taken in a vacuum and that any act taken by an organization is likely to be met by a reaction from those affected, competitors, customers, employees or suppliers. As such, making response strategies more meaningful requires transitioning from strategic planning to the broader process of strategic management, which involves managing an organization's overall strategic agenda on an ongoing rather than on an episodic basis, as well as ensuring that strategies are implemented effectively (Poister, 2010). Response strategies are influenced by the environment in which an organization is operating, that is, they are tools that equip a firm to deal with circumstances it is facing (Johnson, et al., 2008). Therefore, response strategies equip a firm to counter competition so as to ensure its future growth and profitability in the industry, hence coping with environmental and managerial challenges among others.

Strategic responses enable organizations to cope with increased uncertainty and turbulence in the micro and macro environment, and they include long range planning, new venture development, budgeting and business policy (Pearce and Robinson, 2011). Some of the strategic responses that have been adopted by organizations to counter macro-environmental challenges include diversification, differentiation, cost leadership, focus, strategic alliances, new product developments, innovations, merger and acquisitions (Johnson et al., 2008) downsizing, business process re-engineering and use of information technology to speed business processes and communication (Pearce and Robinson, 2011). Porter (1980) views operational responses as part of planning process that coordinates operational goals with those of

the target organization. According to Ross (2011) operational responses include: product or service, process, research and development, location, inventory management, quality, capacity and human resource responses. However, all firms, even in the same industry grouping, do not respond to operating environment in the same way (O'Regan et al., 2012).

1.2. Research Problem

Organizations world over face numerous challenges in their operations particularly, business environmental and managerial challenges. The managerial challenges emanate from the main management functions that include, planning, coordinating, directing (leading), organizing, staffing and controlling as a result of the influence from changes in both the internal and external environments. Irrespective of the nature of challenge encountered, appropriate response strategies have to be put in place to counter them and enable the organization achieve sustainable competitive advantage. It is argued that after environmental analysis, an organization will choose a strategy in response to the opportunities and threats it is facing. However, the response strategies applied have to be chosen carefully because not all response strategies lead to improved performance.

In Kenya, universities have experienced various changes in their external environment, prompting responses from players in the higher education sub-sector with the objective of mitigating risks and taking advantage of opportunities. This has triggered research in the area of strategic management through application of clear and sustainable response strategies. Past research has been carried out on problems facing the public universities, especially focusing on funding, resources (human and physical), remuneration, political interference and research in view of changing environments and government policies. With dwindling financial support from the government, it is evident that there are numerous challenges facing these institutions. This is coupled with competition from the increasing number of private universities which have better facilities, infrastructure and terms of service, hence, competing for students and human resource.

In the past, studies on strategic response to environmental changes/challenges have been conducted mainly in for-profit organizations. In HEIs, Ofori and Atiogbe (2012)

looked at the challenges facing strategic planning in universities in Ghana while Mutula (2002) and, Ndirangu and Odoto (2011) investigated the problems facing university education and the challenges in teaching and learning in Kenya's public universities, respectively. Ekundayo and Ajayi (2009) also looked at the challenges facing university management in Nigeria. Further, Wachira (2011) explored the responses of Jomo Kenyatta University of Agriculture and Technology (JKUAT) to changes in the external environment without looking at what prompted such responses, while Kinyua (2010) looked at strategic alliances between JKUAT and tertiary institutions. Mukhoko (2010) investigated the influence of strategic planning at the University of Nairobi. However, these past studies being case studies are limited in their generalization and a more comprehensive study is needed. While these studies compare well with the current study, they focused on the general problems without addressing the response strategies put in place to counter the challenges or without looking at the issues and factors prompting the responses.

Thus, despite the rapid increase in the number of public universities and university colleges in Kenya, no comprehensive study has probed the environmental and managerial challenges faced by these institutions and explored the response strategies that have been adopted by the public universities to counter these challenges in the ever changing and turbulent environment in the higher education sub-sector, with a view to improving performance, efficiency and effectiveness. Therefore, this study sought to establish the environmental and managerial challenges in public universities in Kenya, the response strategies put in place to cope with the challenges and the factors influencing the choice of the response strategies. In providing information on the knowledge gap the study was guided by the following research questions:

- (a) What are the environmental and managerial challenges faced by public universities in Kenya?
- (b) What response strategies have been put in place by the public universities in order to cope with the environmental and managerial challenges?
- (c) What factors influence the choice of the response strategies?

1.3. Research Objectives

The objectives of this study were:

- (a) To establish the environmental and managerial challenges experienced by public universities in Kenya;
- (b) To establish the response strategies that have been put in place by the public universities to address the environmental and managerial challenges that they face; and
- (c) To establish the factors that influence the choice of the response strategies.

1.4. Value of the Study

In planning higher education in any country, correct information is required in order to formulate appropriate policies. Therefore, the findings from this study are particularly important to a number of stakeholders. First the Ministry of Education, Science and Technology will have detailed knowledge of the environmental and managerial challenges and response strategies used by public universities and may use the findings of the study in policy formulation and identification of management deficits among the managers of these institutions. Practitioners and strategic management consultants of relevant ministries, CUE and management of public universities would find the results of this study particularly useful in their line of work as they attempt to resolve environmental and managerial challenges, and planning issues.

The study provides insights on the way public universities respond strategically to the changes in the environment and enables the management of these institutions identify effective responses for further enhancement or adoption as best practices. The management would be able to identify the gaps in the strategic responses that the universities could exploit in order to cope with the current and future challenges. Understanding the environmental and managerial challenges and response strategies in public universities will help the top management team to align their resources in the most efficient manner necessary for the attainment of strategic milestones and stay competitive. The management of the universities will also find the results invaluable in making decisions regarding how to respond to changing environment and the challenges they are likely to encounter. Further, regional and international organizations/institutions wishing to form alliances with public universities in Kenya

may benefit from understanding the challenges faced by the institutions before forming alliances.

The study contributes to research through the relationship between environmental and managerial challenges and response strategies, and adds knowledge about how to reply to these challenges by matching with the relevant response strategies in HEIs. The results are of value to scholars and academicians as a source of reference and as a basis for further research in university management, besides contributing to literature and theory by providing empirical evidence in the field of strategic management.

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

This chapter outlines review of literature pertinent to the research questions. It is informed by reference to published works with a view to understanding past research in the subject matter, enriching understanding of the research questions, refining methodology and assisting in the interpretation and understanding of the data collected. It covers conceptual and contextual analyses of relevant literature on management of organizations in relation to the environments in which they operate, environmental and managerial challenges faced and, response strategies as well the interrelationship between the two.

2.2. Environment-Dependence Theory of Organizations

Organizations 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 organizations exist in the context of a larger environment that affects how the organization performs and in turn is affected by how the organization interacts with it. The organizational environment is the set of forces surrounding an organization that have the potential to affect the way it operates (Davis and Powell, 1992). Organizations 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, organizations 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 organizations and their environment is a central issue in organizational theory and many scholars have addressed this phenomenon (Xi, Zhang and Ge, 2012). Moreover, the contemporary organizational 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 organization has to offer (Johnson and Scholes, 2002). According

to Lynch (2003) and Fig. 2.1 an organization can use its corporate strategy to link processes between management of organization's internal resources and its external relationship with its customers, suppliers, competitors and the economic and social environment in which it exists. Hence the organization uses its history, skills, resources, knowledge and various concepts to explore its future options as shown in Fig. 2.1.

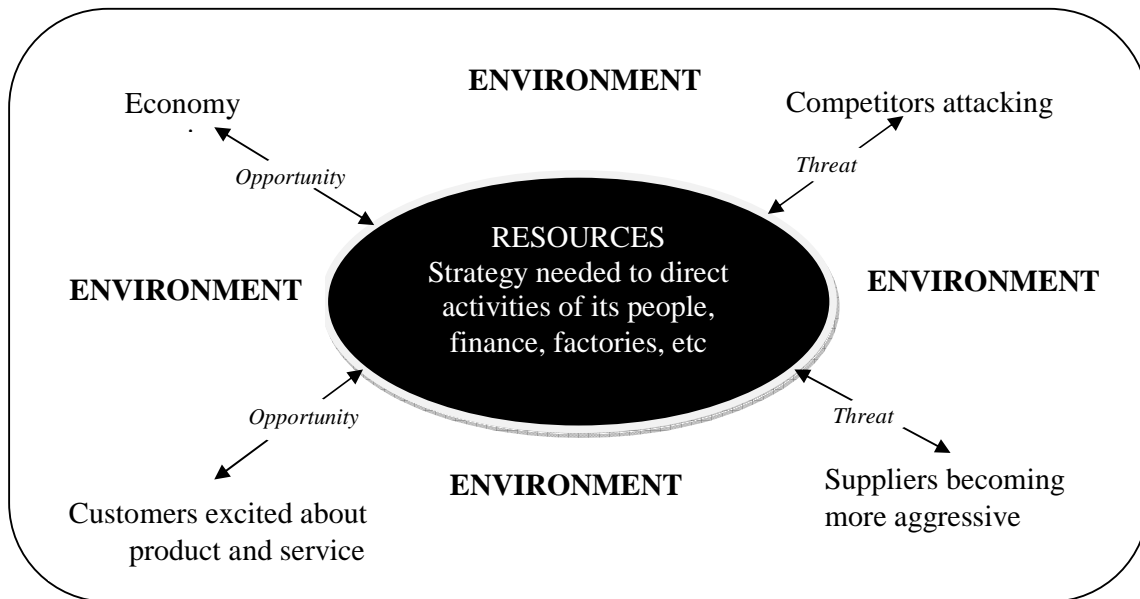


Figure 2.1. The link between organization's resources with its environment
Source: Lynch (2003)

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 organizations 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 organization 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 et al., 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 organization is unable or slow to respond to the changed environment (Baum and Wally, 2003).

The operating environment is the competitive environment of the organization. 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 et al., 2008). The complexity of the modern operating environment in which many organizations operate, in addition to the incredible pace of change in the 21st 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 organizational research and the emergence of the strategy-structure-performance paradigm in strategic management, conceptualizations of organizational 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). To survive in the dynamic environment, organizational strategies need to focus on their customers and dealing with emerging environmental changes in its operating environment (Johnson et al., 2008). Organizations, therefore, must adopt new strategies to new environmental conditions. New strategies have to be adopted when the competitive environment changes so as to tap into new opportunities and respond to threats promptly (Johnson and Scholes, 2002).

The environment in which organizations operate can be studied through different perspectives such as adaptive (Hannan and Freeman, 1977). The adaptive perspective suggests that organizations are affected by their environments in ways that their managers or leaders formulate strategies, make decisions and implement them. Therefore, successful managers are either able to buffer their organizations from environmental disturbances or arrange smooth adjustments requiring minimal disruption (Richards, O'Shea and Connolly, 2004). Hence senior managers will scan the relevant environment for opportunities and threats, formulate strategic responses

and adjust organizational structure, strategy and processes accordingly (Hannan and Freeman, 1977). The effectiveness of the adaptive response is dependent on the fit between the response and the environmental demands. This requires relevant information on changes in the environment and an assessment of consequences of alternative responses (O'Regan, et al., 2012). In doing so, the degree of effectiveness is enhanced with the degree of alignment of organizational strategy with the firm's external environment.

It has been argued that the absence of research on the effect of external environment on the emergence of transformational leadership is 'typical of organizational behavior research which, for the most part draws an artificial boundary between organization and environment, thereby, failing to consider that organizational behavior might be as much a product of the forces outside of an organization as it is a product of the organization' (Dietz, Robinson, Folger, Baron and Scultz, 2003). Indeed the volatility of the external environment is used to characterize an ever changing and uncertain external environment. The volatility of the external environment influences how organizations restructure themselves to cope with the changes or to anticipate them (Beugré et al., 2006). Substantial changes in environments can undercut the appropriateness of developed routines and the attractiveness of protected positions, leaving organizations vulnerable (Bradley, Aldrich, Shepherd and Wiklund, 2011). However, whereas some organizations falter when their environments change, others thrive. Therefore, understanding why organizations are affected so differently by environmental change is fundamental to theories of competitive advantage and survival (Shane and Stuart, 2002).

2.3. Nature of Management

Management in all business and organizational activities is the act of getting people together to accomplish desired goals and objectives using available resources efficiently and effectively, whether in private or public sector. It is a distinct process in that, it is an organized activity, aims at the accomplishment of predetermined objectives, is both a science and an art, is a group activity, its principles are universal in nature and integrates human and other resources (Jones and George, 2008). Management connotes taking charge; it involves translating complexity into manageable simplicity. By combining components of coercive power, positional

authority and individual influence, management directs the conduct and work of others to accomplish action (Basi, 1998).

Management comprises planning, organizing, staffing, leading or directing, and controlling an organization (a group of one or more people or entities) or effort for the purpose of accomplishing a goal (Jones and George, 2008). These functions of management are universal but their performance is contextual with regard to the type of function to be performed and the way to perform it effectively, and is influenced by both environmental and organizational factors. The planning function is usually used in strategic planning and hence setting strategic responses. However, the type of environment that organizations operate within will influence the type of plans designed (Hewlett, 1999) and hence the strategy approach to be used. Irrespective of the nature of the organization, managers usually face various challenges at one time or another which may require crafting survival strategies. The firm's management style is, however, determined by its unique managerial approaches, control systems, decision-making styles and communication modes (Lavie et al., 2012).

Further, management is viewed as an art and science. Management is an art in that: First, just like other arts it has practical application. The knowledge of management should be learned and practiced by managers, just as medical or legal practitioners practice their respective sciences. Second, the manager gains experience by continuous application of management knowledge. This experience helps them to develop more skills and abilities for translating management knowledge into practice. Third, application of management knowledge calls for innovativeness and creativity. The fourth reason to consider management as an art is that, in many situations, theoretical knowledge of management may not be adequate or relevant for solving the problem. It may be because of complexity or unique nature of the problem. Management is a science in that: First, its principles, generalizations and concepts are systematic. In this case, the manager can manage the situation or organization in a systematic and scientific manner. Second, its principles, generalizations and concepts are formulated on the basis of observation, research, analysis and experimentation, as is the case with the principles of other sciences. Third, like other sciences, management principles are also based on relationship of cause and effect. It states that same cause under similar circumstance will produce same effect. Fourth, management

principles are codified and systematic, and can be transferred from one to another and can be taught. Fifth, management principles are universally applicable to all types of organizations (Subedi, 2008; Sharmaa, 2010).

2.4. Environmental and Managerial Challenges

Organizations operate in a dynamic and turbulent environment, hence unpredictable; these 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 organizations 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. For an organization to survive in such an environment, therefore, its strategies need to focus on its customers to deal with emerging environmental challenges. 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 organizations operate is never constant and given its composition and forces therein, it presents unique challenges to organizations and their management. Environmental conditions are important in effective strategic responses (Mitchell et al., 2011; Hough and White, 2003). Environment not only moderates the relationship between decision-level factors highlighted in previous studies (Hough and White, 2003) but it also impacts the consistency of the direction themselves (Mitchell et al., 2011).

The firm's management style is determined by its unique managerial approaches, control systems, decision-making styles and communication modes (Lavie, et al., 2012). Management comprises planning, organizing, staffing, leading or directing, and controlling an organization (a group of one or more people or entities) or effort for the purpose of accomplishing a goal (Jones and George, 2008). These functions of management are universal but their performance is contextual with regard to the type of function to be performed and the way to perform it effectively and is influenced by both environmental and organizational factors. Therefore, the managerial challenges faced by organizations are expected to fall within these functions. The planning function is usually used in strategic planning and hence setting strategic responses. Irrespective of the nature of the organization, managers usually face various

challenges at one time or another which may require crafting survival strategies. Brown (2013) identified quality assurance, the process of developing strategy, strategy communication and engagement of people with the strategy, leadership and managerial engagement of employees as key managerial challenges.

The central strategy-making challenge in a turbulent market environment is managing change (Thompson et al., 2008). Therefore, the manner and speed in which an organization responds to change in the environment may be key in determining its position in the market. Strategic change management is another of the managerial challenges facing organizations. Change occurs mainly because organizations as open systems have to frequently cope with shifts in environment domains. The change challenge can be treated as smaller problems having been to do with the how and what of change (Bridges and Mitchell, 2000). In any organization, change management challenge can be viewed from two perspectives, namely, from those implementing the change and from the recipient of change, that is, the organizational change management and the individual change management (Bridges and Mitchell, 2000). Both perspectives pose managerial challenges to the organization. Structural changes, process changes, introduction of new products and disruptive technologies can have significant impact on a company's operations (Johnson et al., 2008). However, although managers are expected to facilitate change process, most managers have limited knowledge and training in the area of organizational change management (Burnes, 2000) hence a big challenge for the management. Xi, et al. (2012) indicated that the problem of managing holistically and the problem of determining causality are modern day managerial challenges. Environmental conditions are important consideration in making effective strategic decisions/responses (Hough and White, 2003). Mitchell et al (2006) theorized and argued that environmental conditions also influence the extent to which managers make erratic strategic decisions, that is, when it comes to decision making, perceptions of the environment appear to influence both systematic and the erratic processes.

In the recent past scholars have added that while owning or having access to valuable and rare resources is necessary for competitive advantage, the challenge remains in their effective management and synchronization to realize the competitive advantage

(Kor and Mahoney, 2005; Holcomb, Holmes Jr. and Connelly, 2009). Further, Holcomb et al. (2009) have indicated that managerial ability which is defined as the knowledge, skills (human, technical and conceptual skills) and experience, which is often tacit, residing with and utilized by managers (Hitt, Bierman, Shimizu and Kochhar, 2001) can be a challenge in managerial performance. The researchers reported that managerial ability affects resource productivity and this effect is less pronounced with increases in the quality of a firm's resources. From a strategic perspective, managerial ability is from two main sources: domain expertise and resource expertise (Holcomb et al., 2009) which are big managerial challenges. Domain expertise refers to managers' understanding of the industry context and the firm's strategies, products, markets, task environments and routines (Kor, 2003). It captures the breadth of knowledge managers accumulate through formal education in a particular field and through 'learning by doing' (Holcomb et al., 2009). Resource expertise manifests through experience with resource management process. Specifically, it represents the ability of managers to select and configure a firm's resource portfolio, bundle resources into distinctive combinations and deploy them to exploit opportunities in specific context (Holcomb et al., 2009). Failure to clarify and align manager's objectives, translating managerial objectives into concrete projects for employees and getting a commitment to the manager's objectives by employees also pose challenges (Sabourin, 2011). Managers are also facing challenges in dynamic capabilities, that is, the capacity of an organization to purposely extend, create or modify its resource base, enabling the firm to achieve evolutionary fitness through adaptation to and/or shaping of the external environment (Kor and Mesko, 2013). Dynamic managerial capabilities is indeed the key mechanism to achieve congruence between the firm's competencies and changing environment conditions (Sirmon and Hitt, 2009).

2.5. Challenges Facing Public Universities

In the 1980s and 1990s, the structural reforms imposed by the International Monetary Fund and the World Bank had their toll on tertiary institutions as they favoured basic and secondary education. As a result of this, higher education suffered as it became inhibited by numerous challenges. The most serious challenges that public universities faced and continue to face are inadequate funding and rising student population (Mutula, 2002; Chacha, 2004; Ndirangu and Odoto, 2011) without

commensurate increase in infrastructure development and poor working conditions hence unable to attract and retain staff. These challenges tend to affect the quality of higher education and have a negative effect on the overall national development (Ofori & Atiogbe, 2012). Ekundayo and Ajayi (2009) and Chacha (2004) identified some of the challenges facing public university management in Nigeria and Kenya, respectively as: financial crisis, deteriorated infrastructure, brain-drain syndrome, erosion of university autonomy, poor leadership, unplanned expansion, brain drain, graduate unemployment, volatile and militant student unionism, secret cults and political interference. Based on this observation, it is evident that managing a public university and leading it calls for the management of complexity which is a universal feature of the university's character. This is reflected in its systems, infrastructure, values, information, income streams, knowledge, structures, disciplines, discourses, and various activities (Indede, 2007). The university education system in Kenya has changed in the recent past from the traditional university environment. This has been necessitated by changes in government funding, upgrading of tertiary institutions to university colleges and changes in technology that has lowered the cost of entering the market. Thus, the universities, especially the new ones and university colleges are finding themselves operating in unfamiliar environment, especially having to compete for students.

There has been societal transformation and major developments that have been observed in higher education including, expansion in higher education; differentiation or segmentation of higher education as a response to the differentiating demand for higher education by offering course programmes beyond the mainstream; greater flexibility; quality orientation and standardization (Sirat, 2010). Kenya has not been left behind, since between 2007 and 2013 the number of public universities increased from seven to 22 with nine university colleges. To survive in such turbulent environment, the management of these universities have to formulate sustainable response strategies. However, in this regard strategy can only make a difference when the intended purposes of the public universities are designed to action and they can adequately respond to emerging internal and environmental issues (Ofori and Ateogbe, 2012). Indeed, many universities and university colleges appoint top management mainly based on academic excellence and administrative experience but

rarely do they consider managerial capabilities and/or competencies, a situation that may have led to poor management of these institutions.

The present day public university Kenya can be viewed as a 'business'. As such most of the challenges facing business today are expected to be applicable to public universities. Conducive environment and qualified staff are important for the pursuance of academic excellence. However, that fact in Kenya has been overlooked in the insatiable hunger for business anchored on people's thirst for education (Iraki, 2011). In an organization as diverse as a university, it is especially difficult to ensure participatory management system in order to implement strategies (Daniunas and Radzeviciene, 2009). Most of the university colleges were created by upgrading existing institutions which had different structure. For this reason, change was inevitable and had to be managed. The ability to react and manage change is related to the ability to accommodate flexibility and adaptability to the complex external environment and ability to forecast change (Daniunas and Radzeviciene, 2009). This could pose a serious management challenge to the new institutions and these together with the strategies used for change management are yet to be documented. One of the problems identified as facing universities and public university colleges in Kenya is poor leadership (Chacha, 2004; Mutula, 2002) whose cause has not yet been established.

Higher education in Kenya has been facing significant and persistent pressures towards expansion in recent years and this trend has led to significant economic and academic challenges for both HEIs and the government. Education stakeholders are constantly questioning the value of the products the HEIs in Kenya are presenting to the market and why foreign universities still remain attractive. Indeed, brain drain, unemployment among graduates and the rush by students to enroll in universities abroad for courses offered locally at cheaper cost are causes of major concern to stakeholders (Chacha, 2004; Odhiambo, 2013). The establishment of university colleges and upgrading of others has compounded the problem of resource allocation and management capabilities leading to public outcries on the rate at which tertiary institutions were being converted into university colleges. This has increased competition for the limited and scarce resources. In this respect these institutions are expected to respond strategically in order to combat the competitive forces, among

them environmental and managerial challenges and gain competitive advantage. Other challenges facing public universities in Kenya include reduced government funding, gender inequality, low research capability and spread of HIV/AIDS (Mutula, 2002). These challenges facing public universities in Kenya indicate the need for reforms in the management of the institutions. Improved governance of public universities benefits a wide range of stakeholders that include students and employers. Governance is indeed the most critically needed area of reforms in the management of universities in Kenya (Mulili and Wong, 2011).

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).

2.6. Strategic Management in Public Universities

Strategic considerations are central to the well-being of any organization, be it an industrial corporation or an academic institution (Kelly and Shaw, 1987). Strategies are conceived as instruments by which universities manage their organizational processes and deal with the environment in order to select a portfolio of activities and find an appropriate position in the higher education system (Fumasoli and Lepori, 2011). The need for academic institutions to turn to strategic planning so as to more positively address their own futures has been a popular topic in the past with a number of approaches and frameworks being proposed for its introduction. However, strategy is a controversial issue in higher education literature as scholars have somehow avoided this topic, concentrating more on governance, organization, management and leadership (Fumasoli and Lepori, 2011). The genre of strategic management in general and strategic responses in particular has been studied and discussed extensively in recent years. This has been so in the private sector and to some extent in the public sector but not much in public universities.

Strategic management in universities has been studied in Lithuania (Daniunas and Radzeviciene, 2009), universities-industry collaboration strategies in Denmark (Bjerregaard, 2009), marketing strategies of universities in the United Kingdom (Naudé and Ivy, 1999) as well as strategic planning in public universities in Ghana (Ofori and Atiogbe, 2012). However, it is worth noting that though studies have been done touching on problems in public universities in Kenya (Mutula, 2002), no specific study has been undertaken to document the environmental and managerial challenges facing public universities` and the strategic responses employed by the universities to counter these challenges. Indeed effective public administration in the age of result-oriented management requires public agencies to develop a capacity for strategic management, the central management process that integrates all major activities and functions and directs them towards advancing an organization's strategic agenda (Poister and Streib, 1999). According to available literature, university strategies can be limited to a reactive response to environmental pressures, to a simple mechanism for resource allocation according to predefined rules in order to maintain a vulnerable internal balance or by a low degree of autonomy in managing resources (Fumasoli and Lepori, 2011). Considering universities as formal organizations leads to a conception of strategies being as change instruments in the hands of management (Krücken and Meier, 2006).

Strategic management of a university is generally understood as encompassing analysis, decision and action the university undertakes in order to create and sustain its competitive advantage. Thus, university strategic management is determined mainly by: (a) strategic goals (usually long-term), (b) leadership models and behavior, (c) external environment-related factors, and (d) internal factors (primarily resources). The diversity of determinants implies that strategic management of the universities turn into the system of cross-functional decisions which should be formulated, implemented and evaluated in order to achieve its long-term objectives (Daniunas and Radzeviciene, 2009). Further, strategic management is integrative in nature in the sense of: (a) focusing attention across functional decisions and throughout various organizational levels on common goals, themes and issues (b) tying internal management processes and programmes initiatives to desired outcomes in the external environment and (c) linking operational, tactical, day-to-day decision to longer run strategic operations (Poister and Streib, 1999). Given the dynamic political and

institutional environment within which many universities in Kenya operate, an effective strategic management capability is essential for maintaining or strengthening the fit between the organization and its external stakeholders and margins for returns within a clearly defined context of mission, mandates, values and visions. New models of leadership are needed for public universities to continue to graduate students with leading edge capabilities. The higher education sector requires less hierarchical approach that takes into account its specialized and professional context (Jones, Lefore, Harvey and Pryland, 2012). The universities all over the world in the 21st century have already faced unprecedented challenges and most of them in response are seeking to make some major changes or reforms.

2.7. Response Strategies

Response strategies are those choices made by managers that commit important resources, set important precedents and/or direct important firm-level actions. They are processes that shape a firm's direction (Dean and Sharfman, 1996). Executives of the firms employ the response strategies in order to deal effectively with everything that affects the growth and profitability of the firm so that it can position itself optimally in its competitive environment by maximizing the anticipation of environmental change (Pearce and Robinson, 2011). The literature suggests that two main perspectives shape our understanding of strategy and strategic choices: the industrial organization perspective and the resources-based view (Bordean, Borza, Nistor and Mitra, 2010). Organizations are environmentally-dependent and, therefore, they need to employ response strategies in order to adapt to the changing environment. Different levels of turbulence have unique characteristics that require different strategies and different capabilities.

The processes that underlie effective strategic decision-making matter for organizational outcome, leading to both organizational effectiveness and efficiency (Mitchell et al., 2011). These processes are influenced by manager's prior knowledge and experiences, the organizational context in which they are embedded (Kaplan, 2008) and the nature of the environment itself (Nadkarni and Barr, 2008). There are two types of response strategies, namely, strategic responses and operational responses (Ross, 2011). Strategic responses are fundamental and directional, and over-arching while operational responses, on the other hand, primarily affect the day-

to-day implementation of strategic decisions. While strategic responses usually have longer-term implications, operational responses usually have immediate (less than one year) implications (Ross, 2011).

2.7.1. Strategic responses

Strategic responses are the decisions that are concerned with the whole environment in which the firm operates, the entire resources and the people who form the company and the interface between the two (Ross, 2011). Strategic responses enable organizations to cope with increased uncertainty and turbulence in the micro and macro-environment and they include long range planning, new venture development, budgeting and business policy (Pearce and Robinson, 2011). They consider what the organization needs in the future to achieve its desired aims and establishes an approach to change considering the key players, barriers and enablers of change. They focus on the effectiveness of the entire organization and require more resources to implement. It is through strategic responses that an organization is able to position and relate itself to the environment to ensure its continued success and also secure itself from surprises brought about by the changing environment (Denis, Lamothe and Langley, 2001). The environment in which organizations operate is constantly changing with different factors influencing the organization. Increased competition has created fundamental shift in economic environment whereas no organization can hope to stay afloat if it fails to come up with proper strategic responses (Johnson et al., 2008). Strategic responses are also important to avoid current strategies from being obsolete due to changes in the environment (Ross, 2011).

One of the key strategic response employed by organizations is strategic change. Strategic change is the actions, processes and decisions that are expected by an organization's members to realize their strategic intentions (Handy, 1989). It involves managing the unfolding non-linear dynamic processes during strategic implementation and in addition to being long term in nature, it is aimed at achieving efficiency (Handy, 1989). Effective strategic responses require an understanding of the possible effects of competitive change upon people and how to respond to potential sources of resistance to that change and involve changes to the organization behavior. These changes may take many forms depending on the organization's capability and the environment in which it operates (Ross, 2011). The responses to the

operating environment can be categorized according to the strategic orientation of each firm (O'Regan et al., 2012). It, therefore, follows that the alignment of an organization's strategic orientation to its environment is of paramount importance for success. The strategic responses that have been adopted by organizations to counter macro-environment challenges can be classified as: (1) generic strategies and (2) grand strategies.

2.7.1.1. Generic strategies

These are usually referred to as Porter's generic strategies. Porter's generic strategy matrix, highlights cost leadership, differentiation and cost as the three basic choices and has been applied by firms seeking competitive advantage. Indeed, Porter's generic topology has provided strategic response platform for organizations (Porter, 1980; 1985). These strategies are applied at the business unit level and are called generic strategies because they are not firm or industry specific.

A cost leadership strategy is based upon a business organizing and managing its value adding activities so as to be the lowest cost producer of a product (good or service) within an industry (Bordean et al., 2010) and for a given level of quality. The firm sells its goods and/or services either at average industry prices to earn a profit higher than that of rivals or below the average industry prices to gain market share. This can be achieved through improving process and efficiency, gaining unique access to a large lower cost materials, optimal outsourcing, and vertical integration decisions or avoiding some costs altogether (Porter, 1980; 1985). To successfully achieve cost leadership a company needs to optimize its value chain. This can be achieved using the following approaches: (a) perform value chain activities in a more cost-effective manner than competitors; and (b) review the value chain to eliminate unnecessary (wasteful) activities. One way to stay ahead of the competition in a relatively leveled playing field is to introduce continuous optimization of the production and value chain by introducing lean manufacturing techniques like Six-Sigma or Kaizen. Therefore, attainment of cost leadership depends on the arrangement of the value chain activities (Bordean et al., 2010).

Differentiation strategy calls for the development of goods or services that offer unique attributes that are valued by customers and that customers perceive to be better

than or different from the products of competition. The value added by the uniqueness of the product may allow the firm to charge a premium price for it. For a firm to achieve this, it must have access to leading scientific research, highly skilled and creative product development team and a strong sales team (Porter, 1980, 1985), creative advertising, better supplier relationships leading to better service and through service innovation (Bordean et al., 2010). A differentiation strategy is appropriate where the target customer segment is not price-sensitive, the market is competitive or saturated or customers have very specific needs which are possibly underserved. In any case, the organization needs to have unique resources and capabilities which enable it to satisfy these needs in ways that are difficult to copy. The key success factor in a differentiation strategy is to make it either very difficult or very expensive for rivals to replicate the good or service. Companies pursuing a differentiation strategy can command a premium price for its products or services, eventually seeing increased unit sales due to the differentiation factor as well as increased buyer loyalty (Porter, 1985).

Focus strategy concentrates on a narrower segment and within that segment attempts to achieve either a cost advantage or differentiation. The premise is that the needs of the group can be better serviced by focusing entirely on it (Porter, 1980, 1985). Firms pursuing focus strategies have to be able to identify their target market segment and both assess and meet the needs and desires of buyers in that segment better than any competitor (Bordean et al., 2010). The premise is that the needs of the group can be better serviced by focusing entirely on it. A firm using a focus strategy often enjoys a high degree of customer loyalty, and this entrenched loyalty discourages other firms from competing directly. Some types of strategic responses companies might want to look at when pursuing a cost focus strategy include, (a) reducing cost across the value-chain by engaging with specialist suppliers (b) making smart investments in specialized technology to increase production efficiency (c) eliminating activities in the value-chain that are superfluous in the target segment and adopting just-in-time production (Porter, 1980; 1985).

2.7.1.2. Grand strategies

A grand strategy is defined as ‘a comprehensive general plan of major actions through which a firm intends to achieve its long term objectives’ and contend that this is

supported by a 'coordinated and sustained strategic management effort' (Pearce, Robbins and Robinson, 1987). Grand strategies are the overall drivers of strategic actions; however, using the concept of grand strategies requires caution as many firms may operate in more than one environment or indeed have different interpretations or perceptions of the environment (O'Regan et al., 2012). Grand strategies include mergers and acquisitions, diversification and strategic alliances among others.

Mergers and acquisitions is an aspect of corporate strategy, corporate finance and management, dealing with the buying, selling, dividing and combining of different companies and similar entities that can help an enterprise grow rapidly in its sector or location of origin, or a new field or new location, without creating a subsidiary, other child entity or using a joint venture (Pearce and Robinson, 2011). An acquisition or takeover is the purchase of one business or company by another company or other business entity while mergers result from organizations coming together voluntarily. Mergers and acquisitions are beneficial especially: when a firm wants to enter a new market, when a firm wants to introduce new products through research and development, when a firm wants to achieve administrative benefits, to increase market share, to lower cost of operation and/or production, to gain higher competitiveness, for industry knowhow and positioning, for financial leveraging and to improve profitability (Thompson et al., 2008).

Diversification is a business development strategy allowing a company to enter additional lines of business that are different from the current goods, services and markets. The two principal objectives of diversification are improving core process execution, and/or enhancing a business unit's structural position (Johnson and Scholes, 2002). Diversification of business activities brings competitive advantages, allowing companies to reduce business risks; that is why it is a great tool for business development. However, its successful implementation requires profound knowledge and thorough preliminary assessment of the company and its environment. In the current conditions of dynamic markets and strong competition, a successful instrument of risk management is to avoid focusing on a single product, service and/or their distribution to a single limited market (Ryszard, 2007).

Strategic alliances are commonly defined as short-term with long-term voluntary relations between organizations concerning one or more areas of activity such as market entry, skill acquisition or technological exchange in which both parties regulate their future contact *ex ante* by means of mutual forbearance and more or less formally specified contractual mechanism (Gulati, 1998). They are aimed at achieving competitive advantage for the partners. It is a form of cooperation that lies between mergers and acquisitions, and organic growth. The key advantages that have been attributed to establishment of strategic alliances include, entry into new markets, increased market power, the acquisition and exchange of skills, strategic renewal, risk and investment sharing, economies of scale and scope, reductions and liabilities of foreigners and government or trade barriers (Dacin, Oliver and Roy, 2007). The penetration of strategic alliances in recent years marks a shift in the competition, of the intrinsic nature of competition, which is increasingly characterized by constant technological innovation and speedy entry into new markets (Das and Teng, 2000). One of the strategies made in alliances is the close relationships between resources (or competences) and competitive advantage in the so called resource-based view. The resource-based view suggest that valuable firm's resources are usually scarce, imperfectly irritable and in lacking indirect substitutes. Thus, the trading and accumulation of resource becomes a strategic necessity (Peteraf, 1993). The advantages of forming a strategic alliance include: allowing each partner to concentrate on their competitive advantage; learning from partners and developing competencies that may be more widely exploited elsewhere, provision of adequate resources and competencies of an organization for it to survive and to reduce political risk while entering into a new market (Gulati, 1998). Past research has shown that four key factors influence partner selection and subsequent strategic performance: trust, commitment, complementary and value or financial pay off (Shah and Swaminathan, 2008). Shah and Swaminathan (2008) further provided evidence that a contingency approach grounded in management control theory that suggests the criteria managers use in choosing alliance partners will vary by alliance project type-the alliance context.

Other strategic responses that can be used include, new product developments, innovations (Johnson et al., 2008), downsizing, business process re-engineering and use of information technology to speed business processes and communication

(Pearce and Robinson, 2011), human resource management, leadership and culture. All in all strategic responses are influenced by a number of factors including, past strategies, mission and vision, leadership, corporate culture, management attitude towards risk, timing, pressure from stakeholders and need and desire of key managers (Johnson et al., 2008; Wheelen and Hunger, 2008).

2.7.2. Operational responses

Operational responses involve actions that are taken to improve operations in an organization. This could be through designing and controlling the processes of production and redesigning business (Ross, 2011). It involves crafting and implementing operation strategies which specify the policies and plans for using the organization resources to support its long term competitive strategy (Johnson et al., 2008). An operational strategy is the total pattern of decisions which shape the long term capabilities of any type of operations and their contribution to the overall strategy through the reconciliation of market requirements with operation resources (Pitt, 2000). It is a tool that helps to define the methods of producing goods or service offered to the customer. The role of operations strategy is to provide a plan for operations function so that it can make the best use of its resources. Operation strategies are concerned with how parts of an organization deliver effectively the company and business strategies in terms of resources, processes and people.

Organizations adopt strategies directed at improving the effectiveness of basic operations within the organization such as production, marketing, materials management, research and development, and human resource. Porter (1980) views operational responses as part of planning process that coordinates operational goals with those of the target organization. Further, Ansoff and McDonnell (1990) assert that the management system used by a firm is a determining component of the firm's responsiveness to the environmental changes because it determines the way that management perceives the environment, the impact on the firm and decides what to do through implementation. These operational responses are responsible for ensuring that business operations are efficient in terms of using as few resources as needed, and effective in terms of meeting customer requirements. According to Ross (2011) operational responses include: product or service, process, research and development, location, inventory management, quality, capacity and human resource responses. In

essence, operational responses are technical decisions which help execution of strategic responses.

2.8. Response Strategies and, Environmental and Managerial Challenges

The response strategies that organizations adopt in order to cope with the changes in the environment have been of academic interest for many years, especially in the corporate world but little attention to managerial challenges. Indeed the importance of responding appropriately and in a timely manner to the ever turbulent and uncertain macro-environment cannot be gainsaid (Ansoff and McDonnell, 1990). Strategic response is about restructuring by adopting new strategies that match the challenges from the environment (Johnson, et al., 2008). Porter (1985) avers that for firms to retain competitive advantage, they need to examine their environment, both internal and external and respond accordingly. Thus, environmental scanning is the first step in responding to the environmental challenges. In so doing, the firm will understand how to respond to threats, technological changes, political, economic, social and cultural challenges as well as taking advantage of opportunities (Pearce and Robinson, 2011). Although several explanations of strategic action/responses have been developed, two views have been particularly dominant – industry structure and managerial cognition. The industry structure view assumes complete rationality on the part of strategic decision makers and contends that industry structure influences the timing and effectiveness of strategic actions. In contrast, the managerial cognition literature suggests that bounded rationality prevents top managers from developing a complete understanding of their environment (Nadkarni and Barr, 2008). From a university perspective, one of the response strategy that has been used to cope with financial challenges is the introduction of the much-talked about ‘parallel degree programmes’, mainly introduced for the purpose of generating money. This is a strategy of admitting full fee-paying students over and above the students who are admitted with government subsidy (Odhiambo, 2013).

Contingency theory posits that the environment, managers and organizational factors all play a role in determining strategic direction. Contingency theory presumes that the ability of managers to influence organizational outcome is restricted by environmental factors (Finkelstein and Boyd, 1998) and organizational factors (Carpenter and Golden, 1997). Although there has been efforts to integrate managerial

processes into a theory of resource management, for example, structuring, bundling and leveraging, scholars working in the resource-based tradition have not fully explored the actions or responses firms take to create and sustain an advantage or when those responses matter most (Holcomb et al., 2009). The responses applied depend on the managers' understanding of relevant contingencies, including contextual factors that affect competitors' resources as well as their own (Holcomb et al., 2009).

The speed at which response strategies are taken to combat the environmental and managerial challenges is important and it depends on the speed with which a particular threat or opportunity develops in the environment. Response strategies and in particular fast ones may improve competitive performance across environments because such responses lead to: early adoption of successful new products or improved business models that provide competitive advantages (Jones, Lanctot and Teegen, 2000); early adoption of efficient-gaining process technologies even in established industries; preemptive organization combinations that enable economies of scale and knowledge synergies and early 'trial and error' action that may provide useful information for effective secondary action, especially in dynamic markets (Baum and Wally, 2003) and hence solve some of the environmental and managerial challenges. In other words, response or decision speed may enable firms in dynamic and non-dynamic environments to exploit opportunities before they disappear (Stevenson and Gumpert, 1985) and also thwart threats before it is too late.

With the changes taking place in higher education sector in Kenya, various challenges are bound to face the universities, some of which have been established in quick succession. The strategies by universities for resource utilization are embedded in models of HEIs as public institutions rather than commercial organizations. This has been coupled with other major challenges such as inadequate funding, especially for research and development, quality and relevance, inadequate use of information communication technology, unharmonized legal framework and inadequate management capacity (Magutu, Mbeche, Nyamwange and Nyaoga, 2011). In the world over, there has been considerable change within the higher education system, including the emergence of new institutions, changes in the funding structure and tuition fees, a greater accessibility and transparency, technological advances and e-

learning (Richards et al., 2004). This has brought challenges to higher education and in this rapidly evolving environment, it is likely that those institutions that are not willing or able to change may risk failure. In the recent past, higher education sector world over has been subject to a plethora of changes among them an increase in managerial control (managerialism), an increase in competition (marketization), increased scrutiny alongside greater devolved responsibility (audit) and a remodeling of structures and operations on corporate organizations (corporatization) (Szekeres, 2004). All these have posed managerial challenges to universities.

In the demanding environment facing HEIs, one of the key challenges facing educational planners and management teams relate to the ability to identify long-term strategic vision that can be delivered effectively – through best practices strategic management techniques that allow the institution to balance the pressures of change, continuity and resources (Richards et al., 2004). Unfortunately many organizations are failing to meet such challenges because they continue to base strategic planning on traditional strategic planning processes – those designed to optimize strategic decision-making in relatively predictable environments as opposed to today's uncertain and unpredictable environment (Richards et al., 2004).

CHAPTER THREE: RESEARCH METHODOLOGY

3.1. Introduction

This chapter outlines the research design, population, data collection including, type of data that was collected, data collection procedure and data collection tools used, and their administration. It also describes how the data was analyzed, presented and displayed.

3.2. Research Design

The research design adopted for this study was descriptive design. This design entails description of the characteristics of a phenomena, obtains information concerning the current status of the phenomena and describes ‘what exists’ with respect to variables or conditions in a situation (Cooper and Schindler, 2011). This descriptive approach was found to be appropriate for this study because an authentic and accurate description was required of the environmental and managerial challenges and the response strategies put in place.

The study was a survey research, that is, a systematic gathering of information from respondents with the purpose of understanding and predicting some behavioral aspect in a given population (Cooper and Schindler, 2011). A similar research design has been used by previous researchers including but not limited to, Sabourin, (2011) who looked at the managerial challenges facing healthcare professionals in Canada, Muriuki, (2012) who looked at strategic responses to competitive environment in restaurants in Nairobi, Bourdean et al. (2010) when studying Porter’s generic strategies in Romanian hotel industry and Magutu et al. (2011) when carrying out a survey of benchmarking practices in public universities in Kenya.

3.3. Population of Study

Population is the total collection of elements about which one wishes to make some inference (Cooper and Schindler, 2011) and an element represents each member of the population. 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. A list of all the public universities in Kenya is given in Appendix I.

3.4. Data Collection

The study collected both primary and secondary data. The primary data were collected by carrying out a cross-sectional survey of the entire population as well as observations and interviews. Cross-sectional survey involves conducting a survey of a sample population element or entire population at one point in time (Cooper and Schindler, 2011). This survey design was chosen because it provides a snapshot of what is going on with the variables of interest for the research problem and the need to generalize the results so obtained. The survey enabled collection of data from a cross-section of public universities which enriched the amount of information collected. Secondary data were collected from published works, print media and, universities and government documents in public domain.

The study used a Likert-type scale to collect data on environmental and managerial challenges, response strategies and factors influencing the choice of response strategies. In order to address the research questions, the study used a structured questionnaire as a data collection instrument (Appendix II). The quantitative primary data was collected by administering the 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. The questionnaire consisted of six parts including, institutional information, management staff information, managerial challenges, environmental challenges, response strategies employed and factors influencing the choice of the response strategies.

Respondent and institution profiles were collected on the type of institution, location of the institution, age group, professional training in management, professional discipline, experience in university management, need for management training and

its impact on performance. 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, experience environmental and managerial challenges, and are involved in all strategic issues pertaining to the institutions. Given that each university is headed by one vice-chancellor or principal and at least two deputy vice-chancellors or deputy principals, except for five university colleges which had not appointed deputy principals by the time of dispatching the questionnaire, the number of respondents was 91.

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, that is, a situation where individuals may lie to put themselves in a positive light. The respondents were asked to respond to the extent they experienced environmental and managerial challenges, used various response strategies to cope with the challenges faced and the factors that influenced the choice of response strategies.

3.5. 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 and in order to facilitate answers to the research questions. The questionnaire was pre-tested to evaluate it for clarity, style, meaningfulness and ease or difficult of completion. The questionnaire was found to be long, but all agreed that the items and information sought were necessary and relevant to the study. 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 (Huang and Lee, 2013).

3.6. Data Analysis

The data collected in this study fell into nominal, ordinal and interval measurement scales. The demographic information constituted nominal data and was analyzed by calculating percentages. For the ordinal measurement scale items, the descriptive statistics that were used were mode for central tendency and frequency for variability. This was informed by the fact that the Likert-type questions/items were unique and standalone (Boone and Boone, 2012). 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 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. Mean scores, frequency tables and percentages were used to interpret the data from which conclusion and recommendations were made. The results are presented in tables, charts, graphs and prose form.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1. Introduction

This chapter gives details of data analysis, explains and discusses the results obtained, and undertakes comparative analyses of the results in relation to previous studies in similar or closely related setting.

4.2. 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. 4.1). The highest increase in universities was in 2013 when a record 14 university colleges were upgraded to fully-fledged universities.

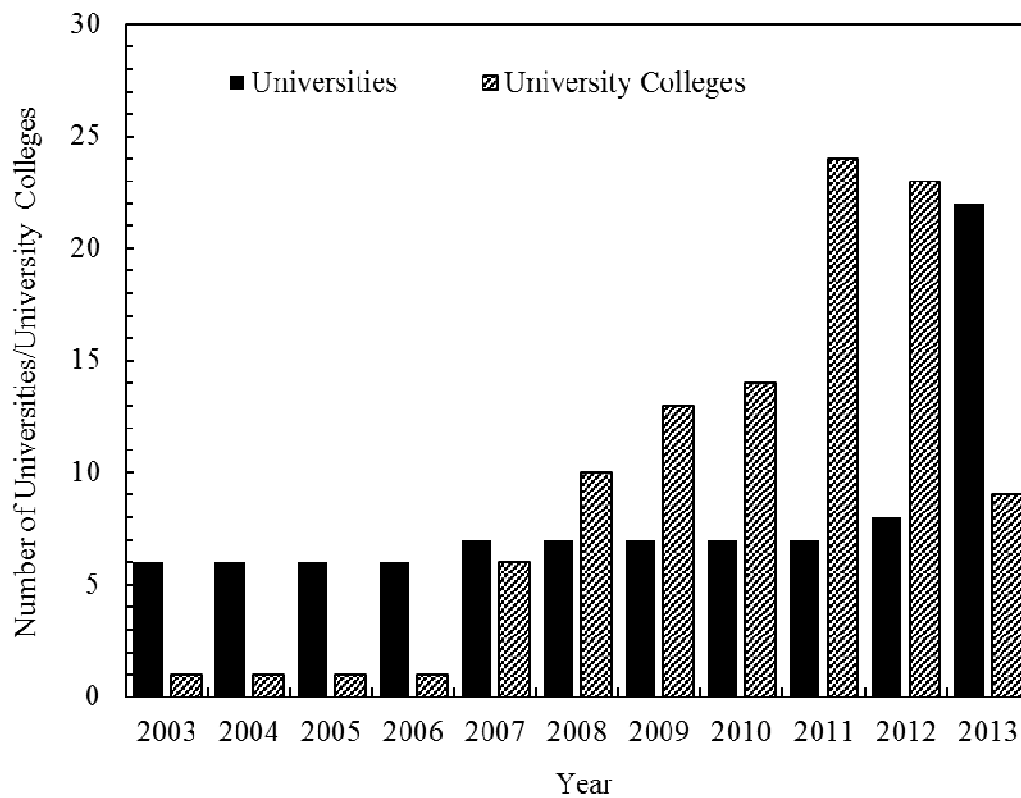


Figure 4.1. Increase in the number of universities and university colleges in Kenya between 2003 and 2013

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.

4.3. Response Rate

Response rate (also known as completion rate or return rate) in survey research refers to the number of people who answered the survey divided by the number of people in the sample or population. It is usually expressed in the form of a percentage. Table 4.1 shows the response rates of the questionnaires per category of university.

Table 4.1. Questionnaire response rate

Category	Number of questionnaires distributed	Number of questionnaires returned	Percentage of total
Old universities	28	18	19.9
New universities	46*	31	34.1
University colleges	17	14	15.4
Total	91	63	69.4

* One of the respondents in this category declined to fill the questionnaire

All the responses were valid with an overall response rate of 69.4% which is quite high since a response of 27% has been reported to be high (O'Regan et al., 2012) based on the fact that typical rates for studies addressing strategic issues are in the region of 10 – 12% (Koch and McGrath, 1996; Geletkanycz, 1997). 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. However, Visser, Krosnick, Marquette and Curtin (1996) showed that surveys with lower response rates (near 20%) yielded more accurate measurements than did surveys with higher response rates (near 60 or 70%). In another study, Keeter, Kennedy, Dimock, Best and Craighill (2006) compared results of a short survey with a 25% response rate with results from a more rigorous longer survey that yielded a higher response rate of 50% and found that the two surveys yielded results that were statistically indistinguishable. Therefore, the presumption that a lower response rate means lower survey accuracy is null and void.

4.4. Demographic Information

4.4.1. Gender distribution of top management in public universities

The gender distribution of top management in public universities in Kenya as of September 2013 is shown in Table 4.2. The percentage of female among the top management of fully-fledged universities is far lower than that in the university colleges.

Table 4.2. Gender distribution of top management in public universities and university colleges in Kenya

Category	Gender	Number	Percentage	Total
Public Universities	Male	64	84.2	100
	Female	12	15.8	
Public University Colleges	Male	13	68.4	100
	Female	6	31.6	

Source: Author, 2013

The gender distribution in the university colleges is in line with the Constitution of Kenya (2010) which requires that no one gender should occupy more than two thirds of positions in government/public institutions. The disparity between the fully-fledged universities and university colleges could be due to the fact that most of the current university colleges were established after the promulgation of the constitution and that during appointment due regard was given to the requirement in the constitution.

4.4.2. Age and experience of the respondents

The majority of the respondents (47%) fell in the 50 – 54 years age bracket (Fig. 4.2). This is expected because in Kenya this is the age when many academia staff have attained the required administrative experience through the ranks and are promoted to the position of Associate Professor, which is usually the standard minimum requirement for one to be appointed to management positions in public universities.

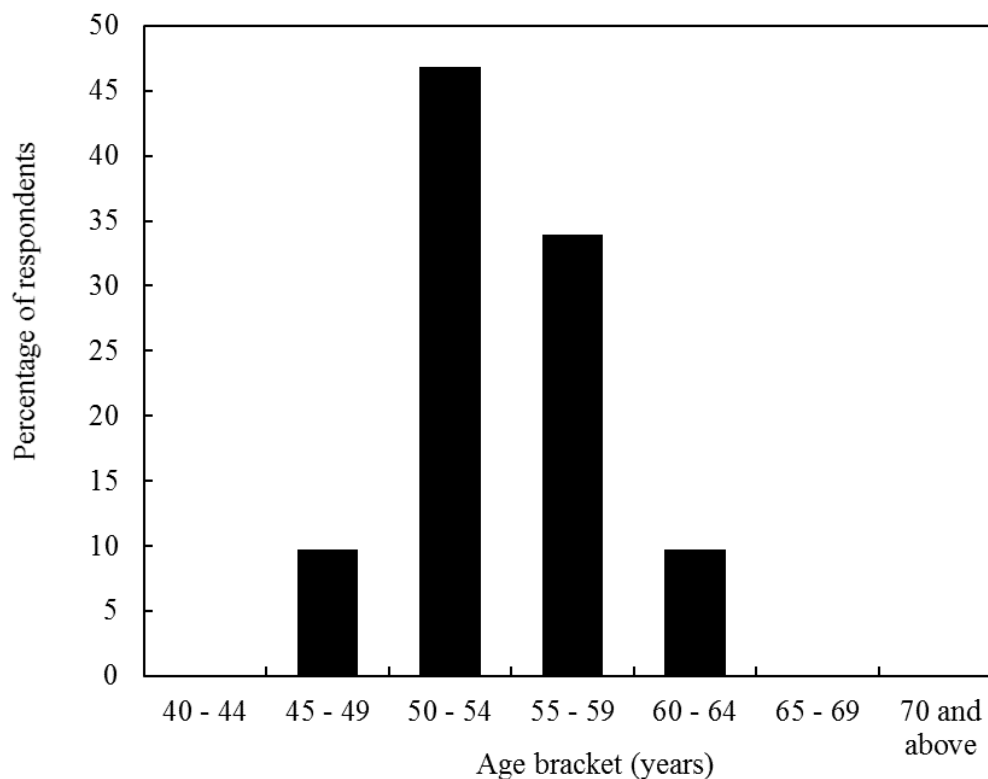


Figure 4.2. Age distribution of the respondents (n = 63).

The study further sought to establish the number of years of experience the top management had in university management. Figure 4.3 shows that most of the respondents (30%) have served for 0 – 4 years. This could be due to the fact that

majority of the public universities were established within the last four years and many of those appointed had no prior experience in running universities at senior management level.

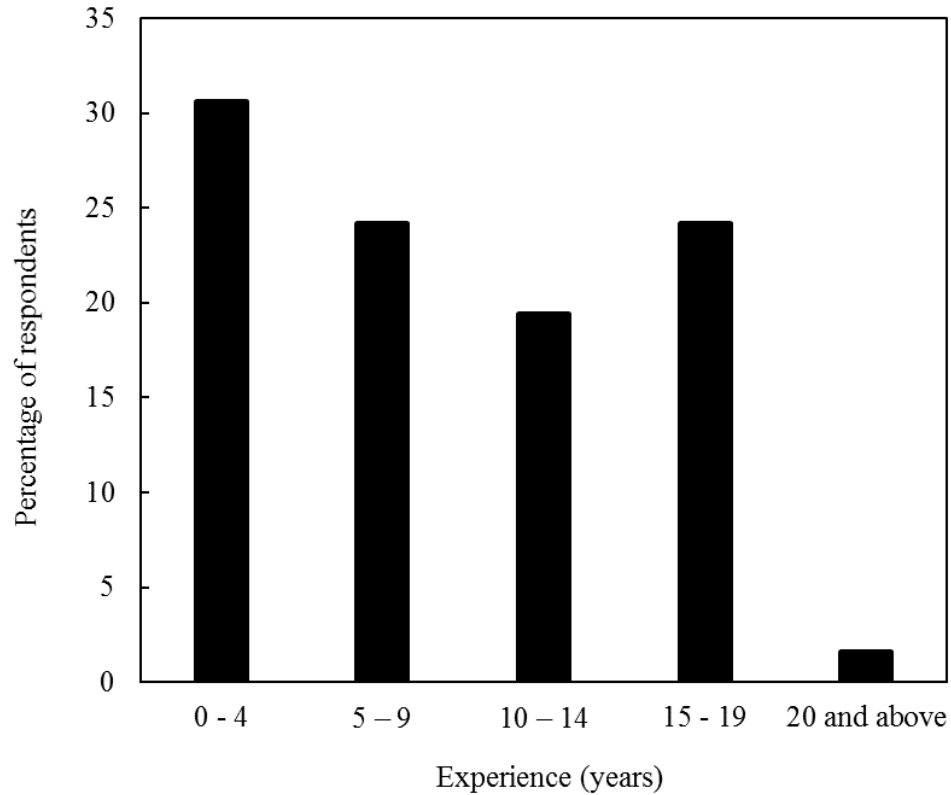


Figure 4.3. Years of experience in university management among the respondents (n = 63).

In this study, experience in university management was taken as serving from the level of principal of a college, a position seen as decision-making. 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.

4.4.3. Basic training of respondents

The basic training of the respondents is shown in Fig. 4.4. The majority of the respondents (76%) had their basic training in the sciences while only 5% had training in business. It is plausible that this scenario has to do with not only the academic qualifications required for appointment to these positions, but the other desirable requirements like publications and evidence for continued research activities.

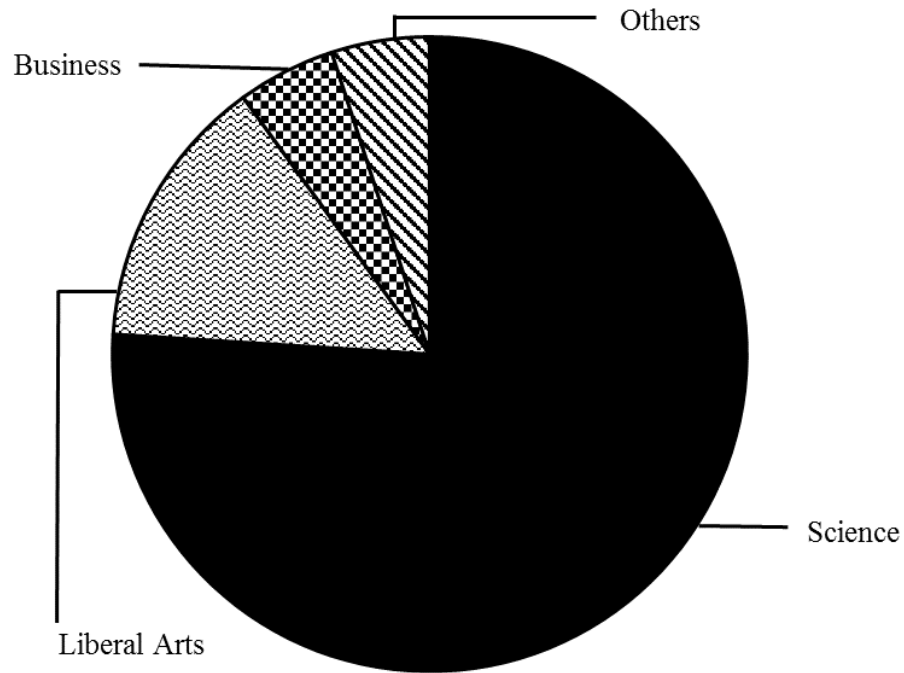


Figure 4.4. Basic training of the respondents (n = 63).

Data available from most universities indicate that most of the research and publications are being churned out by teaching staff in the pure and applied sciences. Since one of the requirements for appointment to these positions is publications and evidence of continued research, this could account for the number of scientists managing public universities. In the business, humanities and social sciences there are many opportunities for part-time teaching and short-term consultancies, hence teaching staff in these disciplines may and are likely to ignore publishable research in pursuit of financial empowerment, thereby devoting little time to research. However, empirical evidence is lacking and research needs to be conducted to verify this assertion.

4.4.4. Level of training in management among the respondents

Professional training is essential in running any organization, whether private or public. A high percentage (79%) of the respondents had no formal professional training in management (Fig. 4.5) with majority relying on what they learned through attending workshops and seminars (Fig. 4.6).

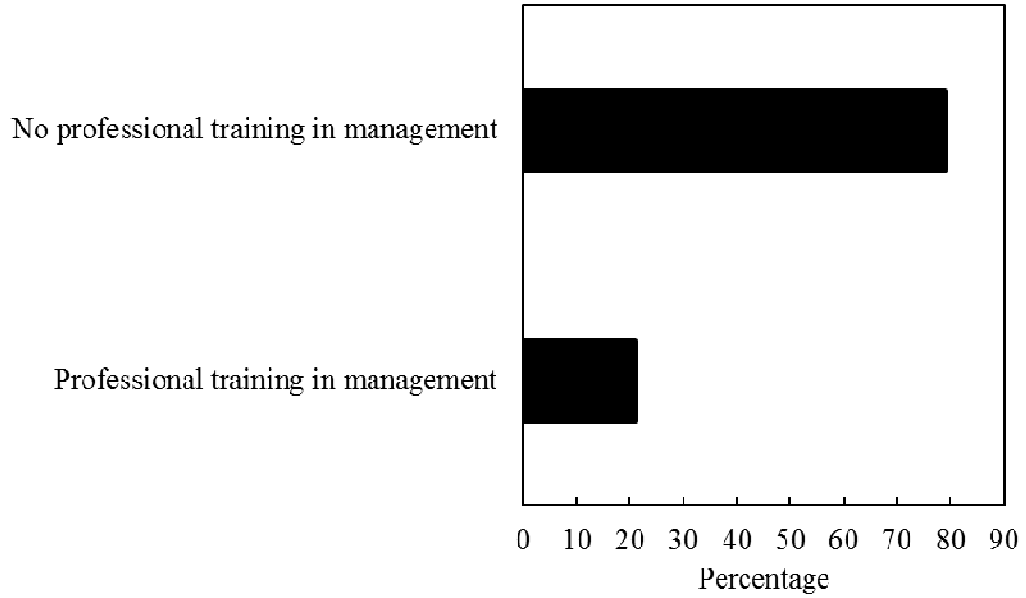


Figure 4.5. Percentage of respondents with or without professional training in management [Professional training includes training in management at Diploma and above] (n = 63).

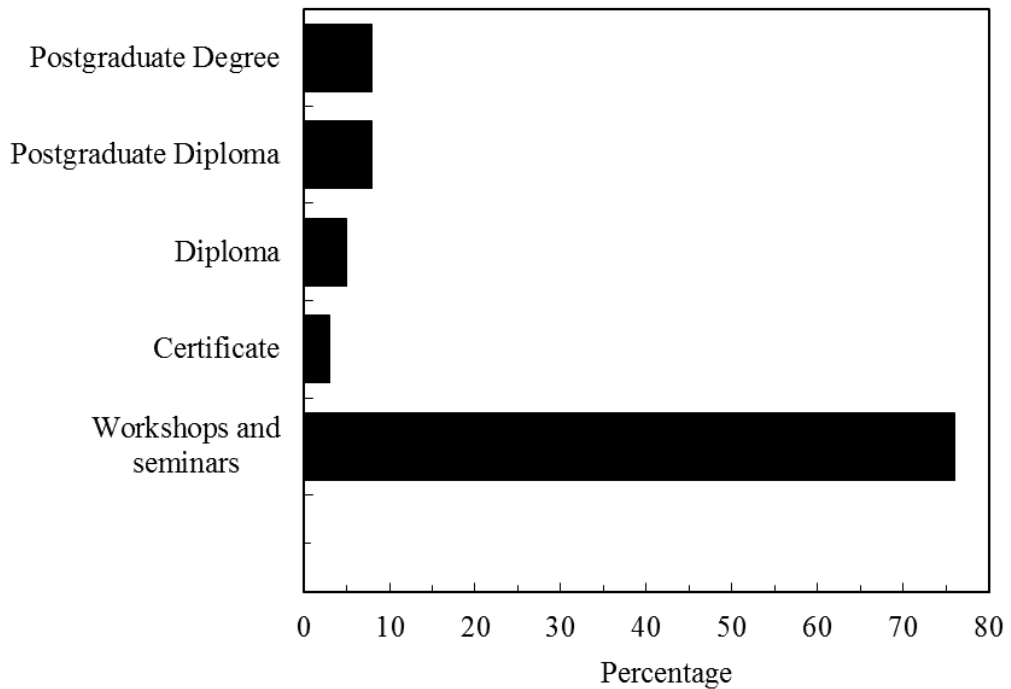


Figure 4.6. Level of professional training in management among the respondents [Professional training includes training in management at Diploma and above] (n = 63). Workshops and certificate not considered in this study as professional training in management.

Only 8% 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' (Table 4.3). This correlates well with the percentage (79%) of respondents who have no professional training in management (Fig. 4.5). 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'.

Table 4.3. Management view of need for professional training in management and paradigm shift in university management

Item	Mean*	Standard deviation	Verbal interpretation
Need for professional training in management	4.1	0.89	To a great extent
Training in management will improve performance, efficiency and effectiveness	3.9	0.91	To a great extent
Universities should be managed by professional managers and not academicians	2.9	1.08	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

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. Recently, Kenyatta National Hospital advertised for the Chief Executive Officer (CEO) position and the only key requirement for the candidates was possession of a postgraduate degree in management and no reference to training in the health sciences. 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 et al., 2012), and Kenya is no exception.

4.5. Managerial Challenges Faced by Public Universities

The respondents were asked to rank the managerial 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 4.4). 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 (Appendix III). 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 organization 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 organization (Brown, 2013).

Table 4.4. 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

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

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. 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 managerial challenges faced by many organizations are influenced by many factors, including the time the organization has been in the industry.

The study sought to compare whether there was any significant difference in the extent to which the new and old universities experienced managerial challenges. 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, based on the fact that the p-values are less than 0.05 (Table 4.5). Overall, there was significant difference ($p < 0.05$) in the managerial challenges experienced by the old and new universities. The new universities and university colleges experienced managerial challenges to a greater extent than the old universities as evidenced by the high means (Table 4.5).

Table 4.5. 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	2.207	0.031**
	New***	45	3.4	0.91		
Organizing	Old	18	2.6	0.76	1.559	0.124
	New	45	3.0	0.97		
Staffing	Old	18	3.0	0.57	1.753	0.085
	New	45	3.4	0.80		
Leading/ Directing	Old	18	2.9	0.72	2.190	0.033**
	New	45	3.4	0.82		
Control	Old	18	3.0	0.78	2.194	0.032**
	New	45	3.6	0.97		
Overall	Old	18	2.9	0.65	2.133	0.037**
	New	45	3.4	0.86		

* 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

In the recent past many new university colleges and universities have been established in rural areas, a departure from the past, where most of the universities were based in the urban centres. There was a significant difference ($p < 0.05$) in staffing, leading and control functions between rural and urban universities (Table 4.6). 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 in Appendix III 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. All the same, rural universities experienced managerial challenges to a greater extent than the urban universities as evidenced by the high means (Table 4.6).

Table 4.6. 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	1.709	0.093
	Rural***	39	3.4	0.96		
Organizing	Urban	24	2.8	0.74	0.784	0.436
	Rural	39	3.0	1.03		
Staffing	Urban	24	3.0	0.58	2.573	0.013**
	Rural	39	3.5	0.80		
Leading/Directing	Urban	24	3.1	0.83	2.077	0.042**
	Rural	39	3.6	0.98		
Control	Urban	24	3.1	0.83	2.077	0.042**
	Rural	39	3.6	0.98		
Overall	Urban	24	3.0	0.67	1.938	0.058
	Rural	39	3.4	0.89		

* 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

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 challenges faced by each of the three categories. Table 4.7 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.

Table 4.7. One-way ANOVA test for the differences among the three categories of universities (university colleges, new universities and old universities) in the extent respondents experienced managerial challenges related to management functions

Function	Source	Sum of squares	df	Mean squares	<i>F</i>	<i>p</i>
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			

Previous studies (Oketch, 2004; Otieno, 2004) reported 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 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).

4.6. Environmental Challenges Faced by Public Universities

The respondents were asked to rank the environmental challenges they experience in their universities. The environmental factors that may pose challenges in any organization are political, economic, social, technological, ecological and legal (Pearce and Robinson, 2011). Of the environmental factors, economic factor posed the most challenge (Table 4.8). 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' (Appendix III). 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 Module II students are drawn from the community surrounding the universities and hence poverty may influence income generation.

The environmental challenges faced by public universities may be influenced by the time the university was established. To establish this, a t-test analysis was carried out between 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 4.9).

Table 4.8. 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

Further, given that the recently established universities and university colleges are located in the rural area, these universities may face environmental challenges different from those in the urban centres. This hypothesis was tested by comparing the environmental challenges faced by rural and urban universities. Table 4.10 shows that 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. This could be due to the 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.

Table 4.9. 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	1.878	0.065
	New*	45	2.5	0.78		
Economic	Old	18	3.1	0.66	1.695	0.095
	New	45	3.5	0.74		
Social	Old	18	2.4	0.67	2.517	0.015**
	New	45	2.8	0.62		
Technological	Old	18	3.0	0.89	1.097	0.277
	New	45	3.3	0.95		
Ecological	Old	18	2.1	0.56	2.182	0.033**
	New	45	2.6	0.90		
Legal	Old	18	3.0	0.62	0.673	0.503
	New	45	3.1	0.74		
Competitive	Old	18	3.1	0.71	1.761	0.084
	New	45	3.4	0.81		
Overall	Old	18	2.7	0.49	2.440	0.018**
	New	45	3.0	0.56		

*Includes new universities and university colleges

** Significantly different at $p < 0.05$

With respect to social factor, poverty and culture have been sighted as big challenges. This is supported by the fact that most of the Module II students are expected to come from the local community, hence this will affect the student population and consequently income generation. A one-way ANOVA test was carried out to establish whether significant difference existed among the three categories of universities with respect to the environmental challenges they faced. Significant difference ($p < 0.05$) existed in economic, social and technological factors among the three categories (Table 4.11). Overall there was significant difference ($p < 0.05$) in environmental challenges faced.

Table 4.10. 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	2.156	0.035**
	Rural	39	3.6	0.65		
Social	Urban	24	2.5	0.62	2.081	0.042**
	Rural	39	2.8	0.66		
Technological	Urban	24	3.1	0.93	0.901	0.372
	Rural	39	3.3	0.95		
Ecological	Urban	24	2.4	0.79	0.399	0.692
	Rural	39	2.5	0.88		
Legal	Urban	24	3.0	0.65	0.669	0.506
	Rural	39	3.1	0.75		
Competitive	Urban	24	3.2	0.82	0.862	0.392
	Rural	39	3.4	0.78		
Overall	Urban	24	2.8	0.48	1.847	0.070
	Rural	39	3.0	0.60		

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

** Significantly different at $p < 0.05$

Table 4.11. One-way ANOVA test for the differences among the three categories of universities (university colleges, new universities and old universities) on each factor of environmental challenge

Factor	Source	Sum of squares	df	Mean squares	<i>F</i>	<i>p</i>
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 $p < 0.05$

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 a lot of challenges and the greatest of all was the challenge of competition from other institutions that have taken advantage of the insatiable quest for higher education in Kenya. The study showed that the university had implemented response strategies, including introduction of new programmes, industry collaboration and human resource management. This study was undertaken 10 years ago when the number of public universities was only six and one public university college. The situation is quite different now with very stiff competition. 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.

4.7. Test for Social Desirability

Social desirability and/or distorted self-reports is where an executive paints himself or herself in good light; although reduced through self-administration of the questionnaire, 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). The results are depicted in Tables 4.12 and 4.13, respectively. There was no significance difference ($p < 0.05$) in the responses from the CEOs and their deputies in the extent they experienced managerial and environmental challenges related to management functions and macro-environmental factors, respectively. This indicates that there was no social desirability in the responses to the challenges. This can be attributed to self-administration of the questionnaire.

Table 4.12. 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*	SD**	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	0.627	0.533
	DVC/Deputy Principal	43	2.8	0.87		
Staffing	VC/Principal	20	3.3	0.79	0.156	0.878
	DVC/Deputy Principal	43	3.3	0.74		
Leading/Directing	VC/Principal	20	3.4	1.11	0.242	0.809
	DVC/Deputy Principal	43	3.5	0.87		
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

** SD – Standard deviation

Table 4.13. The differences between positions of top management members (VCs/principal – CEO versus DVCs/deputy principals) on the extent they experienced environmental challenges related to macro-environmental factors

Factor	Category	n	Mean*	SD**	t	p
Political	VC/Principal	20	2.5	1.03	0.556	0.580
	DVC/Deputy Principal	43	2.3	0.89		
Economic	VC/Principal	20	3.3	0.83	0.802	0.426
	DVC/Deputy Principal	43	3.4	0.67		
Social	VC/Principal	20	2.6	0.68	0.329	0.743
	DVC/Deputy Principal	43	2.7	0.65		
Technological	VC/Principal	20	3.2	1.02	0.161	0.873
	DVC/Deputy Principal	43	3.2	0.91		
Ecological	VC/Principal	20	2.5	0.88	0.322	0.748
	DVC/Deputy Principal	43	2.4	0.83		
Legal	VC/Principal	20	2.9	0.70	1.376	0.174
	DVC/Deputy Principal	43	3.2	0.70		
Competitive	VC/Principal	20	3.5	0.79	0.962	0.340
	DVC/Deputy Principal	43	3.3	0.80		
Overall	VC/Principal	20	2.9	0.56	1.818	0.074
	DVC/Deputy Principal	43	3.2	0.51		

* 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

** SD – Standard deviation

4.8. Response Strategies

4.8.1. Strategic responses

The study investigated the response strategies adopted by public universities to cope with both environmental and managerial challenges, among them Porter's generic competitive strategy model (cost leadership, differentiation and focus) and grand strategies as applied in business entities. The public universities in Kenya used Porter's generic competitive strategy model and grand strategies as some of the response strategies to cope with the environmental and managerial challenges they faced 'to a great extent' overall (Table 4.14). Of the Porter's three generic competitive strategies, cost leadership and differentiation were adopted 'to a great extent'.

Table 4.14. Mean and standard deviation of the extent to which respondents adopted Porter' generic competitive strategy model and grand strategies

Strategic response	Mean*	Standard deviation	Verbal interpretation
Cost leadership	3.6	0.87	To a great extent
Differentiation	3.9	0.71	To a great extent
Focus	3.3	0.95	To a moderate extent
Diversification	3.4	0.94	To a moderate extent
Strategic alliances	3.7	0.75	To a great extent
Overall	3.6	0.61	To a great 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

In the cost leadership strategy, cost minimization in non-core activities and outsourcing non-core services were adopted 'to a great extent' while in differentiation, being the best university/university college in the vicinity, offering the best market-driven programmes and establishing brand equity were adopted 'to a great extent'. In focus strategy, focusing on a particular clientele was adopted 'to a great extent' (Appendix III). These generic strategies have been used by corporate organizations to achieve sustainable competitive advantage. It can, therefore, be

argued that public universities in Kenya are moving from operating as public entities to adopting corporate models (corporatization).

Universities that consider a broad market strategy, cost leadership and differentiation offer a wide range of programmes as seen in the expansion strategy where respondents used expansion as a response strategy 'to a moderate extent' (Appendix III). These universities offer varied modes of delivery including full time, part-time, evening time and distance learning programmes for different economic classes as observed in this study and by Ronquillo (2012). The public universities in Kenya try this by attracting students from rural areas by opening branches in smaller towns in the rural areas. In higher education, applying focus strategy, universities concentrate on a narrow student or programme segment, and within that segment they manage to develop the best offer and capture students' interests. This discourages other providers from competing directly. In this case, students have less choice and are left with fewer alternatives to choose from or have to do the course because of the nature of their job. This kind of strategy has been used by Kenyatta University and Egerton University in providing training for the disciplined forces. The goal of domain creation strategies is to add related domains, to diversify or to spread risks (Cameroon, 1983). These strategies include completely new programmes offerings in high demand areas. They create new opportunities for institutional success while minimizing cost where resources are decreasing (Cameroon, 1983).

The main domain offence and domain creation strategies employed by Kenyan public universities include franchising to commercial colleges, establishment of satellite campuses and introducing new programmes, usually in fields beyond the universities' core areas of strength, such as health sciences, law, information and communication technology, management and business studies (Wangenge-Ouma and Nafukho, 2011; Wangenge-Ouma, 2012). The University of Nairobi, School of Business has in the recent past utilized the differentiation and focus strategies through development of new postgraduate programmes, including M.Sc. (Finance), M.Sc. (Human Resource Management), M.Sc. (Entrepreneurship and Innovation Management), M.Sc. (Marketing) and M.Sc. (Marketing Research) to capture those customers who wish to attain more specialization beyond the regular MBA specializations.

The establishment of campuses and learning centres throughout the country, several of which are exclusive to private students is another domain defense and domain creation strategy employed by almost all of the Kenyan public universities. The respondents indicated that this response strategy is used 'to a great extent'. Public universities are, therefore, emerging as the key providers of private education in Kenya and if the trend of exclusive pockets of private students continues, a new kind of private university seems to be emerging, namely, private universities owned by public universities (Wangenge-Ouma, 2012). In addition some universities franchise their degree offerings to middle level colleges who get name recognition but pay for it (Iraki, 2011). Further, the university colleges of major public universities are quick to indicate their mother university's name with a view to riding on the good will of the more known public universities. Given the nature and history of public universities in Kenya, the strategic responses adopted by the universities may vary. Using t-test analysis, this study shows that there was significant difference ($p < 0.05$) in the adoption of differentiation strategy between the old and new universities (Table 4.15). This difference could be due to the fact that the new universities are yet to develop the common traditional programmes typical of a university and also the fact that the new universities may not have established a brand identity to warrant differentiation.

Depending on the level of development and status, the three categories of public universities may differ in the choice of Porter's generic competitive strategies adopted. Table 4.16 shows that there was no significant difference ($p < 0.05$) in the adoption of Porter's generic competitive strategies among the three categories of universities. This implies that the status of the public university does not dictate the adoption of these strategies but rather the environment in which they operate which seems to be similar in this case. Among the grand strategies, the strategic alliances and collaborations that were adopted 'to a great extent' were those with local community in provision of students and staff welfare (3.7) and with research organizations to enhance research capacity (3.8) (Appendix III). Provision of student welfare, especially accommodation is one of the challenges facing all public universities, worst hit being those in the rural area. With dwindling funds from the government, the public universities have entered into strategic alliances with foreign

universities through memoranda of understanding in order to build both physical and human capacity through collaborative programmes.

Table 4.15. The difference between the extent to which respondents in new and old universities adopted which Porter’s generic competitive strategy model and grand strategies

Strategic Response	Category	n	Mean	Standard deviation	t	p
Cost leadership	New*	45	3.3	0.85	1.500	0.139
	Old	18	3.7	0.89		
Differentiation	New	45	3.3	0.72	2.819	0.044**
	Old	18	4.1	0.64		
Focus	New	45	3.3	0.91	0.516	0.608
	Old	18	3.4	1.08		
Diversification	New	45	3.0	0.99	0.147	0.883
	Old	18	3.2	0.86		
Strategic alliances	New	45	3.4	0.76	1.313	0.194
	Old	18	3.6	0.67		
Overall	New	45	3.3	0.58	1.551	0.126
	Old	18	3.6	0.68		

*Includes new universities and university colleges

** Significantly different at $p < 0.05$

Diversification, both in related business and in unrelated businesses was adopted by the public universities ‘to a moderate extent’ (Appendix III). Content analysis revealed that some of the universities were also adopting joint ventures through the public-private partnership (PPP) model, especially with respect to addressing the managerial challenge of student accommodation. Some universities, like Maseno University and Kenyatta University have already advertised for expression of interest under the PPP model. Other public universities have diversified into the tourism and hospitality industry, and although in some cases seen as facility for training, the core objective is income generation.

Table 4.16. One-way ANOVA test for the differences among respondents from the three categories of universities (university colleges, new universities and old universities) on the adoption of each dimension of Porter's generic competitive strategy model and grand strategies

Strategic response	Source	Sum of squares	df	Mean squares	<i>F</i>	<i>p</i>
Cost leadership	Between groups	1.684	2	0.842	1.106	0.338
	Within groups	43.406	60	0.762		
	Total	45.090	62			
Differentiation	Between groups	1.622	2	0.811	1.626	0.206
	Within groups	28.439	60	0.499		
	Total	30.061	62			
Focus	Between groups	0.872	2	0.436	0.473	0.625
	Within groups	52.54	60	0.922		
	Total	53.412	62			
Diversification	Between groups	0.05	2	0.025	0.027	0.973
	Within groups	52.995	60	0.930		
	Total	53.046	62			
Strategic alliances	Between groups	2.242	2	1.121	2.116	0.130
	Within groups	30.197	60	0.530		
	Total	32.439	62			
Overall	Between groups	0.891	2	0.445	1.192	0.311
	Within groups	21.305	60	0.374		
	Total	22.196	62			

As pointed out by Porter (1985), it is imperative that organizations (universities) have their strategies that reflect their needs and plans, given the institutional arrangements and external conditions. Some universities took the risk of programme differentiation when they started offering other programmes other universities did not offer. Some succeeded and others failed. Ronquillo (2012), indicated that programmes differentiation in a university should be accompanied by a corresponding training of faculty staff. The current results show that strategic alliance which is an agreement between two or more organizations to cooperate in a specific business activity, so that each benefits from the strength of the other, and gain competitive advantage was a preferred mode of entry into new markets (Appendix III). Organizations enter into strategic alliances for four main reasons, ease of market entry, shared risks, shared

knowledge, critical skills and expertise, and synergy and competitive advantage (Išoraite, 2009). Kinyua (2010) reported that JKUAT formed strategic alliances with tertiary institutions with the aim of taking education to the people and to offer bridging courses which were being offered by foreign universities out there hence exploiting a niche market that other public universities had not noticed. This was also aimed at utilizing idle capacity in these institutions and optimally exploit the available human resource capacity at JKUAT, besides generating income that was badly needed to supplement funds from the government. This study has established that most universities enter into strategic alliances with commercial colleges 'to a moderate extent' and with local communities 'to a great extent' (Appendix III) the latter being aimed at provision of staff and student welfare.

The success of private HEIs in Malaysia has been shown to use Porter's generic competitive strategy model to beat competition in the higher education industry and their response to the challenges in the environment are guided by Porter's five competitive forces (PFCF) framework (Hua, 2011). Strategic alliances were used as one of the most popular expansion and response strategy. This could be due to the fact that there is no investment on the part of the public university and that it allows for the spread of risks. It is like a form of franchising programme on the part of the public university to the commercial institution. Kitoto (2005) in her study on competitive strategies adopted by universities in Kenya observed that both public and private universities use generic and grand strategies to survive in the competitive market. In addition, Gongera and Okoth (2012) in their study of middle level colleges in Mombasa, Kenya found that these institutions have crafted strategies that are focused on offering unique products that are generally valued by customers and thus following the differentiation strategy. University strategies can be limited to a reactive response to environmental pressures, to a simple mechanism for resource allocation according to predefined rules in order to maintain a vulnerable internal balance or by a low degree of autonomy in managing resources. Following this perspective, university nature as loosely coupled systems would lead to emergent strategies based on *ad hoc* responses by learning organizational units or by adaptation through simultaneous tracking (Fumasoli and Lepori, 2011). Considering universities as formal organizations leads to a conception of strategies as change instruments in the hands of management (Krücken and Meier, 2006). Therefore, the application of strategic

management to the context of HIEs is feasible based on two premises: (1) an institution of higher learning is an entity with its own goals and coherent goal-directed actions and (2) an institution of higher learning is a network of participants who use their association to pursue their individual goals (Huang and Lee, 2013).

4.8.2. Operational strategies

The operations strategies that have been adopted by public universities are shown in Table 4.17. The results indicate that the provision of leadership by management in formulating response strategies and mounting of evening and weekend classes are used 'to a great extent' (4.1) by the respondents besides value chain analysis, strategic fit, participatory management, benchmarking and running the organization as a corporate entity. Accommodation of students has been highlighted as one of the main managerial challenges to universities located in rural and urban centres. To address this challenge the response strategy adopted by most of the universities was to enter into partnership with the local communities to offer accommodation or into a PPP arrangement on a build-operate-transfer model. Indeed inadequate housing at local universities has caused a steep rise in rents charged by private developers, a move that has raised the overall cost of education.

In Kenya, a university degree is moving from being desirable, in many cases, to being a necessity. The universities have capitalized on the changes in the economy and have coined the terms 'mature student' or 'evening classes' which is basically 'life-long learning' as a marketing tool to ensure repeat business for their product offerings. Mounting of evening classes for mature and working people was a strategy adopted by public universities 'to a great extent' to increase student numbers and also generate more funds. A similar observation has been reported previously by Svensson and Wood (2010). Indeed, Kenyan universities have embraced the marketing concept and this is evidenced by the establishment of fully-fledged marketing departments as a response strategy by the respondents 'to a moderate extent' (3.0) (Appendix III) that are focused on capitalizing on the newfound opportunities (Svensson and Wood, 2010).

Table 4.17. Mean and standard deviation of the of the extent to which respondents adopted various operational response strategies

Response strategy	Mean	Standard deviation	Verbal interpretation
• Top management provides leadership and direction in formulating response responses	4.1	0.82	To a great extent
• Strategic plans are altered along the way to fit environmental changes	3.2	0.85	To a moderate extent
• The university ensures that there is a strategic fit between strategies and the environment	3.6	0.93	To a great extent
• Distributed leadership/decentralization	3.4	0.91	To a moderate extent
• Value chain analysis to cut on costs	3.5	1.05	To a moderate extent
• Paying higher hourly rates to part-time lecturers than the competition	3.0	1.05	To a moderate extent
• Appointment of staff on permanent and pensionable terms	3.4	1.14	To a moderate extent
• Offering attractive and unique allowances to attract competent and experienced staff	3.3	1.07	To a moderate extent
• Institutionalizing internal part-time teaching	3.3	0.97	To a moderate extent
• Participatory management	3.6	0.98	To a great extent
• Enterprise resource planning to improve operations	3.4	0.92	To a moderate extent
• Mounting programmes that need minimum investment	3.2	1.13	To a moderate extent
• Accommodation for all students	3.0	1.16	To a moderate extent
• Training core staff	3.3	1.02	To a moderate extent
• Benchmarking	3.6	0.99	To a great extent
• Weekend and evening classes	4.3	1.27	To a moderate extent
• Restructuring/Re-engineering	3.2	0.99	To a moderate extent
• Establishment of a fully-fledged marketing department	3.0	1.25	To a moderate extent
• Implementation of ISO 9001:2008 QMS	3.6	1.27	To a great extent
• Running the university like a corporate organization	3.6	0.91	To a great extent
• Hiring out university resources	2.9	1.12	To a moderate extent
Overall	3.3	0.51	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

Due to the evening and weekend programmes, most public universities in Kenya have a population of self-sponsored students higher than that of regular or government-subsidized students (Wangenge-Ouma, 2012), thereby creating private public universities. The programmes attended by these 'private' public students are popularly referred to as parallel programmes and they are the *de facto* private wings of public universities as has happened in public hospitals. In large part, public universities introduced parallel programmes alongside 'regular' programmes attended by government-subsidized students to augment anorexic allocations from the government (Wangenge-Ouma, 2012).

Besides administration of a questionnaire, the study also collected secondary data and undertook content analysis. The study has unearthed some unethical response strategies used by some universities which may be detrimental to quality of service delivery and/or graduates. Information from print media and brochures indicate that some universities and the constituent colleges affiliated to them drop some cluster subjects for some courses in order to attract students. A case that was observed in this study is the Bachelor of Information Technology, Bachelor of Science in Information Technology and Bachelor of Business Information Technology. While one of the cluster subjects for government-sponsored students admitted through the Joint Admissions Board (JAB) is physics, information in the intake announcements in the print media and brochures for self-sponsored/Module II students do not indicate physics as one of the cluster subject. This implies that since physics is not taken by many students, dropping physics as a cluster subject, such universities have an unfair advantage in raising student numbers for these programmes as opposed to those universities which include physics in their intake announcements. In so doing the question is, are these two categories of graduates the same? This seems to give credence to the public outcry that the so called parallel students are of inferior quality especially where they are not integrated with the JAB students. Since the brochures are used in exhibitions and open days/forums, students aspiring to join such universities through government sponsorship do not get the right information.

Other universities admit students with a KCSE mean grade lower than C+ (plus) directly into degree programmes and for university certificate and diploma courses with a mean grade of D+ (plus) and C- (minus), respectively at KCSE. While the

certificate are terminal, a fact that is not communicated to them, such graduates are eventually admitted to higher level academic programmes, their qualifications at KCSE notwithstanding. Since the entry requirement the programmes is a C- (minus) and C (plain), respectively, this further poses an unfair competition for students with those universities that maintain the recommended entry requirements. This is supported by the observation that the respondents indicated that this lowering of admission criteria by some universities affected the choice of response strategy 'to a great extent' (Appendix III). Further, combining of classes from different levels of study has also been observed as an unethical response strategy for alleviating the shortage of qualified staff and saving costs. Lowering of job specifications, especially for teaching staff in order to compete for the scarce and limited human resource influenced the choice of response strategies 'to a great extent' (Appendix III). Indeed, some professors in some public and private universities cannot qualify to be senior lecturers in other universities. In other universities, students undertaking master's degrees especially in business, humanities and social sciences are allowed to start project work (Part II) even before completing course work. This flexibility and laxity albeit unethical tends to attract many potential students, a situation that poses unfair competition.

In other cases, there is credit transfer from diploma to undergraduate degree programmes with such students entering university in either first or second semester of second year. Ideally, only related degree units can be transferred from one programme to another, that is, degree to degree. This is an unethical strategy and gives these universities an unfair competitive advantage over the others with respect to attracting and raising student numbers. The low admission criteria was also observed in most private universities where in some cases universities only indicate the minimum qualification (C+) without indicating the required cluster subjects. This not only compromises quality of graduates but are unfair response strategies to beat competition for students. The low admission criteria and undeserved credit transfer used by some private universities as compared to the public universities could contribute to the exponential increase in the number of students in some private universities. The credit transfers from diploma programmes or professional certificates enables the students to finish the programme in two calendar years, assuming trimester. In some private universities candidates with CPA (K) are even

admitted into the MBA programme irrespective of whether they are graduates or not, while in other universities they start in the second or third year, their qualification at KCSE notwithstanding. This trend has influenced other universities in their response strategies and is unfair as far as competition is concerned – the playground is not level. What about quality? CUE, can diploma units or CPA subjects be equated to degree units? A diploma course is supposed to bridge the gap between C (plain) and C+ (plus). If the diploma units are equated to the degree units, then one is left wondering why a candidate needs to undertake a diploma programme in the first place. Another highly abused strategy was the so called pre-university programmes and bridging courses that admit students who do not meet the minimum university requirements with as low as C- (minus) who transit to universities. In other universities candidates with mean grades lower than C+ (plus) are required to sit for entrance examinations and if they pass (which is usually the case) they are admitted into degree programmes. This may be mainly due to lack of national standards in what constitutes a pre-university programme and what should be bridged. In most of the universities except University of Nairobi, where to bridge one must have a mean grade of C+ (plus) and at least a C- (minus) in the subject to be bridged, most other universities are silent on this and students who had scored as low as E are allowed to bridge. In these cases the pass rate is deliberately high to guarantee a steady transition into the undergraduate programmes. Another unethical operational response strategy was found in the institution-based programmes where universities both private and public reduce the number of sessions that constitute a semester to attract students who wish to finish in the shortest possible time content notwithstanding. Fees payable for some programmes was also questionable, raising the question whether the students are taught for the prescribed number of hours.

Organizations are environmentally dependent, hence they need to employ strategic responses in order to adapt to the changing environment. The response strategies that a firm chooses are not easy decisions and some of them may turn out to be wrong but this should not be a hindrance for not coming up with creative decisions (Thompson et al., 2008). Response strategies, therefore, involve changes in the firm's strategic behavior and ensure success in transforming the future environment. One of the response strategies that was indicated as playing a key part in attracting and retaining staff is subsidized fees for staff and their dependents (Kitoto, 2005). Structure is

important in crafting response strategies. The public university structures have remained the same and have not evolved in response to changing internal and external environments. While operations and strategies in most universities have adjusted to changes in internal and external environments structure/organizational structures have remained the same despite changes in the environment hence need for re-engineering albeit contextual. Recently, Kenyatta University advertised for a position of a Registrar to be in-charge of strategy which is a departure from the traditional structure.

4.9. Factors Influencing Choice of Response Strategies

The choice of response strategies by organizations, especially private ones is influenced by many factors among them the Porter's Five Competitive Forces (PFCF). The study sought to establish the factors that influence the choice of response strategies adopted by public universities in Kenya including the influence by PFCF framework.

4.9.1. Influence of Porter's five competitive forces framework

The PFCF framework/model is defined by the following forces: the threat of new entrants, supplier power, buyer (customer) power, the threat of substitutes and intensity of industry rivalry (Porter, 1985). This model is anchored on microeconomics and is one of the most used strategic frameworks today. Having a competitive advantage over competing universities attract sufficient prospective students and further generate funds. Overall all the five competitive forces safe for buyers' power influenced the choice of response strategies adopted by public universities 'to a great extent' (Table 4.18). However, threat from new entrants had the highest influence since most of the respondents indicated that it influenced the choice of response strategies the greatest extent compared to the others (4.1), followed by the bargaining power of suppliers (teaching staff) with 3.7.

In the analysis of higher education systems, many models and frameworks are based on governance, steering, or coordination models. The language used in the present-day policy documents (knowledge economy and competitive position among others) calls for an analysis of higher education as an industry and this is supported by results from this study. The findings from this study are in agreement with those reported for

universities elsewhere. In their work Pringle and Huisman (2011) argued that PFCF framework can be applied in the higher education industry (university sector) in order to achieve a competitive position for the higher education system. Ronquillo (2012) has also reported that PFCF model is applicable in the analysis of competitiveness in universities in Australia similar to that in business entities and has distinct attributes and capabilities which are presented to their clientele if they are to have a strong market and competitive position. Indeed universities world over are challenged by alternative substitute modes of learning.

Table 4.18. Mean and standard deviation of the extent to which respondents' choice of response strategies were influenced by Porter's five competitive forces framework

Force	Mean*	Standard deviation	Verbal interpretation
Threat from new entrants	4.1	0.92	To a great extent
Intensity of rivalry in the industry	3.7	0.78	To a great extent
Threat from substitutes	3.6	0.86	To a great extent
Bargaining power of suppliers	3.7	0.60	To a great extent
Bargaining power of buyers	3.4	0.95	To a moderate extent
Overall	3.8	0.84	To a great 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

Porter (2008) describes the threat of new entrants as directly related to the barrier to entry for that particular industry. It may not necessarily be the actual entry, but the threat of new entrants to the industry that drives competition. Contrary, to observations by Pringle and Huisman (2011), it appears that there are low barriers of entry into the Kenyan higher education industry, particularly for universities intending to launch business, humanities and social science degree programmes. This is evidenced by the fact that threat of new entrants affected the choice of response

strategies 'to a great extent' (Table 4.18). The supply of qualified and competent manpower is a big challenge and hence suppliers (lecturers) have a big bargaining power and 'to a great extent' influenced the choice of response strategies.

A substitute performs the same or a similar function by a different means (Porter, 2008). When the threat of a substitute is high, industry profitability suffers. The threat of substitute is high if the substitute provides a cost-effective trade-off compared to the original product. For the higher education industry in Kenya the most powerful and growing force with respect substitute is the threat from distance education and online degree programmes which have increased and continue to increase in numbers. This was found to contribute to the choice of response strategy 'to a great extent' (Table 4.18). A similar observation had been made by previous researchers (Anand, 2012; Pringle and Huisman, 2011). Martinez and Wolverson (2009) indicated the threat of substitute in higher education is defined by three attributes: convenience, time and application. They consider time to be the most important factor driving students to seek out substitute products, arguing that students do not want to invest four to five years to obtain a bachelor's degree, nor do professionals want to leave the workforce for two years to complete a traditional master's degree. Whether the credit transfer strategy observed in this study could be considered as a substitute remains to be established. As a result, many students are demanding alternatives that decrease the completion time for a degree. Similarly, convenience is largely responsible for driving adult learners to seek out alternative modes of education. In addition to the distance/online market, the delivery methods of evening, weekend (Appendix III) and modularized programmes are increasing (Pringle and Huisman, 2011). In fact, Kenyan universities that have sought to respond to this group by offering convenience and decreased time have become the industry standard and gained competitive advantage as observed in this study. Rivalry among the universities influenced the choice of response strategies 'to a great extent' (Table 4.18), particularly between public and local private universities (Appendix III). Customers (students) will look for programmes with decreased completion time, delivered at times and in ways that are customized to individual needs, for example, evening and weekend classes. The competitors that offer substitutes often combine convenience, time and application, largely because of expanded delivery options made possible by technology and also fair credit transfer.

In higher education industry, the intensity of rivalry depends on the object of the competition: students, teaching staff, donors, government funding or research funds (Pringle and Huisman, 2011). With increasing number of universities in Kenya the intensity of rivalry is bound to be high, leading to reduced 'profit'. It must be acknowledged that university culture has changed, transforming education into a commodity (commodification). The results show that this contributed 'to a great extent' the choice of response strategies, based on the desire to run universities as corporate entities. Due to the high concentration of universities, and perceived incentives to compete on price, it is likely that universities' revenue will be reduced and this is likely to create financial management challenge to the management of universities in the future (Anand, 2012). As the number of providers grows, the competition increases and more competition leads to more efficiency, higher quality, more innovation, more differentiation and more choices for consumers (Pringle and Huisman, 2011). Fumasoli and Lepori (2011) indicated that small universities which cannot profit from mass enrollment, a coherent action is the only way to compete and try to steer their own trajectory – that is, differentiation when faced with competitors endowed with much large power, resources and legitimacy like the older universities.

Further the influence of PFCF on the choice of response strategies was not significantly different ($p < 0.05$) between the old and new universities (Table 4.19). All the p -values are greater than 0.05 which means that there was no significant difference ($p < 0.05$) in the extent to which the PFCF influenced the adoption of response strategies between the old and new universities. This means that the influence of PFCF in the adoption of the response strategies is not dependent on the age of the organization (university) but rather is dependent on the environment in which the organizations operate which apparently for the universities is similar.

Porter (2008) acknowledged that additional factors like economic changes and rise of technology will have a direct effect on the five competitive forces and by extension, therefore, will have a large role to play in influencing the higher education industry. It should be noted that the change in the higher education sector in Kenya created many opportunities, which attracted the private sector to enter into the higher education industry, to exploit the opportunities created with increasing demand and decreasing

public funding, hence increasing the intensity of rivalry. Due to the low entry barrier into the higher education industry in Kenya and not so tight government regulations in the industry, there has been an increase in the number of private universities in the recent past offering the same products as the public universities hence increasing competition in the industry.

Table 4.19. The difference between the extent to which respondents in new and old universities choice of response strategies were influenced by Porter’s five competitive forces framework

Force	Category	n	Mean	Standard deviation	t	p
Threat from new entrants	New*	45	3.8	0.23	0.300	0.765
	Old	18	3.9	0.94		
Intensity of rivalry in the industry	New	45	3.7	0.71	0.555	0.581
	Old	18	3.8	1.02		
Threat from substitutes	New	45	2.2	1.09	1.551	0.126
	Old	18	2.7	0.86		
Bargaining power of suppliers	New	45	3.6	0.64	0.965	0.339
	Old	18	3.3	0.56		
Bargaining power of buyers	New	45	3.3	0.97	0.109	0.914
	Old	18	3.3	0.80		
Overall	New	45	3.4	0.67	0.811	0.421
	Old	18	3.2	0.78		

n= 63

*Includes new universities and university colleges

The marketing concept has been adopted in non-marketing concepts such as relationships between universities and students. Svensson and Wood, (2010) observed that students are seen as customers of knowledge at many universities and universities regard themselves as suppliers of knowledge to these customers. Higher education industry like any other industry is highly competitive and, therefore, has to operate like a business enterprise to sustain the competition. The business of higher education has become complex with emergence of new substitute models of learning and

delivery in form of e-learning, open and online universities (Anand, 2012). With the decreasing government funding in higher education system, most of the revenue is generated from student fees and with universities being provider of higher education service products to the customer – the student after payment of course fees, will demand value for the money. The core of business environment is formed by its relationship with students (customers), teaching staff (suppliers), industry and job markets which form the higher education industry environment (Anand, 2012). A model depicting this has been proposed by Pringle and Huisman (2011) (Fig. 4.7).

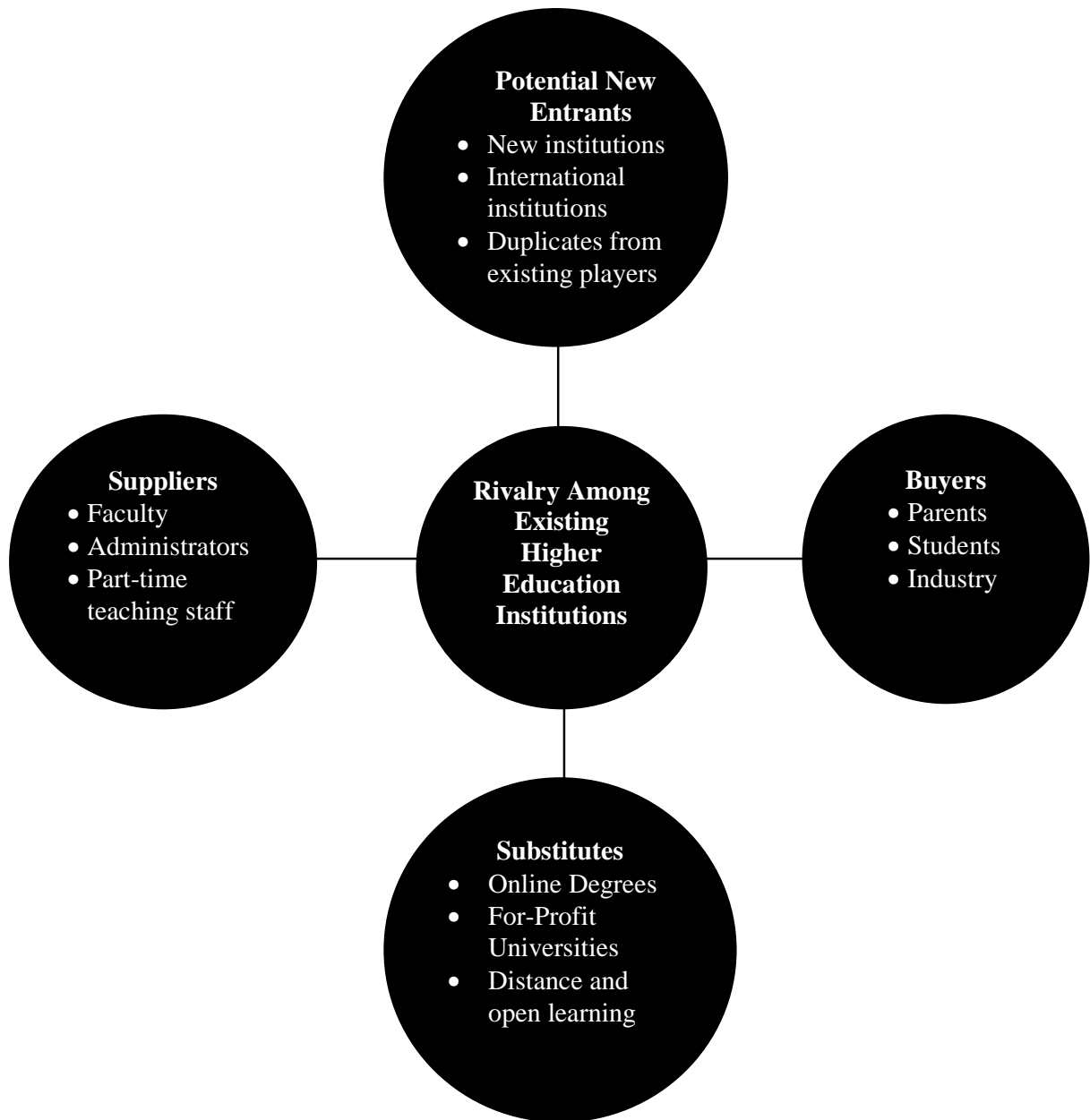


Figure 4.7. Higher education viewed through Porter's five competitive forces framework (modified). Source: Pringle and Huisman (2011)

Further, there was no significant difference ($p < 0.05$) in the extent to which PFCF framework influenced the choice of response strategies among the three categories of public university (Table 4.20).

Table 4.20. One-way ANOVA test for the differences of the extent respondents from the three categories of public universities (university colleges, new universities and old universities) choice of response strategy was influenced by the Porter's five competitive forces framework

Force	Source	Sum of squares	df	Mean squares	<i>F</i>	<i>p</i>
Threat from new entrants	Between groups	0.742	2	0.371	0.251	0.779
	Within groups	84.191	60	1.477		
	Total	84.933	62			
Intensity of rivalry in the industry	Between groups	2.284	2	1.142	1.498	0.232
	Within groups	43.462	60	0.762		
	Total	45.746	62			
Threat from substitutes	Between groups	2.375	2	1.188	0.898	0.413
	Within groups	75.358	60	1.322		
	Total	77.733	62			
Bargaining power of suppliers	Between groups	2.692	2	1.346	1.363	0.264
	Within groups	56.291	60	0.988		
	Total	58.983	62			
Bargaining power of buyers	Between groups	2.011	2	1.006	1.155	0.322
	Within groups	49.639	60	0.871		
	Total	51.65	62			
Overall	Between groups	0.987	2	0.494	0.691	0.505
	Within groups	40.685	60	0.714		
	Total	41.672	62			

The utility of PFCF model is that it provides an analytical framework to determine how to gain competitive advantage by strategically positioning a firm within an attractive industry environment. PFCF model has already been applied in a wide array of businesses, including non-profit organizations where competitive advantage is a central theme. As argued by Pringle and Huisman (2011), Porter's (1985) model is anchored on microeconomics and despite criticism by Mintzberg (1994) and others, it

is still one of the most strategic frameworks used today. Based on the results from this study and according to Ronquillo (2012), the forces can be aligned so that they may appropriately be useful in the higher education industry. The supplier in the higher education sector is referred to as the teaching staff, both permanent and part-time, buyers referred to as industry and students/parents, existing competition referred to as existing universities and colleges, substitutes could be alternative education from degree programmes or mode of delivery and new entrants refer to new universities and colleges offering the same courses. Competition becomes strong when business entities which offer similar services and products create strategies and offer novel products which may be used as alternatives to the same product but at possibly the same quality at lesser cost, and public universities are no exception. This study posits that public universities in Kenya also use the same strategy, which increases their market and value and, therefore, become a threat to the other institutions because they offer more or less the same products.

In the case of higher education, the buyer/customer is the student, his or her parent and the industry (Pringle and Huisman, 2011). The industry demands industry-demand programmes while students demand market-driven programmes. Some of the services offered by some universities are unique and provide a sustainable value to students and add to the bargaining power of the student. As observed by Anand (2012) in India, and results from this study the increased number of universities have provided the students wider options of not just selecting the courses of their choice but also the university they want to study. Ideally, the power of student increases as the services offered become more standardized, which allows them to more readily compare offerings and make more informed choices, thus lowering the switching costs. The intensity of rivalry among existing organizations in the higher education industry manifests itself in the competition for students, faculty and research money (Martinez and Wolverton, 2009). Students would wish to earn degrees from those universities that are likely to command more respect in the marketplace; such degrees are more likely to lead to employment. For sure, the newcomer universities are unlikely to have earned a sufficient reputation and respect from the industry to guarantee jobs. This may explain why some of the respondents from the new universities and university colleges indicated that the desire for students for inter-university transfer to the older universities posed a challenge in the management of

student numbers. A similar observation of old versus new institutions in Ontario, Canada had been made earlier by Pringle and Huisman (2011). Established HEIs have a clear incumbency advantage that is not available to potential new entrants to this industry. First, they already have an established reputation and established buyers (students). Further, they have the administrative and complex scholarly (faculty) and political connections that enable them to function relatively smoothly and sustain their reputation.

The potential for the entry of a new competitor into the existing higher education marketplace depends on several factors including, economies of scale, capital requirements, reaction from existing competitors and the level of buyer acceptance or resistance (Martinez and Wolverton, 2009). It has been reported elsewhere that institutions that focus on online delivery, have reduced physical capital requirement by offering programmes only over the internet. High technological investment has in some instances replaced physical infrastructure and thus changed the cost of doing business ((Martinez and Wolverton, 2009). Public universities in Kenya are slowly adopting this model to circumvent the challenges of physical infrastructure observed in this study. Thus, the new 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).

The power of teaching staff (faculty) varies depending on institutional type and discipline. If the faculty is unionized, supplier power increases (Martinez and Woverlton, 2009). In Kenya, the teaching staff is unionized and, therefore, supplier power is high. The supplier power of teaching staff not only varies by institutional type but also by discipline. In some fields, there are more qualified teaching staff than positions, thus decreasing supplier power. The biggest supplier in HEIs is the teaching staff who weld a great deal of power due to their scarcity and trade union. The respondents indicated that the teaching staff power was high and influenced the choice of response strategies 'to a great extent' (Table 4.18). This is supported by the management challenge on the staffing function (Table 4.4). Without a strong academic staff, no HEI can be successful, because it is their academic teaching and research that defines a university and provides the legitimacy for the credentials the university confers (Pringle and Huisman, 2011). Porter (2008) argues that supplier

power is strong if (1) it is more concentrated than the industry it sells to (HEIs), (2) industry participants (students) face switching costs in changing suppliers, (3) suppliers offer products that are differentiated and (4) there is no substitute for what supplier group provides. All these would support the position that, on balance, despite some erosion in the power of the supplier, the teaching staff maintains a strong bargaining position and degree of power in the higher education industry (Pringle and Huisman, 2011) and as found in this study both full-time and part-time lecturers have high bargaining power. Ideally, the teaching staff bargaining power remains high because currently there are no realistic substitutes. In his study of universities in the Gaza strip, Farahat (2011) reported that PFCF framework is applicable in universities and this was attributed to similarities among universities according to their experience, resources, education quality and reputation. Rivalry, for example, among universities given the low entry and exit barriers is good for improvement of quality. It is clear from the results that public universities strategic response is influenced by PFCF framework (Table 4.18) and is independent of the time the universities were established and their status.

4.9.2. Other factors influencing choice of response strategies

The other factors that influenced the choice of response strategies adopted by the public universities are indicated in Table 4.21. Some of the response strategies used by some universities are unethical and compromise on quality. The respondents indicated that lowering of job specification by other universities to attract staff and lowering of admission criteria for similar programmes by other universities to attract students influenced the choice of response strategies 'to a great extent'. Some private universities have been accused of lowering entry requirements in order to attract students. For instance, CPA (K) holders can take two years to complete an undergraduate business degree through credit transfer while in others, such students are admitted into the MBA programme. This has pushed public universities to craft response strategies some of which are detrimental to quality. This is not only an unfair marketing practice but also compromises quality of service delivery and eventually quality of the graduates. A similar observation has been made by Gudo, Olel and Oanda (2011) in their study on the impact and issues of university expansion in Kenya in relation to quality, challenges and opportunities.

Table 4.21. Mean and standard deviation of the extent to which other factors influenced the choice of response strategies

Factor	Mean	Standard deviation	Verbal interpretation
Changes in the market	3.5	0.79	To a moderate extent
Changes in government policies and decisions	3.6	0.91	To a great extent
Location of the university	3.3	0.32	To a moderate extent
Roles of past strategies	3.1	0.92	To a moderate extent
Mission and vision	3.5	0.67	To a moderate extent
Corporate culture	3.4	0.61	To a moderate extent
Management attitude towards risk	3.5	0.94	To a moderate extent
Pressure from stakeholders	3.7	0.53	To a great extent
Needs and desires of top management	3.2	0.65	To a moderate extent
Statutory bodies requirement	3.5	0.91	To a moderate extent
Changes in government funding	4.0	0.48	To a great extent
Limited human resource base	3.3	0.52	To a moderate extent
Lowering of job specification by other universities to attract staff	3.8	0.56	To a moderate extent
Lowering of admission criteria for programmes by other universities	3.6	0.73	To a great extent
Mandate of the institution	3.7	0.55	To a great extent
New constitution	3.8	0.68	To a great extent
The Universities Act	3.7	0.48	To a great extent
Reforms in the higher education sub-sector	3.5	0.79	To a moderate extent
Conformation to the changing needs of industries	3.6	0.90	To a great extent
Overall	3.5	0.58	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

The government plays a key role in all the PFCF. It funds higher education, disseminates information about universities through CUE, and, formulates policies and regulations. In higher education, government can expand, create, enable or limit the market. This study has shown that statutory bodies requirements, changes in government funding, new constitution, Universities Act (2012) and reforms in the higher education sub-sector influenced the choice of response strategies 'to a great extent' (Table 4.21 and Appendix III). Porter (2008) mentioned that government can exert legitimate influence in any given industry. The results indicate that the government has a great effect on the choice of response strategies and supports the view of Martinez and Woverlton, (2009) that the PFCF model should include government as the sixth force to create a more comprehensive view of the industry. By dissecting the marketplace in which a university operates into strategically significant groups, such as existing rivals, potential entrants, substitutes, suppliers and buyers, an organization begins to see more clearly where its opportunities and threats lie (Martinez and Woverlton, 2009).

Information collected through interviews and from secondary data indicated that teaching staff with as low qualifications as HND and others who have not even completed their Masters degrees teach undergraduate classes. Other universities even combine classes in order to cut on costs. This compromises quality of service delivery and quality of graduates and has been necessitated by challenge of scarcity of competent and qualified teaching staff in some disciplines. It was also disheartening to note that most of the young staff teaching in the public and private universities are those who were not admitted directly through JAB or the best among the graduates. The situation is worse when it comes to the part-time lecturers where chairmen of departments and staff in the universities bring in friends and relatives with no mechanism in place for vetting. The situation on the ground is that anybody can teach in the university, their qualifications at KCSE and the manner in which the degree was obtained and universities from which the degrees were obtained notwithstanding. While the Teachers Service Commission requires one to have attained a minimum of C+ (plus) at KCSE to teach in secondary school, there are lecturers who had attained mean grades far lower than C+ (plus) at KCSE. Secondary information indicate that those who apply for jobs in the universities and are eventually appointed are not the 'A' graduates with some qualifications wanting. If this is the situation how do we

expect top notch graduates from our universities?. It is clear from operations management that the quality of output (graduates) is not only affected by the quality of the input (students) but also by the processes the input undergo during value addition chain (teaching and learning). As for admission of students who do not meet the minimum .entry requirements and taught by incompetent lecturers it is a ‘garbage in – garbage out’ scenario.

The concept of ‘entrepreneurial university’ emphasized identifying a university’s resources and the extent to which they may be developed for commercial use. The increased number of parallel students has shown evidence of creeping but steady marginalization of state-subsidized students, who are becoming increasingly unpopular, since they do not represent a viable market: they do not offset the lack of public funding, nor do they promise efficiency gains (profit maximization), which, increasingly, seems to be becoming an end in itself (Wangenge-Ouma, 2012). The private sector employers in Kenya have raised the red flag over the quality of graduates that local universities are churning out, cautioning that the institutions need to integrate industry needs in their curriculum. This has been attributed to structural weaknesses, poor infrastructure and poor curriculum.

The t-test analysis was used to test whether there was any difference in the other factors influencing choice of response strategies adopted by the old and new universities. The difference in strategic responses between the old and new universities is given in Table 4.22. The location of the university had significant difference ($p < 0.05$) in influencing the choice of response strategies between the old and new universities. Location of the university has been cited as a big challenge in attracting both staff and students. Those in the urban centres are more attractive to staff and students than those in the rural areas.

Table 4.22. The difference between the extent to which various factors influenced the choice of response strategies by respondents in old and new universities

Factor	Category	n	Mean	SD	t	p
• Changes in the market	New*	43	3.5	0.63	0.078	0.938
	Old	17	3.5	1.13		
• Changes in government policies and decisions	New	43	3.6	0.96	0.707	0.482
	Old	17	3.8	0.75		
• Location of the university	New	43	3.8	1.09	5.873	0.00**
	Old	17	2.1	0.96		
• Roles of past strategies	New	43	3.0	0.95	1.536	0.13
	Old	17	3.4	0.78		
• Mission and vision	New	43	3.4	1.11	0.392	0.696
	Old	17	3.5	1.01		
• Corporate Culture	New	43	3.4	1.07	0.054	0.957
	Old	17	3.4	1.06		
• Management attitude towards risk	New	43	3.5	0.98	0.105	0.917
	Old	17	3.5	0.87		
• Pressure from stakeholders	New	43	3.7	1.04	0.581	0.564
	Old	17	3.8	1.02		
• Needs and desires of top management	New	43	2.9	0.99	1.971	0.053
	Old	17	3.4	0.93		
• Statutory bodies requirement	New	43	3.6	0.83	0.783	0.437
	Old	17	3.4	1.12		
• Changes in government funding	New	43	4.2	0.89	1.216	0.229
	Old	17	3.7	1.16		
• Limited human resource base	New	43	3.8	1.08	0.061	0.952
	Old	17	3.6	0.94		
• Lowering of job specification	New	43	3.2	1.52	0.952	0.927
	Old	17	3.2	0.93		
• Lowering of admission criteria	New	43	3.3	0.56	0.287	0.775
	Old	17	3.8	0.70		
• New constitution	New	43	3.3	0.45	0.336	0.738
	Old	17	3.4	0.71		
• The Universities Act	New	43	3.6	0.74	0.799	0.428
	Old	17	3.8	0.85		
• Reforms in the higher education sub-sector	New	43	3.6	0.76	0.49	0.626
	Old	17	3.8	0.70		
• Conformation to the changing	New	43	3.8	0.44	0.115	0.909
	Old	17	3.7	0.85		
Overall	New	43	3.5	0.59	0.182	0.856
	Old	17	3.4	0.48		

n= 63; *new universities and university colleges ** Significant difference at p<0.05

Students often will consider location and convenience above and beyond any cost (Martinez and Wolverton, 2009). Students claim that in the urban centres they can pursue two academic and/or professional programmes at different levels at the same time and that there are more opportunities in the urban universities than in rural ones not to mention that the urban universities are more endowed. Response strategy decision-makers after comprehensive examination are often confronted with several viable alternatives than the luxury of devout obvious choices. Ndiao (2001) reported that in NGO the choice of response strategies is influenced by past strategies, vision and mission, leadership, corporate culture, management attitude towards risk, timing, pressure from stakeholders and, need and desire of key managers. However, the attractiveness of a particular strategic alternative is partially a function of the amount of risk it entails (Wheelan and Hunger, 2008). Attitude towards risk exert considerable influence on strategic response. Wheelan and Hunger (2008) further argue that the attractiveness of a strategic alternative is affected by the perceived compatibility with the key stakeholders in a corporation's task environment.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

This chapter gives summary the results obtained from this study, draws conclusion from the findings, and outlines limitation of the study and recommendations for further research, policy and practice.

5.2. Summary of Findings

This study aimed at establishing the managerial and environmental challenges faced by public universities in Kenya, the response strategies adopted and the factors that influence the choice of the response strategies. The research design was descriptive and used a structured questionnaire, interview and content analysis to collect both primary and secondary data. The population was all the public universities and the respondents, selected through judgmental purposive sampling were the VCs, DVCs of universities and, principals and deputy principals of university colleges. The questionnaire was distributed to 91 respondents and 63 returned, yielding a 69.4% response rate. Majority of the respondents (49%) were in the 50-54 years age bracket and (32%) had between 0 - 4 years' experience in university management. Of the respondents, 76% had basic training in the sciences while only 3% had basic training in business, 79% had no professional training in management and only 8% each had training in management at postgraduate diploma and postgraduate degree. The respondents indicated that they needed professional training in management 'to a great extent', and that such training will improve their performance, efficiency and effectiveness 'to a great extent'.

Among the management functions, the control functions posed a managerial challenge 'to a great extent'. There was significant difference ($p < 0.05$) in managerial challenges for the planning, leading, control function and overall management between the new and old universities while there was significant difference ($p < 0.05$) in managerial challenges in the staffing, leading and control functions between rural and urban universities. However, there was no significant difference ($p < 0.05$) in the managerial challenges related to management functions among all the three categories

of public universities, that is, old, new and university colleges. Economic, social, technological, legal and competitive factors posed environmental challenges 'to a moderate extent'. Social and ecological factors had significant effect ($p < 0.05$) on the environmental challenges experienced by the old and new universities. When urban and rural universities were compared, political, economic and social factors had significant effect ($p < 0.05$) on the environmental challenges experienced. Economic, social and technological factors had significant effect ($p < 0.05$) on environmental challenges among the three categories of public universities. Overall, the macro-environmental factors had significant difference ($p < 0.05$) on environmental challenges. There was no significant difference ($p < 0.05$) in the responses from VCs/principals and their deputies.

The universities had adopted Porter's generic competitive strategies model of cost leadership, differentiation and focus to cope with the challenges. In particular cost leadership and differentiation were adopted 'to a great extent'. Adoption of differentiation strategy was significantly different ($p < 0.05$) between the old and new universities. There was no significant difference ($p < 0.05$) in the adoption of Porter's generic competitive strategy model among the three categories of public universities. In the cost leadership strategy, cost minimization of non-core activities, cost reduction in departments and outsourcing of non-core services and/or activities were adopted 'to a great extent'. Focus on a particular clientele was adopted 'to a moderate extent'. Other response strategies adopted 'to a great extent' included leadership in the formulation of response strategies, distributed leadership, benchmarking, mounting of evening and weekend programmes, implementation of ISO 9001:2008 quality management system and operating the public universities as corporate entities and as systems. The unethical operational strategies used by some universities and identified in this study include, lowering of admission criteria for some programmes contrary to those set by JAB to attract Module II students, lowering of job specifications to attract the scarce human resource, teaching of undergraduate programmes by non-master's degree holders, credit transfer from diploma to degree programmes and combining classes at different levels to cut on costs, and at postgraduate level, undertaking coursework (Part I) and project concurrently.

Porter's five competitive forces (PFCF) framework influenced the choice of response strategies adopted by the universities 'to a great extent', the most influence coming from the threat from new entrants. The government also seemed to play a key role in influencing the choice of response strategies and can be considered as the sixth force in PFCF model. A t-test analysis showed that there was no significant difference ($p < 0.05$) in the influence of the choice of the response strategies by PFCF between new and old universities. Further, one-way ANOVA test indicated that there was no significant difference ($p < 0.05$) in the influence of PFCF on the choice of response strategies among the three categories of public universities. Other factors that influenced the choice of response strategies 'to a great extent' included, pressure from stakeholders, changes in government funding, lowering of admission and job specifications by some public and private universities and the location of the university.

5.3. Conclusions from the Study

The results from this study indicate that public universities experience a multitude of environmental and managerial challenges and have adopted response strategies to cope with the 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 response strategies adopted by the public universities and the factors influencing their choice are more or less similar to those applied by corporate organizations among them, grand strategies, Porter's generic competitive strategies and PFCF framework. The application of PFCF framework in the choice of response strategies was independent of the time the university was established and its status. This indicates that the present public universities in Kenya are run like corporate entities and could as well be renamed public-private universities. 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. Not all response strategies adopted were ethical and some could have serious impact on quality. Although most of the respondents had no professional training in management, it was not possible to link/correlate the managerial and environmental challenges and response strategies to lack of managerial ability.

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 environmental and managerial 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.

5.4. Limitation of the Study

The study was conducted for public universities only and not all the HEIs hence generalization in all HIEs is limited. This was informed by both financial and time constraints. The study investigated environmental and managerial challenges only, yet there are other challenges that could influence performance, efficiency and effectiveness in management of public universities in Kenya. Bureaucracy and delay in returning the questionnaires due to the busy schedule of the respondents limited the speed of data collection. In data collection, the study relied on questionnaires, which included self-assessment measures for the respondents who form the top management team of public universities in Kenya. This could have led to distorted self-reports and/or social desirability, which although reduced through self-administration of the questionnaire and not detected, cannot be ruled out. As pointed out by Sharma (2008), research has shown that individuals tend to over-rate themselves on desirable traits and under-rate themselves on undesirable traits, particularly those appearing as self-evaluation, that may tend to be more subjective and biased. This means that some respondents may have over-rated their competence in some areas of management and response strategies, which could have led to the wrong conclusion that there are no managerial challenges and, if there are, appropriate response strategies are in place. There could have been fear among the respondents to give crucial information and confidential data despite assurance that the information so collected would be used in confidential manner and for academic purposes only. The geographic distribution of questionnaire posed a challenge. The study dealt with only one stakeholder yet there are other stakeholders in the higher education industry. In addition, the study was a

cross-sectional survey and the environment being dynamic, the application of the results over a long time is limited.

5.5. Recommendations for Further Research

The challenges facing public universities in Kenya indicate the need for reforms in the management of these institutions. Improved governance of public universities benefit a wide range of stakeholders that include, students and employees. Based on this, 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 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 and response strategies adopted. Public and private universities operate in the same environment. It is, therefore, expected that they would adopt the same strategies to respond to the changing 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 environmental and managerial challenges, use the same response strategies and whether the same factors influence the choices. The findings of such research could potentially provide important insights into the differences and similarities between strategic management in the different types of HEIs.

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. 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 and the response strategies. Longitudinal studies will shed light on how the response strategies and the factors influencing their choice evolve in the

context of environmental and other influences. The most current pressing challenge may be the least challenging in the future. I, therefore, recommended that a longitudinal study or periodical study is undertaken to examine the changes in the relative effects of the various challenges, response strategies and factors influencing the choices within and outside HEIs. This may unearth new and additional factors that could be considered as significant contributors to strategic management in HEIs. The study focused only on identifying environmental and managerial challenges. However, public universities in Kenya may face other challenges which may need to be investigated. This is important because some response strategies adopted may affect the whole organization and not necessarily respond to a particular challenge.

5.6. Recommendation for Policy and Practice

This sub-section gives recommendation on the contribution of the study to theory and knowledge and, application of the results in policy formulation and practice in the higher education industry.

5.6.1. Contribution to theory and knowledge

This study took a novel approach to studying university system in a manner more typically reserved for business and private sector. The response strategies adopted by the public universities and the factors influencing their choice are more or less similar to those applied by corporate organizations among them, grand strategies, Porter's generic competitive strategies and Porter's Five Competitive Forces (PFCF) framework. This indicates that the present public universities in Kenya are run like corporate entities and that the strategic management practiced in public universities in Kenya is similar to that of corporations. This commodification of higher education and the concept that all response strategies applied by the public universities were geared towards income generation and profits supports the application of frameworks like PFCF analysis to higher education. The study has tried to link managerial challenges with managerial ability and provides lessons of management practice in public universities.

The study makes positive contribution to the strategic management literature by focusing on the relationship between environmental and managerial challenges and response strategies and, hence the environment-dependence theory of not-for-profit

organizations, that is, public universities in Kenya. This is based on the fact that 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.

5.6.2. Contribution to policy and practice

The study has explored the environmental and managerial challenges, response strategies adopted and factors influencing choice of response strategies. 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 as well as response strategies adopted, the government may need to set requirements for appointment of university managers beyond academic qualifications and administrative experience to include, training in management. There was clear bending of admission requirements for some disciplines as a response strategy to attract Module II students. The Kenya Universities and Colleges Central Placement Service created by the Universities Act (2012) may solve this problem by providing national guidelines for all potential candidates. The CUE working with this body needs to streamline admission criteria to ensure uniform and fair playing ground for all universities and quality of graduates. CUE should ensure that same admission criteria are enforced for all degree programmes irrespective of whether one is admitted through the regular/government or Module II programme. This would include setting clear guidelines on entry requirements, course duration and mode of credit transfer. It is hoped that the issue of credit transfer will be addressed through the CUE credit accumulation and transfer system (CATS) initiative. CATS is expected to facilitate credit accumulation and transfer between institutions through developing minimum standards for academic programmes and movement of students within the country and, therefore, solve the problem of unethical strategies on credit transfer observed in this study. The government needs to set national standards for pre-university programmes, institution-based programmes and bridging courses as this study has found that they are misused in an attempt to beat competition.

To compete with the best in the region public universities in Kenya should mutually cooperate and establish strategic alliances, complementing each other in areas where they have advantages instead of always looking at foreign universities. For instance, one of the biggest managerial challenges was availability of physical infrastructure for learning and training. Given that some universities are endowed with specific resources, it would be prudent if local public universities enter into collaborations with a view to sharing the limited resources. Such collaboration has been initiated by JKUAT and Multimedia University of Kenya in conducting training in their engineering programmes. Even dual tenure may be considered for the limited human resource, particularly teaching staff in those disciplines where there are no adequate teaching staff. Policy-makers need to consider more seriously the importance of technology as this could radically alter and disrupt the competitive landscape by lowering barriers to entry further and increasing the availability of substitute products. Given that some universities lower job specifications for teaching staff, the CUE needs to formulate guidelines on job specification for the various cadres within the teaching staff grades. In so doing, all universities will be competing for teaching staff on a level playing ground and avoid using unethical strategies to respond to changes in the external environment further enhancing the quality of teaching in all universities. 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. 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. The information on the response strategies and factors that dictate their choice in public universities could be useful in developing strategic frameworks and management guidelines for further development of higher education industry in Kenya.

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APPENDICES

Appendix I: List of Public Universities in Kenya

S. No.	Name of University/University College
1.	University of Nairobi
2.	Kenyatta University
3.	Moi University
4.	Egerton University
5.	Jomo Kenyatta University of Agriculture and Technology
6.	Maseno University
7.	Masinde Muliro University of Science and Technology
8.	Technical University of Kenya
9.	Chuka University
10.	Kisii University
11.	Dedan Kimathi University of Science and Technology
12.	Technical University of Mombasa
13.	Pwani University
14.	Maasai Mara University
15.	South Eastern Kenya University
16.	Meru University of Science and Technology
17.	Multi Media University of Kenya
18.	Jaramongi Oginga Odinga University of Science and Technology
19.	Laikipia University
20.	University of Kabianga
21.	University of Eldoret
22.	Karatina University
23.	Kibabii University College
24.	Rongo University College
25.	Taita Taveta University College
26.	Embu University College
27.	Machakos University College
28.	Murang'a University College
29.	Cooperative University College of Kenya
30.	Kirinyaga University College
31.	Garissa University College

Appendix II: Questionnaire

To be filled by Vice-Chancellors and Deputy Vice-Chancellors of universities, and Principals and Deputy Principal of university colleges. Kindly fill in the questionnaire by ticking the appropriate response. For confidentiality please **DO NOT** indicate your name or the name of your institution anywhere in this questionnaire.

A. INSTITUTIONAL INFORMATION

1. Location category: [1] - Urban [2] - Semi-Urban [3] – Rural
2. Number of students (approximately) _____
3. Number of teaching staff _____
4. Number of non-teaching staff _____
5. Category [1] – University College [2] – New University [3] – Old University

B. MANAGEMENT STAFF INFORMATION

1. Position: [1] - Vice-Chancellor [2] - Deputy Vice-Chancellor
[3] - Principal [4] - Deputy Principal
 2. Gender [1] - Female [2] – Male
 3. Age bracket (years): [1] 40 – 44 [2] 45 – 49 [3] 50 – 54 [4] 55 – 59
[5] 60 – 64 [6] 65 – 69 [7] Above 70 years
 4. Your area of training: [1] – Science [2] - Liberal Arts [3] - Business
[4] – Others (specify)_____
 5. Cumulative number of years you have held top management position in a university college and/or university [1] 0 – 4 [2] 5 – 9 [3] 10 – 14
[4] 15 – 19 [5] Above 20 years
 6. Do you have any professional training in management? [1] - Yes [2] - No
 7. If yes to what level? [1] – *Workshop/seminar [2] – *Certificate [3] - Diploma
[3] - Postgraduate Diploma [4] – Postgraduate Degree (specify)_____
 8. To what extent do you need training in management?
[1] – Not at all [2] – To a little extent [3] – To a moderate extent
[4] – To a great extent [5] – To a very great extent
 9. To what extent would professional training in management improve your performance, efficiency and effectiveness?
[1] – Not at all [2] – To a little extent [3] – To a moderate extent
[4] – To a great extent [5] – To a very great extent
- * *Workshop/seminar attendance not considered as professional training in management*

10. Universities would operate more efficiently and effectively if they were managed by professional managers rather than academicians?

- [1] – Not at all [2] – To a little extent [3] – To a moderate extent
 [4] – To a great extent [5] – To a very great extent

C. MANAGERIAL CHALLENGES

To what extent does your university experience each of the following managerial challenges? Please rank using the five-point scale given below:

- [1] – Not at all [2] – To a little extent [3] – To a moderate extent
 [4] – To a great extent [5] – To a very great extent

Planning Challenges	1	2	3	4	5
Analysis and evaluation of environment					
Establishment of SMART objectives					
Formulation of appropriate strategies					
Implementation of strategic plan					
Strategy communication					
Engagement of employees with strategy					
Resource mobilization and planning					
Implementation of plans					
Identification of distinctive competitive advantage					
Competition for both students and staff					
Physical facilities for training and learning and students and staff welfare					
New management paradigms					
Ability to forecast					
Development of planning premises					
Organizing Challenges	1	2	3	4	5
Operationalization of the current structures in public universities					
Design of effective structure					
Identification and classification of required activities					

Assignment of work and delegation of authority to managers					
Operationalization of the university as a system					
Staffing Challenges	1	2	3	4	5
Competition for experienced and competent teaching staff among public universities					
Movement of teaching staff to private universities which have better terms					
Effective staff training policy					
Unethical practices among some universities in staff appointment					
Poor remuneration					
Location of the university					
Change management					
Managerial ability					
Human resource training and development					
Job enlargement due to inadequate staff					
Leading/Directing Challenges	1	2	3	4	5
Motivation among staff					
Leadership skills in middle level management					
Result-oriented management					
Leadership style in the university					
Work environment – machine, equipment and materials					
Staff unionism					
Academic leadership					
Transformational leadership					
Micro-management by the university council					

Control Challenges	1	2	3	4	5
Efficiency of control systems					
Management control feedback system					
Real-time information and control					
Control of overall performance					
Feed forward or preventive control					
Establishment of standards					
Measurement of performance against standards and plans					
Real-time correction of variation from standards and plans					
Identification of the critical control points					
Quality assurance					
Data and information management and control					
Others managerial challenges (specify)	1	2	3	4	5

C. ENVIRONMENTAL CHALLENGES

To what extent does your university experience each of the following environmental challenges? Please rank using the five-point scale given below:

- [1] – Not at all [2] – To a little extent [3] – To a moderate extent
 [4] – To a great extent [5] – To a very great extent

Political factor	1	2	3	4	5
Interference in hiring					
Interference in procurement					
Interference by the university council					
Interference by local politicians					

Economic factor	1	2	3	4	5
Increased cost of training					
Income of surrounding community					
Taxation					
Financing of education					
Inflation					
Unemployment rate					
Undifferentiated unit cost					
Social factor	1	2	3	4	5
Poverty					
Culture					
Religion					
Gender equity at workplace					
Diverse workforce					
Technological factor	1	2	3	4	5
In work environment					
In learning and training facilities					
Technological advances and/or changes					
Ecological factor	1	2	3	4	5
NEMA regulations					
Environmental legislation					
Legal factor	1	2	3	4	5
The new Universities Act					
The enhanced mandate of the Commission for University Education					

The statutory bodies established under the Universities Act					
Labour laws					
Accreditation statutory bodies for specific programmes					
Competitive factor	1	2	3	4	5
Local public universities					
Local private universities					
Foreign universities operating in the country					
Suppliers e.g. part-time lecturers					
Customers e.g. students					

D. RESPONSE STRATEGIES

To what extent does your university apply each of the following strategies to deal with the managerial and environmental challenges encountered? Please rank using the five-point scale given below:

[1] – Not at all [2] – To a little extent [3] – To a moderate extent
[4] – To a great extent [5] – To a very great extent

Environmental Response Strategies					
Cost leadership strategy	1	2	3	4	5
Cost minimization in non-core activities					
Cost reduction in most departments					
Outsourcing non-core services					
Charging low fees without compromising on quality					
Avoiding some costs altogether e.g. online registration					
Implementation of e-learning to ease strain on facilities and lecturers					
Franchising programmes					
Differentiation strategy	1	2	3	4	5
Having the best training facilities					

Being the best university/university college in the vicinity					
Offering the best market-driven programmes					
Establishing brand equity					
Focus strategy					
Focus on a particular clientele					
Focus on a particular academic disciplines					
Focus on a particular market segment					
Development of programmes specifically for Module II/parallel students					
Diversification in related business					
Diversification in unrelated business					
Strategic alliances and collaborations					
With competitors e.g. commercial colleges to share facilities					
With foreign universities to enhance image					
With local community in provision of students and staff welfare					
With industry and other universities to access training facilities					
With research organizations to enhance research capacity					
Managerial Challenges Response Strategies					
	1	2	3	4	5
Top management provides leadership and direction in formulating strategic responses					
Strategic plans are altered along the way to fit environmental changes					
The university ensures that there is a strategic fit between strategies and the environment					
Distributed leadership/decentralization					
Value chain analysis to cut on costs					
Paying higher hourly rates to part-time lecturers than the competition					

Appointment of staff on permanent and pensionable terms					
Offering attractive and unique allowances to attract competent and experienced staff					
Institutionalizing internal part-time teaching to increase staff morale					
Declaring fewer openings in certain programmes for students admitted through JAB					
Participatory management					
Enterprise resource planning to improve operations					
Mounting programmes that need minimum investment					
Accommodation for all students					
Training core staff					
Benchmarking					
Students reporting earlier than in other universities					
Weekend and evening classes					
Expansion – establishment of satellite campuses and learning centres					
Opening new campuses at strategic locations					
Control of products quality					
Development of new products for specific market					
Restructuring/Re-engineering					
Establishment of a fully-fledged marketing department					
Implementation of ISO 9001:2008 QMS					
Running the university like a corporate organization					
Hiring out university resources					

E. FACTORS INFLUENCING CHOICE OF RESPONSE STRATEGIES

To what extent does each of the following factors influence the choice of the strategy to deal with managerial and/or environmental challenges? Please rank using the five-point scale given below:

[1] – Not at all [2] – To a little extent [3] – To a moderate extent
 [4] – To a great extent [5] – To a very great extent

Factors influencing choice of response strategy	1	2	3	4	5
Competitive forces					
Threat from new entrants					
Intensity of rivalry in the industry i.e. higher education sub-sector					
• Local private universities					
• Foreign universities operating locally					
Threat from substitutes e.g. online degree from foreign universities					
Bargaining power of buyers e.g. students					
Bargaining power of suppliers e.g. part-time lecturers					
Changes in the market					
Changes in government policies and decisions					
Location of the university					
Roles of past strategies					
Mission and vision					
Corporate culture					
Management attitude towards risk					
Pressure from stakeholders e.g. employers, parents, students, local community					
Needs and desires of top management					
Statutory bodies requirement					
Changes in government funding					

Limited human resource base					
Unethical activities by some competitors					
<ul style="list-style-type: none"> • Lowering of job specification/qualifications to attract staff 					
<ul style="list-style-type: none"> • Lowering of admission criteria for similar programmes to attract students 					
Mandate of the institution					
New constitution					
The Universities Act					
Reforms in the higher education sub-sector					
Conformation to the changing needs of industries					

Thank you for your cooperation

Appendix III: Means and Standard Deviations of the Questionnaire Items

A. MANAGERIAL CHALLENGES

Planning Challenges	Mean	SD
Analysis and evaluation of environment	3.2	0.71
Establishment of SMART objectives	2.9	0.82
Formulation of appropriate strategies	3.0	0.62
Implementation of strategic plan	3.2	0.59
Strategy communication	3.6	0.45
Engagement of employees with strategy	3.7	0.68
Resource mobilization and planning	3.6	0.98
Implementation of plans	3.1	0.74
Identification of distinctive competitive advantage	3.5	0.42
Competition for both students and staff	3.4	0.31
Physical facilities for training and learning and students and staff welfare	3.9	0.88
New management paradigms	3.3	0.96
Ability to forecast	3.1	0.85
Development of planning premises	3.30	0.45
Overall Mean and SD	3.6	0.56
Organizing Challenges	Mean	SD
Operationalization of the current structures in public universities	2.9	0.91
Design of effective structure	2.7	0.56
Identification and classification of required activities	2.9	0.71
Assignment of work and delegation of authority to managers	2.9	0.63
Operationalization of the university as a system	3.1	0.48
Overall Mean and SD	2.9	0.44
Staffing Challenges	Mean	SD
Competition for experienced and competent teaching staff among public universities	3.9	0.66
Movement of teaching staff to private universities which have better terms	3.1	0.46
Effective staff training policy	3.0	0.48
Unethical practices among some universities in staff appointment	3.3	0.61
Poor remuneration	3.6	0.23
Location of the university	3.1	0.74
Change management	3.3	0.48
Managerial ability	3.2	0.55
Human resource training and development	3.3	1.00
Job enlargement due to inadequate staff	3.1	0.68
Overall Mean and SD	3.6	0.75

Leading/Directing Challenges	Mean	SD
Motivation among staff	3.5	0.81
Leadership skills in middle level management	3.5	0.48
Result-oriented management	3.4	0.59
Leadership style in the university	3.0	0.82
Work environment – machine, equipment and materials	3.4	0.71
Staff unionism	3.1	0.65
Academic leadership	3.3	0.72
Transformational leadership	3.5	0.55
Micro-management by the university council	2.6	0.41
Overall Mean and SD	3.4	0.72
Control Challenges	Mean	SD
Efficiency of control systems	3.3	0.59
Management control feedback system	3.4	0.98
Real-time information and control	3.6	0.62
Control of overall performance	3.3	0.65
Feed forward or preventive control	3.8	0.80
Establishment of standards	3.3	0.73
Measurement of performance against standards and plans	3.4	0.69
Real-time correction of variation from standards and plans	3.6	0.78
Identification of the critical control points	3.4	0.62
Quality assurance	3.9	0.97
Data and information management and control	3.5	0.57
Overall Mean and SD	3.6	0.83

B. ENVIRONMENTAL CHALLENGES

Political factor	Mean	SD
Interference in hiring	2.5	0.92
Interference in procurement	3.4	1.04
Interference by the university council	2.9	1.06
Interference by local politicians	3.4	0.99
Overall Mean and SD	2.8	0.93
Economic factor	Mean	SD
Increased cost of training	3.5	0.84
Income of surrounding community	3.2	0.98
Taxation	2.7	0.87
Financing of education	3.6	0.93
Inflation	3.4	1.04
Unemployment rate	3.6	0.96
Undifferentiated unit cost	3.9	1.03
Overall Mean and SD	3.6	0.73
Social factor	Mean	SD
Poverty	3.5	0.87

Culture	2.4	0.97
Religion	2.2	0.94
Gender equity at workplace	2.6	0.82
Diverse workforce	2.7	0.90
Overall Mean and SD	2.7	0.66
Technological factor	Mean	SD
In work environment	3.0	1.04
In learning and training facilities	3.3	1.11
Technological advances and/or changes	3.4	0.99
Overall Mean and SD	3.2	0.94
Ecological factor	Mean	SD
NEMA regulations	3.2	0.89
Environmental legislation	3.0	0.88
Overall Mean and SD	2.9	0.84
Legal factor	Mean	SD
The new Universities Act	2.9	0.82
The enhanced mandate of the Commission for University Education	2.9	0.87
The statutory bodies established under the Universities Act	3.1	0.92
Labour laws	3.2	0.86
Accreditation statutory bodies for specific programmes	3.3	1.05
Overall Mean and SD	3.2	0.71
Competitive factor		
Local public universities	3.8	1.11
Local private universities	3.3	0.98
Foreign universities operating in the country	3.3	0.95
Suppliers e.g. part-time lecturers	3.8	0.89
Customers e.g. students	3.6	0.81
Overall Mean and SD	3.6	0.87

C. RESPONSE STRATEGIES

Environmental Response Strategies		
Cost Leadership strategy	Mean	SD
Cost minimization in non-core activities	4.0	0.50
Cost reduction in most departments	3.8	0.57
Outsourcing non-core services	3.7	0.63
Charging low fees without compromising on quality	3.5	0.49
Avoiding some costs altogether e.g. online registration	3.4	0.85
Implementation of e-learning to ease strain on facilities and lecturers	3.0	0.61
Franchising programmes	3.4	0.95
Overall Mean and SD	3.4	0.87

Differentiation strategy	Mean	SD
Having the best training facilities	3.6	1.01
Being the best university/university college in the vicinity	4.0	0.74
Offering the best market-driven programmes	4.0	0.87
Establishing brand equity	3.9	0.98
Overall Mean and SD	3.9	0.71
Focus strategy	Mean	SD
Focus on a particular clientele	3.5	0.97
Focus on a particular academic disciplines	3.2	0.63
Focus on a particular market segment	3.3	0.85
Development of programmes specifically for Module II/parallel students	3.2	0.86
Overall Mean and SD	3.2	0.84
	Mean	SD
Diversification in related business	3.2	0.86
Diversification in unrelated business	2.7	0.94
Strategic alliances and collaborations	Mean	SD
With competitors e.g. commercial colleges to share facilities	3.1	0.93
With foreign universities to enhance image	3.1	1.00
With local community in provision of students and staff welfare	3.7	0.89
With industry and other universities to access training facilities	3.5	0.98
With research organizations to enhance research capacity	3.8	0.87
Overall Mean and SD	3.4	0.74
Managerial Challenges Response Strategies	Mean	SD
Top management provides leadership and direction in formulating strategic responses	4.1	0.81
Strategic plans are altered along the way to fit environmental changes	3.2	0.84
The university ensures that there is a strategic fit between strategies and the environment	3.6	0.92
Distributed leadership/decentralization	3.4	0.91
Value chain analysis to cut on costs	3.5	0.49
Paying higher hourly rates to part-time lecturers than the competition	3.0	0.99
Appointment of staff on permanent and pensionable terms	3.4	0.39
Offering attractive and unique allowances to attract competent and experienced staff	3.4	0.71
Institutionalizing internal part-time teaching to increase staff morale	3.3	0.65
Declaring fewer openings in certain programmes for students admitted through JAB	2.9	0.89

Participatory management	3.6	0.76
Enterprise resource planning to improve operations	3.4	0.92
Mounting programmes that need minimum investment	3.2	0.32
Accommodation for all students	3.0	0.64
Training core staff	3.3	0.87
Benchmarking	3.6	0.98
Students reporting earlier than in other universities	2.9	0.77
Weekend and evening classes	3.3	0.71
Expansion – establishment of satellite campuses and learning centres	3.4	0.90
Opening new campuses at strategic locations	3.2	0.78
Control of products quality	3.4	0.67
Development of new products for specific market	3.4	1.02
Restructuring/Re-engineering	3.2	0.98
Establishment of a fully-fledged marketing department	3.0	0.49
Implementation of ISO 9001:2008 QMS	3.6	0.68
Running the university like a corporate organization	3.5	0.91
Hiring out university resources	2.9	0.88

D. FACTORS INFLUENCING CHOICE OF RESPONSE STRATEGIES

Factors influencing choice of response strategy	Mean	SD
Competitive forces		
Threat from new entrants	4.0	0.82
Intensity of rivalry in the industry i.e. higher education sub-sector	Mean	SD
• Local private universities	3.7	0.78
• Foreign universities operating locally	2.3	0.49
Threat from substitutes e.g. online degree from foreign universities	3.1	0.48
Bargaining power of buyers e.g. students	3.3	1.00
Bargaining power of suppliers e.g. part-time lecturers	3.5	0.93
Changes in the market	3.5	0.79
Changes in government policies and decisions	3.6	0.90
Location of the university	3.3	0.82
Roles of past strategies	3.1	0.91
Mission and vision	3.4	1.07
Corporate culture	3.4	1.06
Management attitude towards risk	3.5	0.94
Pressure from stakeholders e.g. employers, parents, students, local community	3.7	1.03
Needs and desires of top management	3.0	1.00
Statutory bodies requirement	3.5	0.91
Changes in government funding	4.0	0.98
Limited human resource base	3.7	0.89
Lowering of job specification/qualifications to attract staff	3.6	0.74

Lowering of admission criteria for similar programmes to attract students	3.7	0.57
Mandate of the institution	3.3	0.56
New constitution	3.3	0.97
The Universities Act	3.7	0.55
Reforms in the higher education sub-sector	3.8	0.68
Conformation to the changing needs of industries	3.7	0.48

Appendix IV: Studentship Introduction Letter

Appendix V: Researcher's Introduction and Questionnaire Forwarding Letter

Francis M. Mathooko
South Eastern Kenya University
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KITUI
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E-mail: mmathooko@yahoo.co.uk

14th June 2013
Dear Sir/Madam

RE: LETTER OF INTRODUCTION

My name is Francis M. Mathooko. I am a student at the School of Business, University of Nairobi pursuing a Master of Business Administration (MBA) degree specializing in Strategic Management. I am currently undertaking a research project as partial fulfilment of the requirements for the award of the said degree.

The title of my research project is *“Response Strategies Adopted by Public Universities in Kenya to Environmental and Managerial Challenges”*. The study targets all public universities in Kenya including public university colleges. The respondents are Vice-Chancellors and Deputy Vice-Chancellors, and Principals and Deputy Principals of public universities and university colleges, respectively. Your university and position falls within this category and as such you have been selected to participate in the study. The primary information for the study will be collected through administering a questionnaire which is hereby enclosed. A self-addressed envelope for returning the questionnaire is also enclosed.

The success of the study depends on your assistance and cooperation and I, therefore, kindly request you to fill the questionnaire as honestly as possible and to the best of your knowledge. I assure you that the information and data collected will be used for academic and policy formulation purposes only, and will be treated with utmost confidentiality. Neither your name nor that of your institution shall appear in the final report. However, at the end of the study, and if you will be interested, I could send you the executive summary of the findings upon request.

Thank you in anticipation for your cooperation in this survey and for taking time out of your busy schedule to fill the questionnaire.

Yours sincerely

Mathooko, Francis Mutiso
D61/72588/2008
MBA Student, University of Nairobi