

**MODERATING EFFECT OF PERSONALITY TRAITS ON THE  
RELATIONSHIP BETWEEN INSTITUTION RESPONSIVENESS AND  
COMPETITIVENESS OF PUBLIC UNIVERSITIES IN KENYA**

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## DECLARATION

### Declaration by Candidate

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**DEDICATION**

To my beloved mother the late Rebecca Ndunge, my children Festus Muema, Dennis Mawiyoo, Jim Henry Musyoka and immediate family members

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## ABSTRACT

In the recent past inadequate government funding has led to stiff competition amongst public universities to attract Self Sponsored Programmes (SSP) students in order to meet the financial short-fall. Studies have shown that public universities use external and internal marketing as institution responsiveness strategies to attract SSP students; however no records exist on internal marketing as part of the institutions' responsiveness strategy with personality traits as a moderator. The general objective of the study was to examine the moderating effect of personality traits on the relationship between institution responsiveness and competitiveness of public universities in Kenya. The study had five specific objectives examining the effect of the five aspects of institution responsiveness namely: public relations, motivation, personal selling, information capital and intellectual capital on competitiveness of Public Universities in Kenya. The study was guided by the following theories; the resource based view theory, knowledge based view theory, dynamic capabilities theory, Eysenck theory and the five factor theory. The study utilized explanatory survey research design. Solvin formula was used to obtain a sample of twenty eight public universities out of the thirty one and a sample of 212 senior managers, 398 support staff and 400 SSP students. The study used multi-stage sampling procedure to arrive at the sample. Multiple regression procedures were used to establish the effects of the five dimensions of institution responsiveness on competitiveness. Hierarchical multiple regression analysis was used to establish the moderating effect of personality traits on the relationship between institution responsiveness and competitiveness. The results of the study indicated that public relations ( $\beta = 0.230$ ,  $p < .05$ ), motivation ( $\beta = 0.638$ ,  $p < .05$ ), personal selling ( $\beta = 0.220$ ,  $p < .05$ ), information capital ( $\beta = 0.209$ ,  $p < .05$ ), intellectual capital ( $\beta = -0.160$ ,  $p < .05$ ) and moderator personality traits ( $\beta = 0.264$ ,  $p < .05$ ) were significant predictors of institution competitiveness. Subsequently, when moderated with personality traits it was found that public relation ( $\beta = -0.002$ ,  $P > 0.05$ ), motivation ( $\beta = -0.138$ ,  $P > 0.05$ ), personal selling ( $\beta = -0.103$ ,  $P > 0.05$ ), intellectual capital ( $\beta = -0.037$ ,  $P > 0.05$ ) had negative insignificant effect on institution competitiveness whereas information capital had negative but significant effect on institution competitiveness ( $\beta = -0.219$ ,  $P < 0.05$ ). Similarly, overall test of significance with F-test values  $F(11, 16) = 43.230$ ,  $P < 0.000$  confirmed high significant effect of personality traits on the relationship between institution responsiveness and competitiveness. The conclusion drawn from these results indicated that the study supported the use of resource based view, knowledge based view, dynamic capabilities, Eysenck and the five factor model theories. In addition, it extended the use of literature of institution responsiveness and competitiveness. The findings of the study would enable public university management identify critical factors and design sustainable institution responsiveness strategies which would enable their institutions achieve sustained competitive advantage with a view to attracting more SSP students. The findings will go a long way in assisting university management to respond to changes taking place in institutions of higher learning in Kenya, and these use their resources, competences and the capabilities to develop and maintain a competitive edge. This study recommends a similar study involving both public and private universities; to cover other dimensions of institution responsiveness like training and attitudes; in other organizational settings.

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## OPERATIONAL DEFINITION OF TERMS

**Extrinsic motivation indicators** are factors that are without the individual (Sansone, & Harackiewicz, 2000). In this study extrinsic motivation indicators were operationalised to encompass indicators such as monetary rewards, recognition by the university senior management etc

**Information capital:** According to Laudon and Laudon (2001), information capital is all the information systems that are embedded in an organization as a result of work flow, culture, politics, structure and operating procedures. Information capital was operationalised as information facilities, knowledge and skills of universities employees that enhance the institutions ability to exchange and share information and gain competitive advantage (Bar-Isaac *et al.*, 2008).

**Internal marketing** hinges on the hypothesis that customer satisfaction and employee satisfaction are inextricably linked (Bitner & Zeithaml, 2000). For this study, it was operationalised to mean the activities undertaken by public universities to roll out responsive initiatives as a result of which they popularise their programmes and thus improve on their SSP student enrolment.

**Intrinsic indicators** are the urge, drive which comes from within (Sara *et al.*, 2004). For this study, these were operationalised to include the feeling of being part of a team, taking pride in the institution etc

**Institution Competitiveness:** according to Lynn (1991), competitiveness is defined as obtaining some form of dominance and obtaining the drive to through winning against others. In this study it was operationalized to encompass attributes of public universities that would be expected to attract SSP students such as quality of services courses/programmes, conducive learning environment, adequate physical and technological facilities, e.g. internet, affordable cost, student support services, and inclusive leadership.

**Institution Responsiveness:** Summerfield (2014) defines responsiveness as responding with emotion to people and events. In this study it was operationalised to encompass: public relations, motivation, personal selling, information and intellectual capital which it was averred may significantly influence an institutions success and competitiveness.

**Intellectual Capital:** It refers to knowledge and skills developed by a company, and information pertaining to a company's history, customers, vendors and processes (Leo & Adelman, 2011). In this study intellectual capital was operationalized as; network relationships, intelligence found in human beings as well as organizational routines.

**Moderator:** It is a variable that changes relationships in a complex system by interacting with the casualty and by specifying when or under what condition a predictor variable influences a

dependent variable (Grants *et al.*, 2009). In this study it was operationalised to encompass four components of the five personality trait factors namely; agreeableness, conscientiousness, extraversion and neuroticism

**Motivation:** Motivation is concerned with those psychological processes that trigger arousal, persistence and direction of behavior (Klein & Ilgen, 1988). It is the tendency to behave in a purposeful manner to accomplish specific, unmet needs and the will to succeed, and the inner force that drives individuals to accomplish personal organizational goals. For this study, it was measured using intrinsic and extrinsic indicators such as being part of a team, pride in the institution monetary rewards and recognition

**Personal selling:** Personal selling refers to the promotional presentation by a firm's sales force conducted for the purpose of making sales and building customer relationship (Solomon & Stuart, 2003). Personal selling was measured with respect to support staff knowledgeability, awareness of universities' products, oral communication

**Personality traits:** A personality trait is a characteristic that is distinct to an individual. In this study, the personality traits was operationalized to include the following attributes of university support staff: conscientiousness, agreeableness, neuroticism, and extraversion.



**Public Relations:** a management function, which tabulates public attitudes, defines the policies, procedures, and interests of an organization, followed by executing a program of action to earn public understanding and acceptance (Soitel 2013). For this study, the construct was operationalised with respect to its determinants such as reach, awareness, comprehension and behaviour.

**LIST OF ABBREVIATIONS**

<b>AET:</b>	<b>Affective Events Theory</b>
<b>AIDA:</b>	<b>Awareness Interest Desire and Action</b>
<b>ANOVA:</b>	<b>Analysis of Variance</b>
<b>CAID:</b>	<b>Cronbach Alpha if Item Deleted</b>
<b>CIPD:</b>	<b>Chartered Institute of Personnel and Development</b>
<b>CI-TC:</b>	<b>Corrected Item to Total Correlation</b>
<b>EVA:</b>	<b>Economic Value Added</b>
<b>FFM:</b>	<b>Five Factor Model</b>
<b>GOK:</b>	<b>Government of Kenya</b>
<b>HLI:</b>	<b>Higher Learning Institutions</b>
<b>HRCA:</b>	<b>Human Resource and Costing Accounting</b>
<b>HRM:</b>	<b>Human Resource Management</b>
<b>IGUs:</b>	<b>Income Generating Units</b>
<b>JAB:</b>	<b>Joint Admissions Board</b>
<b>KUCCPS:</b>	<b>Kenya Universities and Colleges Central Placement Service</b>
<b>NSSE:</b>	<b>National Survey of Student Engagement</b>
<b>RBV:</b>	<b>Resource Based View</b>
<b>SCA:</b>	<b>Sustainable Competitive Advantage</b>
<b>SIST:</b>	<b>Self-Initiated Staff Training</b>
<b>SMT:</b>	<b>Social Media Technology</b>

**SPC: Service Profit Chain**

**SSP: Self –Sponsored Programmes**

**TQM: Total Quality Management**

**UNESCO: United Nations Educational, Scientific and Cultural Organization**

**URO: Unrefusable Offer**

**WCY: World Competitive Yearbook**

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.0 Overview**

This chapter gives an overview of the background of the study. It presents the statement of the problem, objectives, hypotheses, significance and scope of the study.

#### **1.1 Background of the Study**

Education enhances the ability of individuals to preserve and utilize the environment for productive gain and sustainable livelihood (European Union, 2013). University education is an indispensable element for socioeconomic, political and technological development world over (Republic of Kenya, 2005; Psacharopoulos, 1985). Access to University education is not only one of the fundamental rights of an individual but also, and more importantly, a crucial tool for sustained socioeconomic development and an important exit route from poverty (Republic of Kenya, 2005).

The Higher Education industry has seen a rapid growth globally during the last three decades because it is key to preparing the much needed workforce with knowledge, technology, proficiency and competences required to develop and transform global economies of states and governments (UNICEF, 2005; Khan, 2007). According to Sawyerr (2004), the number of universities and students joining them is increasing in Africa. Its demand is high because it is deemed as a remedy to low development in Africa. Studies further show that the low level of social development in Africa is partly due to low level of investment in higher education (Oanda & Jowi, 2013). As the number of universities grows, so do their competition for students. Wahlers and Wilde (2011) noted that there is competition to attract students in the university sector

at both national and international levels. As a result, maintaining a steady supply of students is a challenge to a number of institutions.

University education in Kenya, as in most of Africa, has expanded, both in the number of institutions and student enrolment (Mutali & Messah, 2011). According to Ministry of Planning and National Development (2005), Kenya has witnessed great rise in higher education institutions that other East African countries. With comparison with primary education, studies has shown that higher levels of education is associated with much higher social and private returns (Montenegro & Patrinos, 2014). The expansion however has several challenges such as over stretched facilities and low quality of instruction and underfunding (Martin *et al.*, 2007). Kenyan and most African Governments' commitment to the university education development is premised on the understanding that the most sensitive investment area is higher education.

Universities in almost all African countries mainly receive financial assistance from the state (Psacharopoulos, 1982; Sherman, 1990). In these countries, the level of educations' results has long depended on the performance and soundness of the national economy. Most African countries since the 1980s, Kenya included faced financial constraints as a result of poor economic performance and rapid population growth (Cutter, 2001). According to World Bank (1985) and Woodhall & Psacharopoulos (1985), University education has faced financial difficulties as they face other government sectors in competing for these limited funds resulting from financial constraints. With the decline in funding from the exchequer, public Universities have had to look for alternative ways of generating funds internally to supplement Government funding. The introduction of the Self-Sponsored Programmes (SSP) in 1998, the establishment of income generation units (IGUs) and

the institution of overhead charges on externally funded research projects strategies were adopted to diversify revenue.

Growth in this competitive climate would, according to the researcher, be hinged on organizational changes that support an environment that is sales- oriented and market-driven. There is need for enrolment personnel to be more skilful in selling their institution to prospective students as students in today's world have so many choices in their disposal. One way in which the public universities in Kenya have responded to deficits in their financial support from the government is by introducing PSS degree programmes (Government of Kenya, 2009). Most of these programmes were started in 1998. Kenyan Universities today, work under the principle for the survival for the fittest. With ever decreasing slots for regular/government funded degree programs many qualified students miss the opportunity to join these programmes and end up enrolling for SSP commonly known as parallel degree programmes. The over 80 tertiary institutions offering degree programmes have to compete for these potential candidates. With continued diminishing funding from the exchequer, public universities with low SSP student enrolment have strained budgets that cannot break even. Institutions have been forced to device new means of survival due to the burden of running these institutions.

The ability of Public universities in Kenya to attract Self Sponsored Programme students depends on how well they position themselves in a highly competitive environment. However, under the current economic conditions, the Government has decreased funds to these institutions as it struggles to balance its budget (Government of Kenya, 2009). Public universities have been forced to seek alternative sources of revenue and on this; self-sponsored programmes (SSP) come in handy. They however

have to compete with private universities for these SSP students. Messah *et al.* (2011) noted that some universities have relatively low student enrolment as a result of the intense competition. They attribute this to private universities' ability to offer market-driven courses and provide a conducive environment for academic excellence. In addition, most of these private universities have modern infrastructure, including well equipped libraries, information and communication technologies that are vital for academic excellence and research. Their numbers are however not enough and comparatively their fees are out of reach for the common Kenyan citizen.

The decline in the number of SSP students joining public universities is an indicator that the institutions are not competitive. Literature reveals that institution responsiveness under the moderation of personality traits contributes significantly towards competitiveness of firms (Muhamad *et al.*, 2011; Mani, 2010; Reena *et al.*, 2009; Gounaris, 2008). Based on these observations, the low competitiveness of the SSP programmes offered by public universities may perhaps be due to the moderating effect of personality traits on the relationship between their responsiveness and their competitiveness.

In the recent years, competitiveness concerns have ascended high on the agenda of public universities in Kenya where competitiveness refers to their ability to do better in market share or profitability (Lall, 2001). The challenge to university managers in Kenya in the 21st century is how to maintain competitiveness in the face of spiralling demand and yet the declining government funding (Riechi, 2010).

Kenya Government commitment to the development of university education is premised on the understanding that higher education is a most sensitive area of investment. The education sector in Kenya in general has over the years experienced

increased underfunding by the Government on both recurrent and development expenditure (Cutter, 2001). Public Universities often get much less than what they need in order to deliver quality education, as projected in their budgets, yet these institutions keep on being allocated more regular students by the Government (Joint Admissions Board (JAB)/Kenya Universities & Colleges Central Placement Service (KUCCPS, 2015). For example; in 2014, out of the 483,630 who sat for the Kenya certificate of secondary education, 149,717 scored the minimum grade of C+ and hence were eligible to join public universities. However of these only 67,900 were selected to join Government sponsored programs in public universities. The balance had to either seek for admission to privately sponsored programmes or in tertiary institutions (KUCCPS, MOEST, 2015).

In 2015 out of the 522,870 candidates who sat for the K.C.S.E exam, 174,290 obtained the minimum university admission grade of C+, but of these the Public universities could only absorb 70,000 into regular degree programmes, with the balance having to join either privately sponsored programmes or tertiary institutions (KUCCPS, MOEST, 2016). The fore cited scenario shows that the number of those being admitted to regular degree programmes in public universities but who pay subsidised fees, not enough to meet the institutions' financial needs has been increasing despite the inadequate Government funding. With reduced exchequer funding, public Universities had to rethink ways of generating funds internally to supplement the low funding. The introduction of the Self-Sponsored Programmes (SSP) in 1998, the establishment of income generation units (IGUs) and the institution of overhead charges on externally funded research projects strategies were adopted to diversify revenue (Government of Kenya, 2009).



Given the inadequate funding by the government, public universities in Kenya operate in a highly competitive environment due to rapid expansion in the sector. They have to compete against fellow public universities as well as against private universities in order to attract and retain Self Sponsored Programs students (Mutali & Messah 2011). This has manifested itself in the rush to occupy any available space in major towns across the country with university campuses/learning centres. Ability to attract SSP students is a challenge to universities and indication of inadequacy in their responsiveness in enhancing their competitiveness and hence the focus of this study.

The survival and success of firms, industries and countries in the ever changing environment of the 21 century depend on their competitiveness (Hua, 2011). To remain competitive, organizations have to reorient and adapt themselves to the changing environment that bring about improvement in efficiency, performance and effectiveness (Barney, 1991). According to Chan and Cheung (2012), explained competitiveness is a multi-dimensional concept that can be viewed at from three dimensions: firm, country and industry (Cheung & Chan, 2012). Lynn (1991) defined competitiveness is defined as obtaining some form of dominance and obtaining the drive to through winning against others. Arslan and Tatlıdil (2012) define competitiveness of a country as its production ability goods and services that meet the standards of the international markets as well as concurrently expand and maintain the income and raise the welfare level of its citizens. At institutional level, competitiveness can be defined as designing, producing and marketing ability of superior products to those offered by competitors, with price and non-price qualities into consideration (D'Cruz, 1992). Competitiveness is thus concerned with ability of institutions, countries, industries and firms to improve or protect their position in relation to competitors which are active in the same market.

Organizations become competitive when they acquire or develop attributes or a combination of attributes that allow them to outperform competitors (Eden & Ackermann, 2010). These include; access to resources and highly trained and skilled labour. Porter's (2008) resource-based view considers an organization competitive when it has capabilities and resources that are superior to those of its competitors which enables it to deliver products of higher quality. Porter proposed three strategies which can be employed to achieve a competitive advantage; cost leadership, product differentiation and focus (niche). Studies have also shown that management and leadership capabilities are key determinants of competitive advantage as they enable firms to articulate visions and communicate and implement them (Fu Zhang, 2012).

Enhancing institution responsiveness is one of the key components of internal marketing. Ma and Liao (2006) observed that marketing as a form of communication is one of the factors that significantly strengthen a firm's position in the market. Responsiveness is concerned with developing the employees such that they have the required knowledge, skills, motivation, attitudes and behaviours that lead to fulfillment of the individual's and institution's goals (Lee & Bruvold, 2003). Those exposed to responsiveness programmes are changed and become more committed, competent, and cost effective and in sympathy with the aims of the employing agency (Vigoda, 2000). In addition, they are reactive, sympathetic, sensitive and capable of feeling the needs of clients. Elena (2000) noted that there is a direct relationship between institutions' responsiveness and performance. Responsiveness thus serves as a catalyst for improved productivity, lower labour costs, reduced turnover and increased employee commitment, customer retention, referrals and loyalty as well as organizational competitiveness (Hameed & Waheed 2011).

Marketing is the means by which an organization communicates to, connects with, and engages its target audience to convey the value of and ultimately sell its products and services. American Marketing Association (2013) defines it is the activity, set of instructions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large. Armstrong *et al.* (2009) defines marketing as a social and managerial process by which individuals or firms obtain what they need and want through creating, offering and exchanging products of value with others. It involves enhancing an organization's capabilities through generation and dissemination of information about a product or service and responding to customer needs while keeping an "eye" on the competitor (Csath, 2007).

Many organizations engage in marketing because it has a positive significant effect on performance and competitiveness of organizations (Ho & 2008; Svetlik, 2009). Marketing enables firms to convince buyers (potential customers) that the product/services they are offering is closest to meeting their need or want at that point in time (Burnett, 2008). Traditionally, marketing has been associated with profit making organizations. However, nowadays non-profit organizations, such as learning institutions and government agencies have adopted marketing in order to effectively fulfill their mandates (Chih-lun, Ching-Hui Yang, 2014). Two types of marketing are commonly used by organizations; external and internal. At firm level, external marketing entails defining its mission, analyzing the situation on the ground, selecting target markets, drafting appropriate marketing strategies such as advertising, sales promotion and executing them (Demiray *et al.*, 2007).

On the other hand internal marketing is defined as a set of human resource management practices for instilling “people” orientation into an organization for purposes of improving and strengthening the quality of goods and services (Papasolomou, 2006). Grayson *et al.* (2010) consider it as any planned effort to align, motivate and integrate employees towards the effective implementation of corporate responsibility and the organization’s sustainability strategy. Internal marketing incorporates a multifaceted focus on employee development as they play a central role in attracting, building and maintaining relationship with customers (Nantana & Phapruek, 2010). A comprehensive internal marketing activities plan usually include employee recruitment, training, motivation, communication and retention efforts. The training focuses on areas such as public relations, customer care and the product/services promotion (Harris & Chapman 2002). Internal marketing programmes impact positively on both the management and behavior of employees because it enhances their skills, commitment, attitudes and job satisfaction (Lings & Greenley, 2005). From an external perspective, internal marketing influences quality of services, customer satisfaction and loyalty and performance of both the employee and the organizations they work for (Kaur *et al.*, 2009).

Relationship between variables, for example for this study responsiveness and competitiveness, is averred to be affected by the effects of moderators (Chen *et al.*, 2010). Moderation is an interaction that uncovers underlying mechanism affecting the correlation between two conditions that enhance or lessen the influence of one factor on another (Baron & Kenny, 1986; Holmbeck, 1997). A moderator is a variable that changes relationships in a complex system by interacting with the casualty (Grants *et al.*, 2009). This means the relationship between responsiveness and competitiveness of public universities may be affected by a moderator variable. Studies have shown that

personality traits are some of the moderators of relationships between an independent variable and outcomes that are related to performance and competitiveness of organizations (Chen *et al.*, 2010; Rothmann, & Coetzer, 2003).

Personality traits are defined as a set of characteristics possessed by a person that influence their cognition, motivation and behavior in a variety of situation (Misha *et al.*, 2015). The five dimensions of the five-factor model of personality are; Openness to Experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism, (Rothmann & Coetzer, 2003). Openness to experience is concerned with active imagination, aesthetic sensitivity, and attentiveness to inner feelings, a preference for variety, intellectual curiosity and independence of judgment. Conscientiousness refers to self-control and the active process of planning, organizing and carrying out tasks (Mkoji & Sikalieh, 2012). Extraversion includes attributes such as sociability, assertiveness, activity and talkativeness (Abdullah *et al.*, 2013). Agreeableness is fundamentally about altruistic, sympathetic to others and eager to help with a belief that others will equally be helpful (Kumar, 2009). Neuroticism refers to the tendency to experience negative effects such as fear, sadness, embarrassment, anger, guilt and disgust (Darsana, 2013).

## **1.2 Problem Statement**

To achieve a competitive edge, public universities need to devise effective and creative ways of attracting, retaining and fostering stronger relationships with self-sponsored students. As stated earlier, Self-sponsored programmes are important as they enable public universities in Kenya to generate funds that cushion them against declining financial support from the exchequer. State financing policies on higher education opportunities gave way to cost-sharing as an acceptable way of meeting the

cost of higher education (Psacharopoulos, 1994). However, Wahlers and Wilde (2011) asserted that national and international competition in the university sector continues to grow while demand for stakeholders is high. Subsequently, Cubillo *et al.* (2006) observed that competition among universities is increasing with universities entering into joint ventures and franchise operations in Kenya. Thus, Messah (2011) noted that intensity of competition has led to some universities having relatively low student enrolment.

An examination of enrolment trends in public universities in Kenya indicates that the aggregate number of this category of students is increasing. However, the numbers joining faculties in each of the universities is declining. This inability to attract SSP students in specific programmes is an indicator the universities are not competitive. Aaker (2011) observed that as the number of private, foreign and colleges continue to grow in Kenya, so does competition for market survival. The inability of public universities to attract Self-sponsored programmes students is of concern to stakeholders as it has led to a fall in their revenue. As a result of the fall, they are facing challenges financing their operations as what is received from the exchequer is not enough. More so in today's competitive academic environment in Kenya where students have many options available to them, factors that enable universities to attract and retain students should be seriously studied (Hasan, 2008). As a result of this, the need for universities to build competitive advantage is self-driven; calling for strategies that can make the universities to thrive and prosper is evident (Hasan, 2008).

Studies have shown that universities use marketing (Messah & Namule, 2012) as a responsiveness strategy to attract Self Sponsored Programmes students. They use

both external and internal marketing strategies (Schüller & Martina, 2011). The corporate business sector has noted that institution responsiveness under moderation contributes significantly towards competitiveness of their businesses (Muhamad *et al.*, 2011; Mani, 2010; Reena *et al.*, 2009; Gounaris, 2008). The non-competitiveness of the public universities it is averred by the researcher could be due to personality traits moderating the relationship between the institutions' responsiveness and their competitiveness. Studies have been done on competitiveness of universities in Kenya by scholars such as Messah and Namule (2012). However, the focus of these studies was only on external marketing strategies and their effects on the institutions' competitiveness. However, no records exist on whether personality traits moderate the relationship between institutions' responsiveness and their competitiveness. It is this apparent knowledge gap that this study endeavoured to fill.

### **1.3 Objectives of the Study**

This study had one general and five specific objectives. The general objective of the study was to investigate the moderating effect of personality traits on the relationship between institution responsiveness and institution competitiveness of public universities in Kenya. The specific objectives are presented in the subsequent subsection.

#### **1.3.1 Specific Objectives**

The specific objectives of this study were:

- i. To examine the effect of public relations on institution competitiveness.
- ii. To determine the effect of motivation on institution competitiveness.
- iii. To determine the effect of personal selling on institution competitiveness.
- iv. To establish the effect of information capital on institution competitiveness.

- v. To determine the effect of intellectual capital on institution competitiveness.
- vi. To examine the effect of personality traits on institution competitiveness.
- vii. To analyze moderating effect of Personality traits on the relationship between institution responsiveness and competitiveness.

#### **1.4 Study Hypotheses**

The study tested the following six null hypotheses:

- H<sub>01</sub>: Public relation has no significant effect on institution competitiveness.
- H<sub>02</sub>: Motivation has no significant effect on institution competitiveness.
- H<sub>03</sub>: Personal selling has no significant effect on institution competitiveness.
- H<sub>04</sub>: Information capital has no significant effect on institution competitiveness.
- H<sub>05</sub>: Intellectual capital has no significant effect on institution competitiveness.
- H<sub>06</sub>: Personality traits have no significant effect on the relationship between institution responsiveness and competitiveness.
- H<sub>07a</sub>: Personality traits do not significantly moderate the effect of public relations on institution competitiveness.
- H<sub>07b</sub>: Personality traits do not significantly moderate the effect of motivation on institution competitiveness.
- H<sub>07c</sub>: Personality traits do not significantly moderate the effect of personal selling on institution competitiveness.
- H<sub>07d</sub>: Personality traits do not significantly moderate the effect of information capital on institution competitiveness.
- H<sub>07e</sub>: Personality traits do not significantly moderate the effect of intellectual capital on institution competitiveness.



### **1.5 Significance of the Study**

This study is significant because of a number of reasons; first it will assist senior managers in public universities identify areas of weakness and formulate policies and develop practices that enhance institution responsiveness and institutional competitiveness. Nonaka (1991) observed that in an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge and that successful organizations are those which consistently create new knowledge, disseminate it widely throughout the organization, and quickly embody it in new technologies and products.

Secondly, the findings of this study will assist public universities to enhance their ability to generate revenue by developing and implementing internal marketing strategies which focus on the worker. For instance, employees can be empowered through training in areas such as public relations, motivation and personal selling. Adeyinka *et al*, (2007) and Mani (2010) noted that organizations with empowered employees are always at the top because their workers are always happy, able to communicate ideas both vertically and horizontally and work extra hours to help clients. This attracts more clients. This strategy can be used by public universities to attract and retain SSP students thus boosting the institutions revenue base.

Thirdly the study is significant because it will give public universities an insight of the links between institution responsiveness, personality traits and competitiveness. This is expected to lead to behavioural change, improvement in their work performance and competitiveness of their institutions. Summerfield (2014) noted that through their employees, responsive institutions are better performers because they are able to identify both the explicit and implicit needs of clients and use their understanding of

those needs to fulfil them. Aguilera et al. (2005) established that institution responsiveness through its employees increases competitive advantage by fuelling innovation, creating high work performance, enhancing organization's reputation as well as maintaining client/customer trust.

Lastly, the findings of the study are significant due to their contribution to theory and human resource management practices. Theoretically, the findings of the study will bridge the gap in literature as most previous studies on competitiveness of universities in Kenya (Messah & Namule, 2012) have focused only on external marketing strategies. Studies have shown that public universities use external and internal marketing as institution responsiveness strategies to attract Self Sponsored Programme students; however no records exist on the relationship between institutions' responsiveness and their competitiveness with personality traits as a moderator. There has never been a critical examination of the moderating effect of personality traits on the relationship between universities' responsiveness and their competitiveness. Practically, the findings will help human resource managers assess the relationship between institutions responsiveness and their competitiveness under the moderation of personality traits. A good understanding of the links will assist the managers come up with better policies and practices that will not only enhance performance of the support staff but also competitiveness of the universities.

### **1.6 Scope of the Study**

This study investigated the moderating effect of personality traits on the relationship between institution responsiveness and competitiveness of public universities in Kenya. The study focused on five aspects of institution responsiveness namely; public relations, motivation, personal selling, information and intellectual capital.

Universities competitiveness was measured using four determinants:- quality of services, technology, cost, environment and leadership while personality traits were expressed using four components of the big five model namely; conscientiousness, agreeableness, neuroticism and extraversion. Twenty eight public universities participated in the study while the University of Nairobi provided the samples that were used to pilot the instruments for reliability. The study involved universities senior managers, support staff and Self Sponsored Programmes students. The study was conducted between November, 2014 and March, 2015. The independent, dependent and moderator variables' data were generated using senior managers, support staff and students questionnaires.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0 Introduction

This chapter presents a review of the study literature. It begins with an introduction and then gives an overview of institution competitiveness and responsiveness. These sections are followed by theoretical perspectives of institutional competitiveness and an examination of the relationship between institution responsiveness and competitiveness. The review goes further and examines the moderating effect of personality traits on the relationship between institution responsiveness and organizational competitiveness. Lastly, it presents the conceptual framework of the study.

#### 2.1 Concept of Institutional Competitiveness

In this era of globalization, competition among business organizations has become more fierce than ever. Competition has been sharpened by reduced trade barriers, the spread of technology and lower transportation and communication costs. This means that firms have to improve their competitiveness if they are to survive in the local and global markets (Schwab, 2012). The term competitiveness is a very controversial concept because it is measured at different levels using a variety of variables jointly (Tomas, 2011). Economic literature examines competitiveness along two different levels: national (macroeconomic) and firm/industry (microeconomic).

Schwab (2012) defined competition at the national level as factors, policies and institutions that determine a country's level of productivity. Atkinson (2013) defines it as the ability of a country to export more in value added terms than it imports.

According to Olu (2004), a nation which have associated public institutions, follow economic package policies that accentuate private sector as well as experience continuous technological progress are said to be competitive. The ability of a country to provide its residents with employment level and high living standard for those willing to work is said to have a competitive economy (Porter & Ketels, 2003).

The ability to do better than comparable firms in market share, sales or profitability is referred to as firm level competitiveness (Lall, 2001). But according to Longman's Advanced American Dictionary (2000), defines firm level competitiveness as the desire of being successful than other and the ability of a product or a company to compete. The term describes the ability of firms and industries to stay at the top and reflects their ability to improve or protect their position in relation to competitors that are active in the same market. The capability of a company to grow and increase on a sustainable basis is the main focus of industry/firm level competitiveness. It exists only when there are multiple service providers who must abide by the same legal rules and regulations (Depperu & Cerrato, 2005). Studies have shown that a country's competitiveness is correlated to those of its firms since macroeconomic stability is necessary for economic growth and competitiveness (Vuković, & Wei, 2010). It can therefore be said that a competitive national economy turns into firm level competitiveness and vice versa.

The concept of competitiveness is closely associated with competitive advantage. Powell (2001) defined competitive advantage as developed superiority by a firm within an industry in comparison to its competitors. Kukukaslan and Ersoy (2007) define competitive advantage as the symmetrical or differential in a firm's attributes that allows it to serve its customers better than others and create better customer value

and superior performance. It is the ability to higher levels performance than others in the industry (Porter, 2004). When a firm possess products, services as well as processes that can't be imitated or duplicated by its competitors, then it is said to have competitive advantage.

According to Poddar and Gadhave (2007), a firm achieves competitive advantage with its ability to produce, design and market superior products to those offered by competitors, where factors like technological advancement, quality and price are used to evaluate product superiority. It is also achieved when an organization has attributes such as superior location, domination of shelf space in retail, exclusive or favourable access to supply, a well known brand, employee know how and efficiency in business operation (Ospina & Schiffbauer, 2010). The theoretical argument by the scholars on resource-based view states that the firm's set of differentiated and unique resources is relied on by the competitive advantage (Stojcic *et al.* 2011).

For a firm to gain its competitive advantage over its rivals, it should develop its business strategies (Millar & Porter, 1985; Porter, 1980, 1985). There are five ways of gaining competitive advantage namely: the suppliers' bargaining power, the buyers' bargaining power, new entrants' threats, threat of substitute services or threat and existing firms' rivalry within the same industry. The industry profitability is determined by these forces since they influence costs, prices, and required investment. The prices charged by a firm is influenced by the power of the buyer, for instance, as does the substitute products' threat. The investments and costs can also be influenced by the power of the buyers since costly services are in demand with the powerful buyers. The cost of raw materials and other inputs are determined by the suppliers' bargaining power. Furthermore, competing in product development area for instance, the costs as well as the prices are influenced by the rivalry intensity. Therefore, the

threat shapes the required investment, and places a threshold on prices to deter entrants. The application of these five forces to the education industry is discussed in another section in this research.

Competitive Advantage (CA) is a function of either providing comparable buyer more efficiently than competitors (low cost), or performing activities at comparable cost but in unique ways that create more buyer value than competitors and hence command a premium price (differentiation). You win either by being cheaper or by being different (which means being perceived by the customer as better or more relevant (Porters, 1985). Behind Porters idea laid a novel way of looking at the firm as a series of activities which link together into what he called “value chain” Each of the links in the chain adds value – that is something that a customer is prepared to pay for. Porter (1985) observes that a firm is not a prisoner of the five forces. The attractiveness of an industry for better or for worse can be fundamentally changed if firm shape its structures. He also notes that in any particular industry, not all of the five forces will be equally important and the particular structural factors that are important will differ.

The five-force framework allows the identification of strategic innovativeness through its complexity as well as pinpointing critical factors to competition in its industry that would improve its own profitability as well as the industry. Additionally, finding new ways to compete in the industry through creativity is not eliminated by these five-force frameworks. Instead, the senior managers’ creative energies are directed towards the industry structure aspects that are crucial to long-run profitability. The aim of the framework in the process is to raise discovering odds of a required strategic innovation. This view is in tandem with Hunt and Morgan (1995) view that a firm can use its human resources for such innovativeness; a view the researcher agrees with

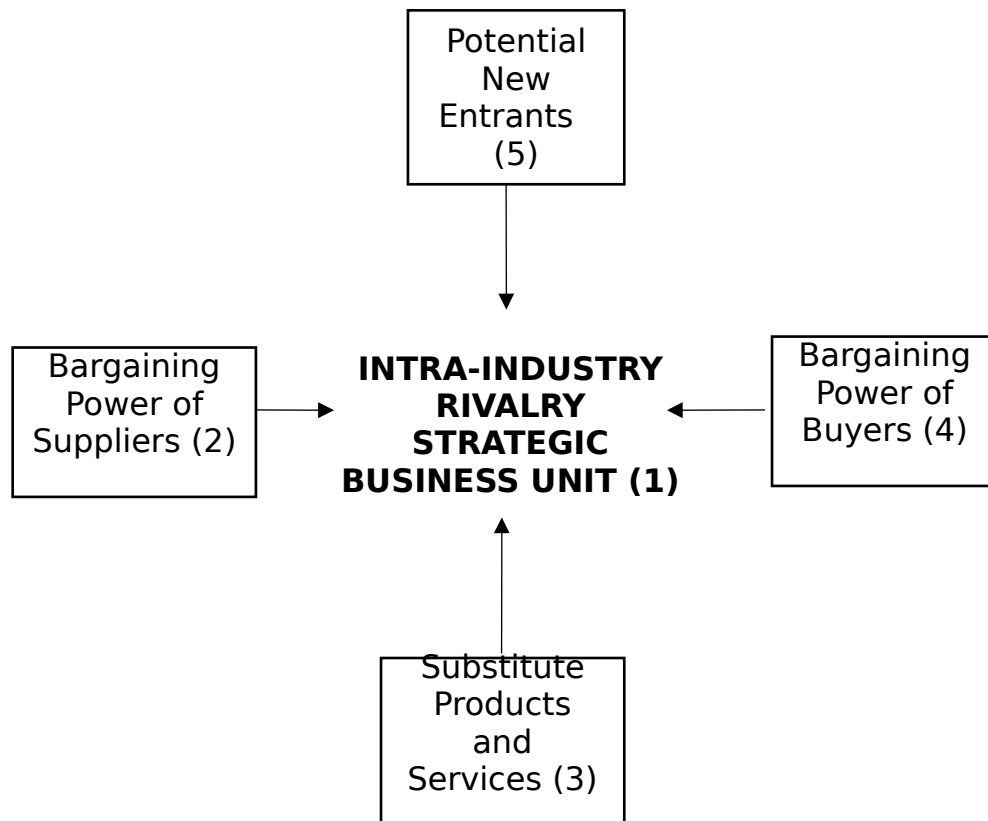
hence the concept /aspect of institution responsiveness through their employees. In the context of Porter's Five Competitive Forces, this study presupposed that these could also be adopted as assessment factors in determining the competitiveness of educational institutions. The forces to this end were aligned so as to be appropriately beneficial on the educational field.

As pointed out earlier in this study, with reduced Government exchequer, public universities in Kenya have to generate funds internally to supplement their budgetary allocations. In this case, the introduction of the Self Sponsored Programmes (SSP) was initiated with this intention of sourcing for extra income hence the stiff competition for SSP students. Therefore based on the foregoing discussion on the five-force framework in Porter's model, it is important to state that the current study seeks to investigate whether senior managers of public universities can rely on support staff and Self sponsored Programmes students to market their academic programmes and in return generate funds through an increased student enrolment. The assumption here is that an institution can differentiate itself from its competitors by satisfying buyer needs through its managers, support staff and Self Sponsored Programmes students.

The likelihood of new institutions entering the industry and competing away the value (high student enrolment) determined by the entry threat by either through dissipating it by raising competing cost or passing it on to buyers in form of lower prices. The extent to which most of the value they created for themselves is retained is determined by the power of buyers (students). Therefore, the extent to which other products can meet the needs of the same buyer is determined by the threat of substitutes, and thus places a ceiling on the amount a buyer is willing to pay for an institution's product. The extent of the value created for buyers appropriated by suppliers is determined by



the supplier's power. Finally, the threat of entry acts similarly to the intensity of rivalry. It therefore determines the extent to which an existing firm in the industry overcome the competition of value they themselves create for buyer, passing it on to buyers. The fore cited interconnectivity is depicted in figure 2.1



**Figure: 2.1: Porter's Five-Forces Competitive Advantage Model in the Education**

**Industry: Universities**

**Source: "Forces Governing Competition in Industry (1979)"**

Porters' (1985) Five Competitive Forces are similar to what Barney (1991) identified as four attributes to sustainable competitive advantage (SCA) viz: value, rareness, inability to substitute, and inability to be intimidated. These specific skills as reiterated by Day and Wensley (1998), Hunt and Morgan (1995) contribute to sustainable competitive advantage. These superior skills and resources are in tandem

with Porter's (1985) generic differentiation strategy. Through personnel differentiation, a firm can market its products to the clientele. In addition, Porter's Five Competitive forces are in agreement with Hoffman (2000) general model of how sustainable competitive advantage is affected by the dyadic relationships inside an environmental network.

According to Porter (1985), the meaning of the concept of competitiveness is productivity. Thus, the collective strength of these five forces will determine the profitability of the industry. In addition, Porter asserts that in order to gain Competitive Advantage, institutions have to come up with good strategies. In this case, a strategy is viewed as "finding a position in the industry or building defences against the forces of competition where the competing forces are weakest." Further, Porter (1985) argues that the best way to achieve and maintain competitive advantage is to work towards being different from your rivals. In other words, build your value chain around unique activities. This brings us to the investigation of personnel differentiation as an antecedent to competitive advantage in public universities.

Differentiation factors are the competitive advantages a firm is able to exercise in a market in relation to its competitors. Differentiation strategy creates values for customers for which the customers are willing to pay. The means for differentiation are peculiar to each industry (Porter, 1985). Differentiation can be based on the product itself, the delivery system by which it is sold, the marketing approach, and broad range of other factors. What the researcher perceives out of this statement is that, for example, in a learning an institution, differentiation tends to be based on academic programmes offered, marketing such programmes the cost of the programmes inter alia. In this study, differentiation is operationalized to focus on personnel differentiation in terms of how they sell the product, how they deliver the

services to the customers (students/potential students/parents) for purposes of competitive advantage. Further, in this study, personality traits attributable to support staff were taken into consideration when considering personnel differentiation.

The logic of differentiation strategy requires that a firm/ institution choose attributes in which to differentiate itself that are different from its rivals (Porter, 1985). In other words, a firm/ institution must truly be unique at something or be perceived as unique if it is to expect a premium price. In this study, the premium price is constructed in terms of competitiveness (SSP student enrolment). In view of this, this study sought to establish whether employee differentiation has a significant influence on sustainable competitive advantage.

Successful differentiation strategy has three characteristics. Firstly, is to generate Customer Value (Porter, 1985). The strategy must add value for the customer and thus the differentiation strategy should be designed from the customers' perspective rather than the firm's perspective (Porter, 1985). Consequently, market research plays important role in understanding the customers' perspective. In this study, the customer is the student and the value added is an increase in student enrolment. Secondly, a successful differentiation is to provide Perceived Value: The added value must be communicated to the customers and they should effectively perceive it (Porter, 1985). Creating brand value is the most effective method for communicating the differentiating features of a product, service or a company. In this study, the channel of communicating the added value was evaluated in terms of how support staffs relay such information. The third aspect of a successful differentiation is the aspect of sustainability. The differentiation factors projected by the firm should not be easy to copy by the competitors (Porter, 1985). The synergy and the pre-emptive move

generate strong sustainability of the differentiation strategy. In this study, this sustainability of competitive advantage is perceived in terms of employee differentiation.

Differentiation strategy is targeted at creating superior values for the customers. Superior values can be created through differentiation strategy implemented over the product, personnel and image (Porter, 1985). For instance, Product differentiation includes features such as styles, design and performance etc. Service Differentiation includes Product Delivery, installations, customer Training, customer counselling, free servicing, warranty, credit facility etc. Personnel Differentiation includes Expertise, Experience, Responsiveness, and Courteousness etc. Image Differentiation includes High Quality, Modern Technology, Industry, Leadership and Social Responsiveness.

There are two major approaches of differentiation: Option Approach and Building Strong Brands Approach. Porter (1985) observes that the quality option is one of the strong and sustainable differentiation strategies. This approach focuses on developing a reputation for good quality and promise to deliver superior quality products or services to customers. Under this approach, the firm should project its brand as the premium brand associated with enhanced customer benefits, premium price, and ownership values. Quality perception of a product is dynamic and is liable to change due to competitors' actions, introduction of superior technology change in customers' taste and preferences, and many other market forces (Porter, 1985). This approach is implemented with two major focuses: Total Quality Management (TQM) which calls for quality-focused management systems where the whole process, people and systems within the firm have one objective-produce and deliver superior quality

products and services to the customers. The Customer Focus: It requires the grooming of an organization culture and programmes directed at developing long-term and sustainable relationship with the customers. The top management of an institution should therefore have personal contact with the customers'; a system where support staff performance are to be judged by creating and retaining satisfied customers and developing an in-depth understanding of customers' motivations, choice and satisfaction (Porter, 1985). In this study, focus is on the quality option approach.

It should be noted that an institution can enjoy competitive advantage through various pre-emption moves. For example, in this study, the form of pre-emption is in the field of institution responsiveness which takes a wider perspective in terms of product differentiation (performance), service differentiation like Customer training, product delivery, and image differentiation (social responsiveness). These pre-emptive moves are focused on the institutions with a view to assessing whether its responsiveness provides sustainable competitive advantage factor; in this case, improvement in student enrolment. This approach to sustainable differentiation focuses on building brand equity. Brand equity generates value to customers and provides the firm a space to adopt premium pricing and enhanced brand loyalty. The aspects of brand equity are Brand Awareness, Brand Associations, Perceived Quality and Brand Loyalty (Porter, 1985).

Concerning Brand Awareness, familiarity and recall value of a brand name is an indicator of brand awareness (Porter, 1985). This is a strategic asset for the firm in a competitive market where it provides a sustainable difference. Secondly, Brand Associations of the brand name with a competitive advantage factor is an enduring asset to a firm. The brand name can be linked to the firm's other businesses and products. Product-attributes and Customer-benefits are the two commonly associated

factors that can be developed as brand equity (Porter, 1985). Thirdly, concerning Perceived Quality, the Customer's perception of the brand in terms of its quality supported by its attributes and utility is a major factor that contributes to the brand equity (Porter, 1985). Finally, concerning Brand Loyalty, the most enduring and sustainable asset of a firm is brand loyalty, that is, the resistance to brand switching by customers. It reduces marketing costs, presents high entry barriers to competitors, enhances brand image, provides for launching related products under the same brand name and provides ample time to respond to competitor's attacking moves (Porter, 1985). It should be observed that this study adopted all the foregoing brand strategies in examining whether institutional competitiveness is linked to institution responsiveness.

### **2.1.1 Sustainable Competitive Advantage**

The researcher's view on competitive advantage is that the same should be sustainable in order to be of value to the institution. A firm possesses a sustainable competitive advantage when it has value-creating products, processes and services for its customers that cannot be duplicated or imitated by its competitors. Having a competitive advantage, even a sustainable one, does not necessarily mean that you or your customers are aware of it. So there is a need to create an offer or positioning in the market that clearly states your competitive advantage. This is called an "unrefuseable offer" (URO) or a "Mafia Offer" (Goldratt, 1999). A mafia offer is an offer so good that: 1) your customers cannot refuse it and 2) that your competitor cannot or won't offer the same or match it. A Mafia Offer is simply the offer you make to your market-your prospects and customers – to make them desire your products and/or services and something that your competitor can not easily match.

The offer an institution makes is a combination of its products, services, and how these are delivered to them. For an institution's offer/solution to be unrefuseable, it must be something of equal or greater value than the price being charged.

In this study , firm resources include all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies (Barney's, 1991). In their contribution to the Resource Based View (RBV), scholars have proposed various constructs such as resources, capabilities, competencies, skills, factors and assets, to refer to different objects. This study uses the term 'resources' as a generic construct that encompasses all these attributes.

Literature differs widely in terms of appropriate indicators for measuring competitiveness at country and firm levels (Lalinsky, 2013). Determinants such as resource endowments, cost of labour and production inputs, financial and technological infrastructure, access to markets, institutional and regulatory frameworks are examples of country-specific factors that are used to measure both performance and competitiveness (Anos-Casero & Udomsaph, 2009). Tomas (2011) argues that many processes in the economy are related to human beings and their activities; hence people and the value they add is the cornerstone of a nation's competitiveness. According to CESES (2004), export performance is the easiest way to measure a country's competitiveness as it tests its the ability to operate in the international markets. European Union defines competitiveness as the ability to provide its citizens high and rising standard of living and employment to all who wants to work (Klvačová & Malý, 2008). This means that the standard of living and employment levels can be considered as measures of a nation's competitiveness.

Porter (2004) expressed competitiveness with respect to productivity that is reflected in either lower costs or differentiated products that command premium prices. Beside financial and market-based measures, other indicators of firm level competitiveness are innovativeness, quality and social concerns like ethical standing, responsibility to society and working conditions of employees (Lall, 2001). A Firm's sustainable competitiveness position within an industry can also be expressed in terms of its relationship with customers, suppliers, competitors, and other stakeholders like government and partners (Ma, 2000). Adoption of strategies that focus on customers and dealing with turbulent and dynamic market conditions also contribute towards being at the top.

Competitive strategies play a key role in helping firms understand the challenges, opportunities and threats that are in the environment and applying appropriate responses (Xu, *et al.*, 2003). Firms that have in place appropriate strategies have better chances of surviving and achieving sustainable competitive advantage. Strategy is a concept that has been defined in several ways. According to Thompson *et al.* (2008), it is a game plan for achieving good business performance. The same view is echoed by (Clegg *et al.*, 2011) when they argue that strategy addresses major initiatives, either intended or emergent, which involve senior managers using resources to enhance performance in competitive environments. The term is therefore concerned with the vision an organization has and gives a general direction for its achievement. Strategy leads to allocation and optimum utilization of resources within the organizational environment and achievement of its objectives (Pearce & Robinson, 2011).



Organizations use a number of strategies to maintain a competitive edge. Porter (1980) outlined three strategies namely; cost leadership, differentiation and focus or niche. Cost leadership focuses on gaining competitive advantage by having the lowest cost in the industry (Porter, 1987). This could be achieved through mass production and distribution, economies of scale, technology, product design, input cost, capacity utilization of resources, and access to raw materials (Malburg, 2000). Differentiation strategy, also called segmentation strategy is a marketing strategy used by firms to establish a strong identity in a specific market. It involves positioning a brand in such a way as to differentiate it from competitors and establish an image that is unique, (Davidow & Uttal, 1989). This is achieved by introducing different varieties of the same basic product under the same name (Kingoo, 2014). Focus or niche strategy is concerned with either lower costs than those of competitors serving that market segment or an ability to offer niche members something different from competitors (Thompson, *et al.*,2005). Focusing is based on selecting a market niche where buyers have distinctive preferences. The niche is defined by geographical uniqueness, specialized requirements in using the product or by special attributes that appeal to customers.

Concentrated growth and generic strategy are other commonly used strategies by organizations to enhance their position in the market. The concentrated growth strategy requires that a firm directs its resources to profitable growth of a single product, in a single market, with a single dominant technology (Pearce & Robinson, 2000). Generic strategy on the other hand emphasizes focus on a particular group, geographical location, age group or income level, profession or on the basis of sex (Poddar & Gadhave, 2007). It seeks to coordinate and integrate the activities of the various functional areas of a business in order to achieve long-term organizational

objectives (Thompson & Strickland, 2002). This holistic management approach has a positive significant effect on performance and competitiveness of firms (Grant, 2002).

Many topics in strategy research have been linked to aiding in the process of creating and maintaining Sustainable Competitive Advantage. Included in these topics are the concepts of market orientation and business networks. Day and Wensley (1988) suggest using perspectives of both customer and competitor to assess firm performance; this outward focus links the Sustainable Competitive Advantage construct to the concept of market orientation. Through a customer orientation, firms can gain knowledge and customer insights in order to generate superior innovations (Varadarajan & Jayachandran 1999). Because a market orientation employs intangible resources such as organizational and informational resources, it can serve as a source of Sustainable Competitive Advantage (Hunt & Morgan 1995). Business networks consist of multiple relationships, with each participating firm gaining the resources needed to build core competencies and obtain Sustainable Competitive Advantage.

Building on the proposed definition of Sustainable Competitive Advantage, Hoffman (2000) proposes a general theoretical model of how dyadic relationships within a network environment affect Sustainable Competitive Advantage. In conjunction with this model, he presents four propositions viz: P1: Network identity is an antecedent of trust; P2: Communication is an antecedent of both trust and organizational learning; P3: Commitment is the result of both trust and organizational learning and P4: Both trust and commitment result in Sustainable Competitive Advantage.

### **2.1.2 Network Identity as an Antecedent of Trust**

The concept of network identity, which is defined as the perceived attractiveness (or repulsiveness) of a firm as an exchange partner due to its unique set of connected

relations with other firms, links to their activities, and ties with their resources (Anderson *et al.*, 1994). In other words, the firm must possess something that makes its warrant inclusion in the network. Network identity is similar to a firm's expertise or competence in a particular area. It is logical that trust stems from the perception that a firm is attractive in some way, and that it has something to offer. This is similar to Ganesan (1994), who sees reputation as an antecedent of trust.

### **2.1.3 Communication as an Antecedent of both Trust and Institutional Learning**

There is a link between communication and trust in a business-to-business relationship marketing context (Morgan & Hunt 1994). The linkages between these constructs should be present in a network environment as well. In fact, Morgan and Hunt (1994) argued that communication becomes even more essential in relationships involving more than two parties; it is the key to coordinating each firm's unique skills and resources. In addition, effective communication leads to the benefit of organizations being able to learn from their exchange partners' core competencies. Networks exist because of their capacity to generate, integrate, and leverage knowledge and relationships that extend considerably beyond the resources of a sole firm (Srivastava *et al.*, 1998). If communication is present, then each individual firm in a network can learn from the others in order to properly integrate and leverage unique assets and resources.

### **2.1.4 Commitment as the Result of Both Trust and Institutional Learning**

Trust in a network is indicated by each member's confidence in its partners' sincerity, reliability, loyalty, and willingness to refrain from opportunistic behaviour (Achrol, 1997). Commitment may be defined as an enduring desire to maintain a valued relationship (Moorman *et al.*, 1992). Certainly a firm is more likely to feel committed

to a network if this trust truly exists. Additionally, firms will want to maintain the relationship if they perceive it invaluable.

Various Concepts in Strategy Theory have been shown to relate to Sustainable Competitive Advantage, and many researchers have contributed (either directly or indirectly) to the literature pertaining to Sustainable Competitive Advantage. Specific contributions include a focus on distinctiveness or differentiation, potential Sustainable Competitive Advantage sources, and customer perspectives of Sustainable Competitive Advantage. Alderson (1965) proposes three bases for differential advantage: technological, legal, and geographical; four strategies for achieving differential advantage: segmentation, selective appeals, transaction, and differentiation. Hall (1980) suggests that, successful companies will achieve either the lowest cost or most differentiated position. Henderson (1983) discusses those unique advantage(s) of one firm over competitors; those who can adapt best or fastest gain an advantage over competitors. Branding is what differentiates a product from competitors; brand equity is a potential source of Sustainable Competitive Advantage SCA (Gardner & Levy, 1955; Aaker, 1991; Keller, 1993).

Fiol and Lyles, (1985) suggest that, Market orientation is an intangible resource which involves a dual focus on both customers and competitors and can contribute to Sustainable Competitive Advantage. They also argue that the management of information is an asset used to gain Sustainable Competitive Advantage; Sustainable Competitive Advantage lies in the ability to learn faster than competitors. Sustainable Competitive Advantage may result from those innovations which are consistent with the firm, both socially and technologically, and provide some distinct value to customers, either directly or indirectly (Foxall, 1984; Wolfe, 1994; Rogers, 1995;

Gatignon & Xuereb, 1997). Day and Fahey (1988) are of the opinion that, the provision of customer value is a source of Sustainable Competitive Advantage; customers' desired value changes and firms should monitor these changes via continuous learning about customers. The building of trust and commitment make relationship marketing rare and difficult to imitate, thus rendering it a potential source for Sustainable Competitive Advantage (Morgan & Hunt, 1996; Thorelli 1986; Jarillo, 1988; Iacobucci & Hopkins, 1992) argued that, Networks involve technology transfer and informational exchange; trust fosters network relationships; networks allow for core competencies to be strengthened, resulting in Sustainable Competitive Advantage ; network relationships should thus be a part of strategic planning.

There are many obstacles to further theory development for the Sustainable Competitive Advantage construct (Morgan & Hunt 1994). First, researchers lack a solid operational definition for Sustainable Competitive Advantage . Without this, we cannot measure it, nor can we begin to empirically understand its antecedents and consequences. Current theory also has not agreed upon method of assessing whether a Sustainable Competitive Advantage has been or has not been achieved by a firm. For example, should performance indicators such as market share or profitability be used to determine if an Sustainable Competitive Advantage has been achieved? If such performance indicators are used, how can they be empirically linked as the result of Sustainable Competitive Advantage rather than other factors? These are just a few measurement issues that need to be addressed if we want to successfully develop further theory related to Sustainable Competitive Advantage. Thus, sustainable institutional competitiveness is a perceptual performance outcome derived from employees (attracting and retention of highly qualified teaching, Administrative and support staff). The study postulates that Sustainable Competitive Advantage could

also be derived from the perceived image by its clientele-students (both on-going and potential) as well their parents, which could lead to high Self Sponsored Programmes student enrolment).

In context, the researchers view is that an institution's sustainable competitive advantage could either be employee oriented or clientele oriented. The former could be evidenced by increased service quality through;-increased employee performance (Tsauro & Lin, 2004), and managing employee behaviour which is instrumental to guaranteed quality service; good HR practices e.g. facilitating a work environment that motivates a more customer/clientele oriented behaviour from employees (Morrison,2006). A conducive working environment has been shown to impact both the employee wellbeing (such as job satisfaction, stress, and health emotion, inter alia) as well as organizationally relevant outcomes such as employee commitment, turnover, absenteeism, job performance and human rights, (Aguilera *et al.*, 2005).

## **2.2 Theoretical Perspectives**

The following theories guided the study; the resource based view theory, knowledge based view theory, the dynamic capabilities theory, the Eysenck theory, and the five factor theory.

### **2.2.1 Resource-Based View Theory**

Resource Based View theory (RBV) stems from the principle that the source of firms competitive advantage, lies in their internal sources, as opposed to their position in the external environment (Raduan *et al.*, 2009). The resource-based view theory emphasizes that a firm's resources are the fundamental determinants of competitive advantage and performance. Firm resources refer to tangible assets such as physical, monetary, and human capital as well as non-tangible ones like information,

capabilities, organizational processes, firm attributes and knowledge that enable it to conceive and implement strategies that improve its efficiency and effectiveness (Ray *et al.*, 2004). The Resource Based View theory makes two assumptions in the analysis of sources for competitive advantage (Peteraf and Barney, 2003). First, it assumes that firms within an industry are heterogeneous with respect to the bundle of resources that they control. Second, it assumes that resource heterogeneity persists over time and is not mobile across firms. Heterogeneity is considered a necessary condition for a resource bundle to contribute to a competitive advantage.

Resource Based View theory is relevant to the study because it is concerned with resources and their link to organizational performance and competitiveness. Human capital is one of the resources of organizations and is considered as the most valuable asset (Makkar & Singh, 2013). The role of employees is critical since their responsiveness and personality traits play a key role in determining whether an organization gains and retains a competitive advantage (Mkoji & Sikalieh, 2012). Several scholars have pointed out the potential of capitalizing on human resources management as a means of gaining and maintaining competitive advantage (Schuler & McMillan 1984; Ulrich, 1991) as explained further by the knowledge based view theory.

### **2.2.2 Knowledge-Based View Theory**

The knowledge-Based view (KBV) theory is generally regarded as a special case of the resource-based view theory (Curado, 2006). Advocates of the knowledge based view theory consider knowledge as the most strategically significant resource of the firm. This knowledge is embedded and carried through multiple entities including organizational culture and identity, policies, routines, documents, systems, and the

employee (Katz *et al.*, 2012). The proponents of the theory argue that knowledge-based resources are the major determinants of sustained competitive advantage and superior corporate performance because they are socially complex and difficult to imitate (Wernerfelt 1984; Barney 1991; Conner 1991). Knowledge is a powerful resource and an asset that enables individuals and organizations to achieve several benefits such as improved learning and decision-making (Al-Busaidi *et al.*, 2010).

The theory acknowledges the significant role of employees as “containers” of knowledge and drivers of success and competitiveness of firms (Grant, 2006). It also acknowledges the primary role of the firm in integrating the knowledge resident in its employees into goods and services. While incorporating much of the content of the Resource Based View theory, the Knowledge-Based view pays more attention to the process or path by which specific firm capabilities evolve and develop over time (Kogut & Zander, 2008). According to McEvily and Chakravarthy (2002), the growth, performance and competitiveness of a firm are not sustainable without the dynamic re-development of knowledge-based resources and capabilities because without them, an organization is not capable of discovering new opportunities. This means that organizational growth, performance and competitiveness is significantly influenced by knowledge-based resources and capabilities of an organization which are associated with human capital given that knowledge reside in employees. This relationship is what informed the selection of the theory as it focused on examining competitiveness of public universities through the support staff capacities in public relations, motivation, personal selling, information and intellectual capital and personality traits.



### 2.2.3 Dynamic Capabilities Theory

The Dynamic Capabilities Theory (DCT) was introduced by Teece and Pisano in 1994 (El-Gizawi, 2014). It proposed that competitiveness was due to ability of companies to react rapidly and flexibly to product innovation, while simultaneously possessing the capacity to manage firm specific capabilities in such a way as to effectively coordinate and redeploy internal and external competencies (Teece, 2014). This ability to achieve competitive advantage by being flexible and fast in dealing with changing market environments is what Teece and Pisano referred to as “DCT”. The theory focuses on two fundamental issues that are not discussed in the other two theories; the first being a firm’s ability to renew competencies so as to adapt to changes in the business environment and the second being the ability of strategic management to use these competences to match the requirements of the environment (Teece *et al.*, 1997). In a sense, the Dynamic Capabilities Theory links to the resource based view by explaining the nature of sustainable competitive advantage, while also intending to inform managerial practices. It highlights two areas: use of competences that are unique to firms to gain competitive advantage and explain how these competences are developed and deployed.

The theory was selected because it is concerned with competencies of an organization and how they are used to meet requirements of the market. It can be used to explain competitiveness of universities or lack of it with respect to competencies. The dynamics of competitive advantage also informed its selection. Alinaghian *et al.* (2012) noted that sources of competitive advantage have shifted from financial resources to technology and now to human capital. They argued that what the market requires is a highly trained workforce that is flexibly and is able to react rapidly to the

ever changing market. They are of the view that personal attributes of workforce have a significant influence on the individual and organizational performance.

#### **2.2.4 Eysenck Personality Trait Theory (1916-1997)**

Eysenck identified three (3) dimensions of personality which is distinctive from others. These are: Extraversion, Neuroticism and Psychoticism. His combination of descriptive and causal aspects of personality makes his more distinct than other theories. Extraversion is seen as a continuum ranging from extroversion to introversion. High extroverts, are more sociable, delight meeting people and active. They are sensitive to reward. Whereas, those on the low are less sociable, quiet, like to live a well ordered life and more sensitive to punishment. Neuroticism talks about the differences in the intensity of emotional experience. This exists in degrees and is best explained as individuals who are unstable.

High neuroticism leads to people being impulsive and having obsessive behaviours like taking drugs to avoid negative emotional states. They also express excessive fear, anxiety, depression and low self esteem. They are highly sensitive to punishment. Whereas, those on the low are calm, even tempered and less likely to feel tense. Psychoticism is about the ego control, is made up of less extraversion and less neuroticism. Individuals high on psychoticism are tough minded, rebel, willingness to take risk and may be unconcerned about the rights and welfare of others. Those on the low are affectionate, sensitive and concerned about others. This can be articulate well with five factor model theory.

#### **2.2.5 The Five-Factor Model theory**

In addition, Colquitt *et al.* (2009) identified five dimensions that describe personality these include; conscientiousness, agreeableness, neuroticism, openness to experience

and extroversion commonly referred to as the big five. Conscientiousness is associated with trait adjectives such as dependable, organized, reliable, ambitious, hard working while agreeableness has adjectives such as kind, cooperative, sympathetic, helpful, courteous, and warm (Colquitt *et al.*, 2009). On the other hand, neuroticism has to do with nervous, moody, emotional, insecure, and unstable character (Colquitt *et al.*, 2009). Openness to experience has to do with curious, imaginative, creative, complex, refined, sophisticated while extraversion is associated with adjective traits such as talkative, sociable, passionate, bold, dominant (Colquitt *et al.*, 2009).

Personality therefore represents a process of change and it relates to the psychological growth and development of individuals. Personality traits are extremely important in today's competitive organizational settings. Often the 'wrong' kind of personality proves disastrous and causes undesirable tensions and worries in organization (Khosla, 2009). Research indicates that personality acts as a moderating factor: workplace deviance was more likely to be endorsed with respect to an individual when both the perception of the workplace was negative and emotional stability, conscientiousness, and agreeableness was low (Colbert *et al.*, 2004). Of the five factors, the single factor of conscientiousness is the most predictive of job performance and therefore positively influence work performance (Hurtz & Donovan, 2000; Zimmerman, 2008). Personality research has focused on the five-factor model (FFM) personality traits (Costa & McCrae, 1985). The Five Factor Model establishes five factors of personality (Conscientiousness, Extraversion, Emotional Stability, Agreeableness, and Openness to Experience) as a parsimonious model of distinguishing between differences among individuals' dispositions (Zimmerman, 2008).

### **2.3 Concept of Institution Responsiveness**

Responsiveness is best seen in light of activities (programmes) undertaken by an institution to boost its image/identity. An institution's responsiveness programmes help attract and retain quality and motivated employees, which in turn, gives it an edge over competitors (Doyle, 2004). Responsiveness has the potential to increase competitive advantage as it fuels innovation, enhances job satisfaction and work performance as well as maintaining intangible assets such as employee goodwill and community trust (Aguilera *et al.*, 2005). Hameed and Waheed (2011) observed that firms which prioritize responsiveness deliver a higher level of customer service that ultimately leads to a higher level of profitability. Responsiveness serves as a catalyst for improved productivity, lower labour costs, reduced turnover and increased employee commitment as well as customer retention, referrals and loyalty. Development of institution responsiveness is one of the key components of internal marketing.

Responsiveness refers to willingness or readiness of employees to provide services (Ziethaml & Bitner, 2000). Responsiveness of an institution is enhanced when its employees have the required knowledge, skills, motivation, attitudes and behaviour that leads to fulfilment of the individual's and employer's goals (Lee & Bruvold, 2003). According to Hameed and Waheed (2011), these attributes and competencies are what serve as a catalyst for improving productivity, lowering labour costs, reducing turnover and increasing employee commitment, customer retention, referrals and loyalty as well as organizational competitiveness. It can therefore be said that competitiveness of organizations is dependent on aspects of responsiveness such as

motivation and employee competencies in areas such as public relation, motivation, personal selling and attributes like information and intellectual capital.

Internal Marketing is defined as "selling the firm to its employee" since the related activities are confined within the organization (Grayson *et al.*, 2010). The work of scholars like Gounaris (2008) and Ahmed and Rafiq (2003) have shown that internal marketing ensures customer satisfaction through the fulfilment of their needs. From this perspective, "employment" is perceived as the "product" and employees as the company's internal "customers". It is also perceived that initiatives strategically designed to address employee needs such as motivation, training in public relations, communication, and personal selling would go a long way in endearing them to employment (Lings & Greenley, 2009). Internal Marketing focuses on the employee because they play a central role in attracting, building and maintaining relationship with customers. Quirke (2008) asserts that one of the ways of maximising employee potential is treating them as the first customers of the organization or agents of its internal marketing strategy. Internal marketing programme activities include; employee recruitment, training, motivation, communication and retention efforts (Tansuhaj *et al.*, 1988).

Internal marketing hinges on the assumption that employee satisfaction and customer satisfaction are inextricably linked (Zeithaml & Bitner (2000). Internal marketing strives to build stronger links between the employee and customer (Singh & Ranchhod, 2004)). This is achieved by satisfying the needs of the employee thus boosting his/her ability to deliver quality services required to satisfy the tastes of external customers. The assumption is that fulfilling employees needs enhances their commitment, motivation and work performance which in turn provide the much needed customer satisfaction and loyalty (Zampetakis & Moustakis, 2007).

Studies have shown that internal marketing programmes stimulate institution responsiveness which in turn translated into improvement in firm's performance and its competitiveness. Ziethaml and Bitner (2000) demonstrated that an institution's responsiveness programmes help attract and retain quality and motivated staff which gives a firm a competitive edge. Summerfield (2014) argue that responsive employees are better performers because they are able to identify both the explicit and implicit needs of clients and use their understanding of those needs to fulfil them. Mani (2010) is of the view that no matter how automated an organization may be, its success depends on employees' empowerment in areas such as public relations, motivation and personal selling. This is so because empowered employees are always happy, able to communication of ideas both vertically and horizontally and work extra hours to help clients.

### **2.3.1 Public Relations**

Public relations have been defined as the management of communication between an organization and its publics (Riel, & Fombrun, 2007). Seitel (2006) refers to it as a management function, which tabulates public attitudes, defines the policies, procedures, and interests of an organization, followed by executing a program of action to earn public understanding and acceptance. It can be considered as the practice of managing the spread of [information](#) between an individual or an [organization](#) and the [public](#). The aim of public relations is to persuade the public, prospective customers, investors, partners, and other stakeholders to maintain a certain point of view about an organization, its leadership, products, or political decisions (Choi & Choi, 2009). It is the part of a marketing and communications strategy that crafts an organization's message(s) to its diverse public which includes

customers, prospects, investors, suppliers, distributors, media/journalists, social media networks and the government ( Hung & Yang, 2014).

An institution's public relations activities do not only target external clients but also the employees. In-house public relation activities are meant to enhance the relationships among the various organization levels and employees (Gilaninia *et al.*, 2013). These activities contribute to maintaining effective working environments within the organization by developing employees capacities building bridges and resolving conflicts through communication (Botan, 2006). Effective communication explains organizational priorities and shares its information about what is happening so that employees understand, accept and commit their efforts and ideas to help in the achievement of mission and goals (Shaman, 2015). Good public relations within an organization leads to increased job satisfaction, morale, productivity, commitment, trust and learning; improvements in products/services quality and earnings (Berger, 2008).

The manner in which an organization relates with its internal and external clients significantly influences its success and competitiveness. Scholars like Adjei (2014) argue that it is the most fundamental driver of business performance. According to Gay *et al.* (2005), developing a cordial relationship among the workers, management and various branches of an organization elicit positive attitudes and behaviours that are instrumental in the implementation of the competitive strategies.

Several studies have established that a cordial relationship between a firm's employees and its external public attracts customers and enhances their loyalty (Paul *et al.*, 2005). The attitudes and behaviour of the employees towards the public is very important to the success of a firm as they portray a good image and attract clients (Ni,

2006). A study conducted by Li (2002) showed that in the eyes of the public, the most credible means of communication that the organizations have at their disposal is public relations, through letters, press releases, magazine articles, conferences, trade fairs and seminars. The respondents in the study indicated that they were strongly influenced by the information disseminated by the firm's public relations department.

Richardson and Robinson's (1986) study conducted among bank customers revealed that poor public relations lead to loss of clients. They noted an increase in number of clients that were closing their accounts because of dissatisfaction caused by poor service, rude or unhelpful employees and the impersonal nature of the banking institutions. Yeung (2011) amplifies the importance of public relations by arguing that it is not only provision of quality products and services that earns an organization public support but also the types of employees it has. Post *et al.* (2002) assert that relationships generate organizational wealth because a firm's fundamental resources are represented by various stakeholders. It is the relationships with these stakeholders that make resources available. Relationships can therefore be regarded as a firm's resource because they make the exploitation of other resources possible.

Studies done in institutions of higher learning have also shown that public relations play a significant role in their attractiveness to students. A study by LeBlanc (2001) found out that the prestige or reputation of an institution is more important than its other qualities. They noted that it was these attributes which guided the decisions of prospective students and scholars to enrol with an institution. Messah and Namulia (2012) examined the effect of public relations on enrolment in private universities in Kenya and noted that it positively influences student enrolment. They attributed this to outcomes of public relations such as public image and customer satisfaction. Messah



and Namulia (2012) argued that satisfied and happy clients speak well of institutions and influence others to enrol with it.

### **2.3.2 Motivation**

Motivation is one of the strategies commonly used by organizations to improve performance and their competitiveness as it is a powerful tool that reinforces behaviour and triggers the tendency to continue (Ganta, 2014). Bulkus and Green (2009) consider motivation as a push or influence to proceed to fulfill a want. Bartol and Martin (2008) describe motivation as a power that strengthens behaviour and triggers the tendency to succeed. Bedian (2003) motivation refers to it as an internal drive to satisfy a need and the will to accomplish it. Motivation can therefore be considered as a psychological process that causes arousal, direction and persistence of behaviours that is closely linked to work and organizational efficiency.

There are two categories of motivational factors; extrinsic and intrinsic. Extrinsic motivation is derived factors that are outside the individual (Sansone, & Harackiewicz, 2000). For instance, the lure of a promotion, recognition, money, fame, or material achievements are all examples of extrinsic motivation. Intrinsic motivation on the other hand is the urge or drive which comes from within (Sara *et al*, 2004). It comes from the enjoyment and satisfaction that is derived from doing a particular thing successfully. For example, the love of music is what propels musicians to attend classes and practice the instrument. Intrinsic motivation is crucial in today's work environment as it is a key factor in performance and innovation as it enhances commitment, leads to job satisfaction and helps an employee keep stress levels down (Sleimi & Davut, 2015).

Motivation and satisfaction of employees are of great of interest to contemporary human resource management. A variety of techniques are used by senior managers to motivate employees. Some of the techniques employed are job enlargement, rotation and enrichment, promotion, pay increment, bonuses or other types of monetary rewards (Reena *et al.*, 2009). Sara *et al.* (2004) noted that no other incentive or motivational technique comes close to monetary reward with respect to its influence. Other motivational methods include; training, job security, a clear career path and a conducive work environment (Tampu, & Cochina, 2015).

Baldoni (2005) considers leadership and trust as motivators. Leadership is concerned with the urge to do what is right for people as well as the organization. Leadership is about getting things done and to do so, the leader needs people to trust and follow him/her. For people to trust and do things for the leader and the organization, they need to be motivated. This implies that motivation is an aspect of leadership (Rukhmani, 2010). Recognition and empowerment also play a significant role in enhancing one's motivation towards organizational tasks (Shammot, 2014). Appreciating the employees for their work and granting them decision making powers, gives them internal satisfaction, enthusiasm and motivation to accomplish tasks (Dobre, 2013).

Many scholars have associated the success of organizations to employees' motivation. Ganta, (2014) noted that motivation enhances employees ability to meet personal goals, job satisfaction and efficiency; this in turn boosts a company's chances of meeting its goals. Matthew *et al.* (2009) concurs with Ganta by asserting that an internally satisfied, delighted and motivated worker is highly productive and this contributes significantly to an organization's efficiency, effectiveness and profits. Abu-Al-Rub (2003) conducted a study that involved 303 hospital nurses drawn from

the USA, Britain and Canada who were accessible over the Internet. Descriptive statistics, Pearson product moment correlations, chi-squares, t-tests, analysis of variance procedures, and hierarchical regression techniques were utilized to analyze the data. The results of the analysis revealed that increased perceived social support from co-workers and supervisors enhanced job performance.

Kalimullah *et al.* (2010) conducted a study which examined the relationship between rewards and employee performance in commercial banks of Pakistan. The study focused on monetary and non monetary rewards such as recognition. The results showed that the explanatory variables explained a significant variation in the outcome. They attributed this to motivation as it aligns the employee's goals to those of the organization. Manzoor (2012) investigated the impact of employee motivation on organizational effectiveness. The study concluded that factors such as empowerment and recognition have positive effect on organization effectiveness. Yahaya *et al.* (2011) in a study done among nurses in Malaysia concluded that social needs were the most significant predictor of employee of performance.

Adeyinka *et al.* (2007) and Mani (2010) concluded that motivation contributes to the success of organizations and their competitiveness. The reason being that a motivated worker is always happy, works extra hours to help clients and exercises his/her discretionary energy for the benefit of the client. Constant *et al.* (2001) concurs by stating that an internally satisfied, delighted and motivated worker is a productive employee.

According to Washakowski (2015), organizations cannot operate efficiently and effectively without motivation. Several studies have indicated that organizations with employees that have low work motivation may have higher turnover rates, low

organizational commitment, and low job satisfaction among employees. Additionally, work motivation has been found to not only change an employee's outlook on their job, but has also been combined in literature with other aspects of work that could improve overall motivation (Washakowski, 2015). Subsequently, the level of motivation that employees have can vary on account of various amounts of factors. It can also vary due to job satisfaction or enjoyment after completing their tasks (goal setting). Grant (2008) also states that motivation acts as driving force that leads employees towards achieving the institutional goals. This study examines the moderating effect of personality factors on motivation.

Wang and Zheng (2012) investigated the role of social identity in moderating the effect of working pressure on the identified motivation. The variables of the study were employees' behaviour, self-actualization, and stress, social identity, self-determination, identified motivation and work pressure. The findings indicated that participants under the condition of task deadline reported less identified motivation, both at the individual and group levels, than did those under the condition without task deadline. Some studies also found that motivation has power to make a successful entrepreneur (Akhtar *et al.*, 2014).

A study by Segal *et al.* (2005) examined the relationships between self-motivation and ability to become the entrepreneur. The variables under study were desirability of self-employment, tolerance of risk, self-efficiency of self-employment and self-employment intentions. Using samples from the undergraduate business students at Florida Gulf Coast University it was found that these factors have great contribution towards the intention (motivation) of an individual to become an entrepreneur. A study by Haines *et al.* (2008) sought to explore the impact of intrinsic motivation on

the ability to accept the international assignments. The variables of the study were difficulties, support and willingness to accept the international assignment. Using a sample of 331 employees of business, a high ranking MBA programme of a Canadian University, it was found that intrinsic motivation has great involvement in accepting of international assignment.

Washakowski (2015) examined how praise would moderate the relationship between work motivation and autonomy. Using a sample of 54 participants in a professional work environment, it was found that there is a significant relationship between praise moderating the effects of autonomy on work motivation. Further, it was found that praise plays a much greater role in the level of work motivation that employees have.

### **2.3.3 Personal Selling**

Personal selling is a useful communication tool in building buyers' first choices at various stages of the buying process. Personal selling refers to the promotional presentation by a firm's sales force conducted for the purpose of making sales and building customer relationship (Solomon & Stuart, 2003). It is conducted on a face-to-face basis, over a telephone, through video conferencing, or any interactive electronic media (like the internet) between the buyer and seller. The direct contact with the customer gives the salesperson the opportunity to be flexible and modify the sales message to coincide with the customer's needs (Kotler, 2013). The interactive nature of personal selling makes it one of the most successful methods for building relationships and attracting customers (Armstrong, 2001). Personal selling can therefore be considered as an extension of marketing concept as it involves identification of customer needs and aiding customer decision-making by selecting those products that best fit their requirements (Moncrief & Marshall, 2005).

According to Kotler and Armstrong (2012), personal selling is the communication between a firm's sales force and customers for the purpose of making sales and building customer relationship. Personal selling is not only the responsibility of a firm's sales force but also its employees (Peter & Donney, 2011). Employees play a key role in marketing an organization because they are the link between it and the publics. However, they need to be empowered to be effective marketers. Empowerment means equipping the workforce with knowledge, skills and positive work behaviour (Burkitt & Zealley, 2006) Empowering employees places them in a better position to deliver quality services desired to satisfy external customers. Jober (2007) argues that empowering employees enhances their ability to build and maintain long-term customer relationships by listening to them, assessing their needs, and solving their problems This not only enhances the institution's attractiveness but also its competitiveness.

Several studies have examined the association between personal selling and institutional competitiveness. Schwepker (2003) attributes the success of those with personal selling skills to their ability to persuade a potential client by explaining the utility and distinctive qualities of the product. Moncrief and Marshall (2005) noted that personal selling had a positive effect on firm's effectiveness. They explained that personal selling skills enable salespersons to give an accurate presentation of products or services to the potential clients/customers, continuously holding their attention and creating interest. Cheney *et al.* (2011) established that there was a significant positive association between a salesperson's skills and a firm's performance. They argue that personal selling involves direct personal communications between a consumer and a salesperson, with the latter conveying the product or service. This one-to-one contact

makes it easier to convince a customer to buy. The achievers are adept at identifying consumer needs and supplying solutions.

Armstrong (2001), states that personal selling can enhance performance and competitiveness of educational institutions. Employees of such institutions can use their knowledge and skills to communicate with prospective students in a timely and personal manner thus boosting their attractiveness. A study in Czech republic conducted by Schüller and Rašticová (2011) on universities marketing communication revealed that how employees handle clients has an effect on the identity, image, and brand of universities. Messah and Namulia's (2012) study on the effect of selected marketing communication tools on student enrolment in private universities in Kenya established that personal selling during career days helps institutions to significantly increase students' enrolment. They noted that making presentations and one-to-one communication strengthens an institution's relationship with clients and boosts students' enrolment.

### 2.3.4 Information Capital

Many firms have recognized the potential and advantages of information capital and infused it into their operations to facilitate business growth and enhance competitiveness (Wang *et al.*, 2007). Information capital enhances growth and competitiveness because it enables firms to develop new products, services, re-engineer business processes, and improve decision-making, coordination and flexibility (Chi & Sin, 2015). It also leverages a firm's complementary assets such as new business models, management behaviour, organizational culture and training (Ray *et al.*, 2005). Information capital is defined as the sum of all the tools, techniques and procedures used by the business to process data (Hooper & Page, 1997). Laudon and Laudon (2001) consider it as all the information systems that are embedded in an organization as a result of operating procedures, work flow, politics, culture and structure. It is an important source for learning new things, solving problems, creating core competencies and establishing new positions for the individual and organization (Nasimi *et al.*, 2013).

Organizations can only reap the benefits associated with information capital if they have the capacity to use it to capture business opportunities that bring success (Oriarewo *et al.*, 2013). The capacity is usually expressed in terms of availability of information and communication technology facilities, employees' knowledge, expertise and behaviour towards work. Fang *et al.* (2009) assert that information capital is effective only if the user is responsive to it. This means that information capital can only contribute to the success of an organization if its employees (users) have the required knowledge, skills and work behaviour. Organizations should therefore ensure that their employees have those attributes because competitive



advantage is increasingly found in knowing how to do things, rather than in having special access to resources and markets (Lubit, 2001).

Literature shows that information capital enhances organizational performance and competitiveness. Choy *et al.* (2014) examined the effect of information technology on the performance of logistics firms in Hong Kong using a sample of 210 companies. They established that information technology enhances service quality thereby creating a competitiveness edge. Rashed *et al.* (2010) investigated the impact of information and knowledge sharing among suppliers. The study involved 30 Bangladesh Readymade Garments firms. Path analysis test results indicated that information sharing is a vital factor for increasing the supplier's operational performance. The results of Rashed *et al.* (2010) study confirmed the findings of earlier studies by Neumann and Seger (1979), McCormack (1998) and Petersen (1999), which established that relevant data, information accuracy and completeness were critical factors to an organization's effectiveness.

Studies that involved institutions of higher learning have also indicated that information capital affects their performance and competitiveness. Barnes and Lescault (2011) established that 100 per cent of the most popular institutions of higher learning in USA sampled in their study reported using some form of social media to reach their clients, with Facebook (98%) and Twitter (84%) being the most used. Swartzfager (2007) observed that aspects of information capital such as twitter provides institutions with the opportunity to create live, up-to-the minute notices of commencement programs, homecoming events, class re-unions and live chat sessions thus enhancing their attractiveness to students. A research carried out by Davis III *et al.* (2011) on internal marketing communications of higher education institutions

found out that reduced information flow led to the loss of prospective students to competing institutions. Gomes and Murphy (2003) examined the Internet's role in communicating educational opportunities to potential university students'. The results showed that its use enhanced enrolment of foreign students.

### **2.3.5 Intellectual Capital**

Intellectual capital has been recognised as a critical factor in the performance of firms in face of intense competition (Huang & Liu, 2005). Intellectual capital encompasses all intangible materials that have been formalized, captured, and leveraged to create wealth by producing a higher-valued asset (Roos *et al.*, 2005). Engstrom *et al.* (2003) refers to it as knowledge, skills and expertise, and all non-material entities of value to an organization. Lev (2001) and Gazdar (2007) consider it as invisible assets and non-financials respectively. Intellectual capital encompasses much more than patents, copyrights and other forms of intellectual property. It is the sum and synergy of a company's knowledge, experience, relationships, processes, discoveries, innovations, market presence and community influence (Jurczak, 2008). From these definitions, it can be said that it encompasses the intelligence found in human beings, organizational routines and network relationships. Intellectual capital represents the wealth of ideas and ability of an organization to innovate and is a key determinant of its future (Curado & Bontis, 2006).

Intellectual capital consists of three components namely; human, structural and the external customer (Kalkan *et al.*, 2014). Human capital is defined as the knowledge, skills, experience, intuition and attitudes of the workforce. Human capital is important because it is a source of innovation and strategic renewal for organization (Trevinyo-Rodriguez & Bontis, 2007). Structural capital consists of patents, concepts, models, and computer and administrative systems. They are created by the employees

and are thus generally 'owned' by the organization. Structural capital is the firm's organizational capabilities to meet market requirements. It encompasses routines and structures that support employees' quests for optimum individual and organizational performance.

External customer capital refers to the organization's relationships or network of associates and their satisfaction with and loyalty to the company (Kotler, & Armstrong, 2012). It includes knowledge of market channels, customer and supplier relationships, industry associations and a sound understanding of the impact of government public policy on organizations. External customer capital is associated with the public that resident outside the organization (Singh & Ranchhod, 2004). This means that improving external capital involves looking outside an institution's boundaries to things such as relationships and trust with customers, suppliers, and surrounding communities.

Intellectual capital is now considered a major source of competitive advantage in the new knowledge economy. Shakina and Barajas (2012) assert that the ability to produce and market goods and services by a firm and stay at the top depends on non-tangible assets such as competence of employees, reputation and relationships with staff and clients. Intellectual capital has been associated with performance and competitiveness of firms by several scholars. Pourmozafari *et al.* (2014) investigated the relationship among several factors and financial performance of 45 companies listed on Tehran Stock Exchange. The results of factor analysis and multiple regressions indicated that there was a positive significant relationship between intellectual capital and performance. A study by Taghieh (2015) examined the influence of intellectual capital on the organizational performance. The study used a sample of 100 faculty members of Islamic Azad University of Mardvdasht. The

regression test results indicated that there was a positive relationship between human and structural elements of intellectual capital and organizational performance.

Awan and Saeed (2015) analyzed the impact of intellectual capital on work performance of university employees. The study involved two universities and a sample of 150 academic and 50 non-academic staff. They found out that there was a significant correlation between intellectual capital and organizational performance.

Nejadivani *et al.* (2012) examined the effects of intellectual capital on the performance of tax offices in North Khorasan Province using a sample of 125 respondents. The results of the investigation indicated that the relationship between the two constructs was significant.

Studies carried out in Jordan among pharmaceutical firms results by Sharabati *et al.* (2010) using path analysis indicated that three elements of intellectual capital combined had a positive and significant effect on business performance. Fonkem *et al.* (2014) study in Yaounde Cameroon investigated the effects of intellectual capital and performance of financial institutions using a sample of sixty companies. They established that human capital had a significant effect on the performance of the companies. Ekwe (2013) also observed that intellectual capital has a positive and significant effect on bank employees' productivity in Nigeria. Kamukama *et al.* (2010) explored the extent to which intellectual capital explained the performance of Uganda's microfinance industry using a sample of 65 firms. The results showed that intellectual capital accounted for 47% of variance in performance.

The results of the fore cited studies revealed that relational capital had a positive impact on attracting new students, whereas structural capital did not have a significant impact. These observations have confirmed that intellectual capital not only affects

the performance of firms but also their competitiveness. Jurczak (2008) asserts that the 21 millennium requires less people who do physical work and more who do brain work as economic wealth and success is driven more by knowledge and information than the production process. This demands that organizations must be rich in intellectual capital as it is closely related to knowledge and experiences of employees and customers (Lonnquist & Mettanen, 2002).

#### **2.4 Personality Traits**

Employees' performance involves attitudes and values towards a particular aspect of work and hence, it must relate to personality traits (Hashim *et al.*, 2012). Thus, it is reasonable to expect that personality traits influence personal values and attitudes as has been demonstrated by empirical research. Personality refers to cognitive and behavioral patterns that show stability over time and across situations (Hurtz & Donovan, 2000). Colquitt *et al.* (2009) defines personality traits as the structures and propensities inside a person that explains his or her characteristic patterns of thought, emotion and behavior. The Big Five Model is one of the most commonly used personality traits Model. The big five consists of five traits which are: neuroticism, extraversion, openness to experience, agreeableness and conscientiousness.

Neuroticism is concerned with the extent to which a person experiences emotional instability, anxiety, moodiness, irritability and sadness (Ahmed *et al.*, 2013). Neurotics possess traits that include getting annoyed, stressed, sulky, unsociable, nervous, embarrassed, uncertain, doubtful, unconfident, fearful, and dejected. Extraversion concerns the extent to which individuals are outgoing, assertive, and positively interact with others versus being reserved, timid, and quiet (Judge & Ilies, 2002). Those with this trait normally will try to avoid conflict from occurring. Studies have also established that those with high extraversion will perform better on their

job. Openness to experience refers to extent to which employees possess characteristics such as imagination and insights and those who are high in this trait tend to have a broad range of interests (Ilies & Judge, 2002). Those who are in this group have the attitude or mindset that is open to any ideas or opinions. In addition, they are very vulnerable to something about new experience.

Agreeableness also refers to likeability, concerns the degree to which individuals are kind, cooperative, warm, and agreeable versus being cold, rude, harsh, and antagonistic (Yahaya *et al.*, 2012). Employees with this trait are hardly involved in conflict with others. They tend to establish companionship with others in performing their tasks, thus, making them high performers. Conscientiousness refers to the extent to which individuals are diligent, organized, efficient, and dependable versus being lazy, disorganized, and unreliable (Hashim *et al.*, 2012). These individuals are normally conflict avoidant. Their concentration is on how to perform their job effectively and efficiently.

This study avers that an institution will gain competitive advantage over others based on the services rendered by the firm's sales/customer service staff. Most researchers have observed that staff would go through a personality change either because of internal or external factors which are job related. As a result, they could be mentally, physically or emotionally down thus affecting their level of job performance. Subsequently, lack of job involvement could in turn result in poor service rendered to the customers. Dissatisfied customers would move out to another organization whereas satisfied customers would stay due to better services rendered by the sales staff. Based on this, it can be argued that the service of the sales staff is important in determining the success of an organization. The sales staffs are an asset to the organization since they play an important role in managing the customers, meeting

their needs and giving them satisfaction (Eswaran *et al.*, 2011). In this regard it is important to understand the employees' behaviour for purposes of effective management. Several studies have employed the personality traits and behaviour theories to analyse the moderating effect of these on employee public relations and productivity.

Recent studies have linked job performance to the "Big Five" personality traits: openness to experience, conscientiousness, extraversion, agreeableness and neuroticism (Heckman *et al.*, 2006). Fernandez *et al.* (2014) analysed the impact of the Big Five personality traits on performance. Using a sample of 359 University of New South Wales students, the experimental tests revealed that more neurotic subjects perform worse, and that more conscientious individuals perform better. These results are in agreement with previous studies which suggest that part of the effect of personality on labour market outcomes operates through productivity. The link between personality and productivity is important because employers are interested in a better understanding of this relationship. For instance, Wilkinson (1998) stated that personnel managers find "attitude" motivation and personality as the most important attributes.

Thus support staffs individually possess diverse personality traits that may influence negatively or positively their performance of jobs assigned to them. A study by Darkwan (2014) examined the impact of personality traits on job performance in the public sector with Kumasi Metropolitan Assembly as a case study. Using a sample of 150 respondents, it was found that the Five Factor Model of Personality was seen to be exhibited by every employee within Kumasi Metropolitan Assembly. The study further indicated that conscientiousness and Extroversion were the major predictive factors which have a positive correlation with job performance. The study

recommended that employers should look out for support staff with Extroversion and conscientiousness first before considering other traits.

Another study by Eswaran *et al.* (2011) investigated the relationship between the Big Five Personality Dimensions and job involvement in the Northern Region of Malaysia. Using a sample of 105 sales/customer service staff of foreign based banking institution, the results of the regression analysis revealed that extroversion and agreeableness are positively related to job involvement. Further, the results showed that emotional stability/neuroticism, conscientiousness and openness to experience did not show any significant relationship with job involvement. Taj and Sanneh (2015) examined the different factors of employee engagement and their impact on organizational performance in the public sector of West Africa while taking the case of Gambia Ports Authority. Using a sample of 327 support staff it was found that various factors have significant impact on employee engagement with the exception of team and co-worker relation. Overall, findings indicated that support staff who feels engaged and connected with the organization attempt to reciprocate and show greater enthusiasm towards work and to the organization, which could lead to improved performance.

For instance, Mkoji and Sikalieh (2012) examined how personality dimensions impact on corporate organizational performance. Using a sample of 85 employees of the Kenya Medical Research Institute (KEMRI), it was found that the conscientiousness aspect personality trait is the most predictive of job performance followed by openness to experience, agreeableness, extraversion and emotional stability/neuroticism. These findings are in line with Hashim *et al.* (2012) study which, using a sample of 231 employees of Maxis Telecommunications Malaysia, the results from the multiple regression analysis indicated that only agreeableness,



conscientiousness and openness to experience significantly moderate the studied relationship.

Sarwar *et al.* (2013) investigated the relationship between personality traits of employees and their turnover in public and private organizations. Further, the study explored the kinds of personality traits that are more dominant in those employees who have high turnover intentions or having high job quitting probability. Using 301 employees, the results from the regression analysis indicated that personality traits like extraversion, emotional stability, conscientiousness and agreeableness were found to be negatively associated to individuals' intents to quit, while openness to experience were observed to be positively related with intention to quit.

Judge and Ilies (2002) study provided a meta-analysis of the relationships between the five factor model of personality and three central theories of performance motivation (goal-setting, expectancy, and self-efficacy motivation). The quantitative review included 150 correlations from 65 studies. Traits were organized according to the five-factor model of personality. Results indicated that Neuroticism and conscientiousness were the strongest and most consistent correlates of performance motivation across the 3 theoretical perspectives. As a set, the Big Five traits are an important source of performance motivation. For any organization to have good performance it is important to identify and validate the salesperson characteristics and behaviours predictive of high performance in selling. Based on this, a number of studies have been conducted with regard to selling behaviours, their individual and organizational antecedents, and salesperson performance (Terho *et al.*, 2014). A Salesperson represents the main point of customers and is critical for any organization. In light of this, it is also important to understand the factors that explain and predict effective employee performance as internal marketers of an organization.

Studies have indicated that personality traits are a critical factor of employee performance.

According to Echchakoui (2013), data about the relationship between personality traits and salesperson's performance is limited. In spite of this, primary studies and meta-analyses have shown that under certain conditions, there are relationships between personality traits and salesperson's performance. These studies suggest that personality traits have a significant impact on employee performance. Market research shows that employee performance is related to adaptive behaviour (Barrick *et al.*, 2005). Despite this, there have been a few studies focusing on adaptive behaviour in face to face environments especially in salesperson environment. The study is to explore the relationship between personal traits and personal selling in organizations. This relationship is anchored in the Personality Traits theoretical framework and also behavioural theories. The personality traits introduced in the literature include the Big Five Model developed by Costa and McCrae (1992). Employees in the marketing offices are observed to alter their behaviour during a customer interaction or across customer interactions based on perceived information about the nature of the selling situation (Echchakoui, 2013). In other words, to practice adaptive selling, a salesperson must change or adapt his/her selling strategies for each client/customer. It can therefore be argued that personality factors moderate the ability of the salesperson to be adaptive in the given situations hence affecting their performance.

There has been very little research that has directly examined the relationship between the Five Factor Personality traits and performance, in marketing offices (Echchakoui, 2013). For instance Sawyerr *et al.* (2009) study indicated that only openness to experience was significantly correlated with employee performance to be

measured by the accuracy of information provided to customers, the speed of response to customer requests and ability to solve problems. However, it is observed that these items do not capture all aspects of employee performance with customers in marketing offices, for example, the ability to generate profit (Echchakoui, 2013). Concerning jobs that require interaction (Personal selling), many studies and meta-analyses have shown that conscientiousness and emotional stability (neuroticism) are the most robust predictors of performance (Barrick & Mount 1991; Barrick & Mount 2001; Bakker *et al.*, 2006). In addition, Barrick and Mount (1991) meta-analyses indicated that Agreeableness and Extraversion are associated with performance in jobs that require interpersonal interaction (personal selling). Bakker *et al.* (2006) similarly established that Agreeableness is an important predictor of performance in cases of negative encounters between employees and customers. The analyses of these studies thus confirmed that agreeableness and extraversion predict employee performance with customers in marketing offices.

Some studies also found that there is a relationship between salesperson customer orientation and customer loyalty. Homburg and Klarmann (2011) investigated which type of salesperson customer orientation is more effective with regard to establishing and maintaining customer loyalty, given the specific situation. The study specifically analysed the moderating impact of a customer's communication style (task orientation and interaction orientation) and specific characteristics of a supplier's products. Using a sample of 538 customers of Twelve companies, 56 sales managers, 195 sales representatives, it was found that there was empirical support for positive, non-significant, and even adverse effects of salespeople's customer-oriented behaviours on customer loyalty, depending on contextual variables.

Considering the fact that most researchers have established that personality traits are linked to one's ability to perform the task, marketing scholars have recognized the importance of personality components, especially in giving some guidance for the selection and hiring of staff (Wiley & Carolyn, 1997). In light of this, Salleh and Kamaruddin (2011) examined the effects of personality traits in determining the sales performance of Takaful (Islamic Insurance) agents. Three personality dimensions were used: self-efficacy, self-monitoring and locus of control and how these factors are related to sales performance. Using a sample of 289 respondents of the Insurance Industry in Malaysia, it was established that two of the three personality dimensions that is, self-efficacy and self-monitoring, were found to be positively related to sales performance, while locus of control was found to be inversely related to sales performance.

In this regard, the varying degrees of self-efficacy present in each individual will motivate the persons to move forward to achieve and increase their performance. Further, self-monitoring was found to predict salesperson's performance in the organization. The implications of the results suggest that the higher the self-efficacy and self-monitoring of salespersons, the higher their performance. The reason is that salespersons that are able to adjust and adapt to different selling situations are likely to be able to win more sales (Salleh & Kamaruddin, 2011). While interpersonal, salesmanship, technical and marketing skills have been established as key determinants of salespersons performance in previous studies, they are not the only factors that influence salesperson performance (Ahmad *et al.*, 2010). This is so because the effects of affective organizational commitment on sales skills dimensions take place.

Several studies have confirmed that effective communication improves job satisfaction (Holtzhausen, 2002), and productivity (Litterst & Eyo, 1982). Additionally, it is established that communication improves employee job performance (Goris, 2007). On the other hand, poor communication results to low employee commitment to the organization (Kramer, 1999). Since personality traits influence an individual's behaviour, it is hypothesized in this study that such factors moderate communication within institutions of higher learning. Communication as an attribute of information capital is the transfer of information from a sender to a receiver with the message being understood by the receiver (Shanon & Weaver, 1949). In a similar way, communication is needed to establish and disseminate the goals of the organization (Ayatse, 2005). From the literature reviewed, little research has been done to explore the relationship between information capital and the moderating effect of personality traits; hence the need to study how personality factors moderate the information variable.

A study by Ikyanyon and Ayatse (2012) examined the relationship among organizational communication, job stress and citizenship behaviour of Information Technology employees in Nigerian Universities. Using a sample of 49 employees, it was found that there is a significant positive relationship between organizational communication and citizenship behaviour while stress levels were not found to be related to either organizational communication or citizenship behaviour.

Previous studies have shown the latent relationship between personality traits and the acceptance of new technology (Barrick & Mount, 1991). However, how the personality traits would affect the intention to accept a new technology has not reached final conclusions. Wang and Yang (2005) explored the role that personality plays on unified theory of Acceptance and Use of Technology. Using a sample of 240

respondents of online stocking, the following findings were established. First, agreeableness with internet experience moderates the social influence-intention relationship. Secondly, conscientiousness was found to moderate the effect of social influence on intention and the effect was negative. Thirdly, neuroticism was found to significantly moderate the facilitating condition-intention relationship with positive effect. This is because a neurotic individual appears to be more anxious for facilities, so he will feel secure in the attempt to a new technology. This study confirmed that personality traits play more important roles as moderators than as external variables (Wang & Yang, 2005). Therefore the quality of communication in a workplace can act as one of the influencing variables on job satisfaction. This is because when the employees in an organization have more information about their work, and can express their ideas and take part in decision making, they provide proper reaction and their job satisfaction increases (Arabshahi & Arabshahi, 2014).

Following this observation, Arabshahi and Arabshahi (2014) examined the relationship between personality traits, job satisfaction and communication satisfaction in a public company to find out whether it is possible to predict job satisfaction and communications satisfaction based on employees' characteristics. Using a sample of 50 directors and employees of a public company in Mashhad, it was found that the level of job satisfaction and communication satisfaction of the staffs could be predicted regarding the five personality characteristics. Based on the findings, nervousness had influence on job satisfaction of employees, negatively and there was no acceptable relationship between job satisfaction and extraversion. These findings are in agreement with Hatfield *et al.* (1982).

Some studies predicted negative effects of personality factors on communication. Jia and Jia (2015) took an individual trait approach to investigate the impact of

personality traits on cyberloafing. Using a sample of 147 working adults, it was found that the Big Five traits significantly predicted Cyber loafing as hypothesized. More specifically, extroversion and openness were positively related while conscientiousness and emotional stability (neuroticism) were negatively related. Agreeableness was found to be non-significant.

In the contemporary world, knowledge is viewed as a potential source of competitive advantage (Spender & Grant, 1996). In light of this, many knowledge management initiatives take the form of a “knowledge repository” or a “discretionary database” which allows employees in an organization to exchange experiences, work methods; improve ideas and market hints (Thorn, 1990). However, effective knowledge management cannot take place without extensive behavioural change (Davenport & Prusak, 1998). Previous studies have indicated that personality traits are linked to an institution’s performance (Barrick *et al.*, 2001; Mount *et al.*, 1998). Based on this, some studies have explored the relationship between personality factors and intellectual capital.

Cabrera *et al.* (2006) investigated some of the psychological, organizational and system-related variables that may determine individual engagement in intra-organizational knowledge sharing. Using a sample of 372 employees from a large multinational company in Spain, it was found that self-efficacy, openness to experience, perceived support from colleagues and supervisors, perception of rewards associated with sharing knowledge, significantly predicted self-reports of participation in knowledge exchange. Some researchers have observed that in spite of the large amount of research investigating personality-performance relationships; very little research has examined the mechanisms through which personality influence performance (Barrick *et al.*, 2001). Consequently, Biderman *et al.* (2007) examined

the relationship between conscientiousness, time-on-task, and academic performance. Using a sample of 188 undergraduate students enrolled in an introductory psychology course at a Southern University, the regression analysis indicated weak relationships when simple summated conscientiousness scores were analysed. When factor scores partialling out common method bias were analysed, conscientiousness was found to predict performance and time on task fully mediated the conscientiousness-performance relationship.

A study by Wei (2010) explored the effect of personality traits on knowledge sharing under extrinsic rewards system. Using a sample of 220 Information Technology professionals from large IT consulting firms in the Netherlands, and step-wise regression analysis, it was found that Extraversion, conscientiousness had a main effect on knowledge sharing. Using a sample of 394 military leaders and their supervisors, results showed that neuroticism and conscientiousness moderated the relationship for only those leaders with high job autonomy and extraversion, regardless of a leaders' level of job autonomy. Chien (2013) study sought to verify the effects of intellectual capital accumulation on the organizational performance of Taiwan-listed biotechnology companies, with organizational citizen behaviour being the moderating variable. Using a sample of 296 respondents, it was found that there was a significant relationship between organizational citizen behaviour and intellectual capital.

Hsieh *et al.* (2011) investigated the relationship among the Big Five personality traits, innovation, and the mediating role of knowledge management. The study used a sample of 550 employees of biotechnology companies in Taiwan. It was found that the Big Five personality traits have an impact on the application of knowledge management. Though this study established that the Big Five personality traits bring

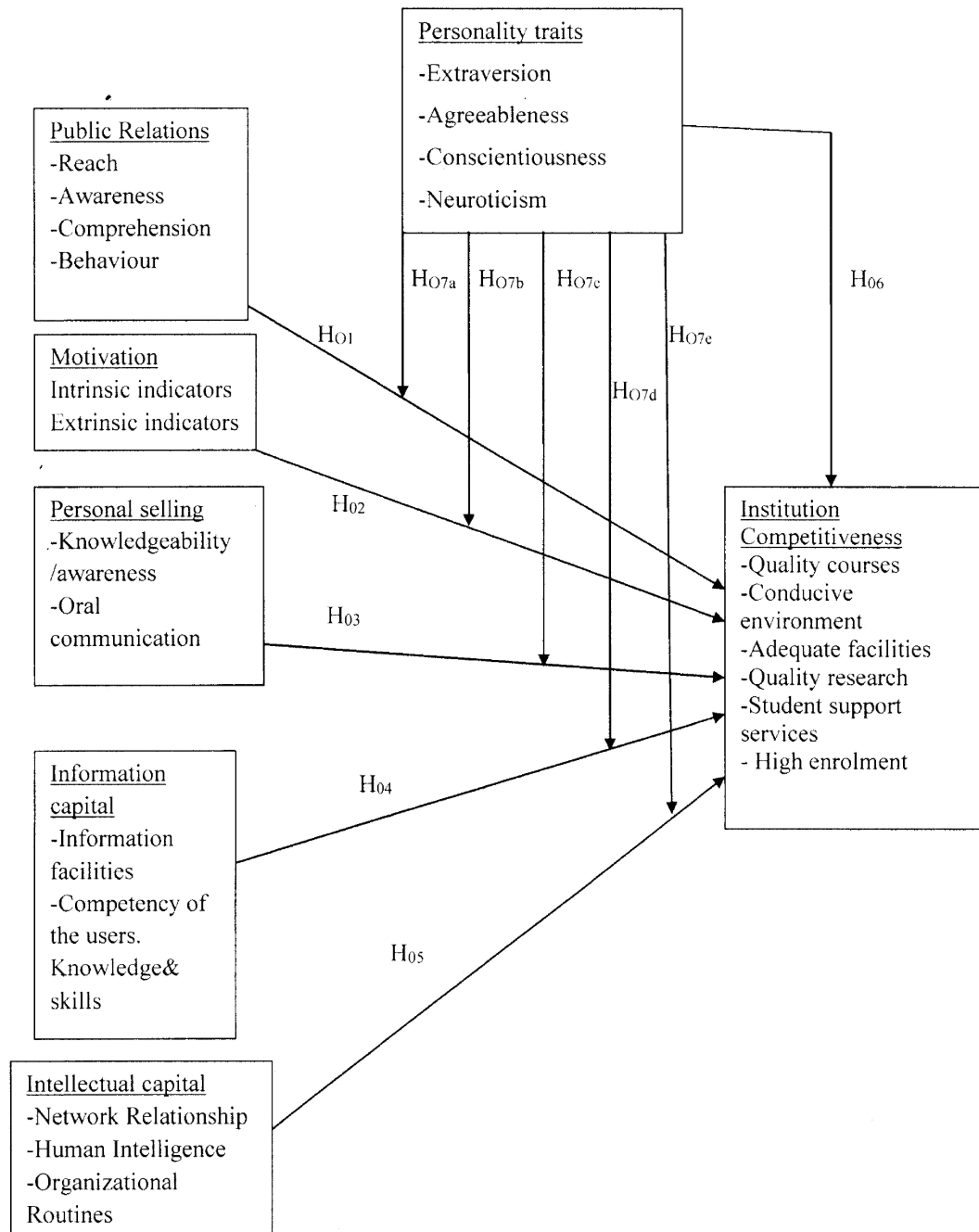


about innovation through the mediating effect of knowledge management, the current study approaches the knowledge management from the moderating effect of personality traits.

According to Manaf (2012) little research has been done into the sharing of knowledge to enhance individual and organizational performance. In light of this, Manaf (2012) examined the roles of personality traits in facilitating knowledge sharing practices and managerial tacit knowledge transfer among managers working in high and low performance local governments. The study used a sample of 308 senior managers working in local governments in Malaysia. The results indicated that the agreeableness, openness and conscientiousness dimensions of individual personality interacted with mentoring programmes in a way that predicted individual performance.

## **2.5 Conceptual Framework**

A Conceptual framework is a diagrammatic representation of variables that shows the interconnections between them. For this study, the conceptual framework was modelled along the objectives of the study and the theories on which it was grounded. It postulates that institution responsiveness affects competitiveness of universities and the relationship between the two constructs is moderated by personality traits as shown in Figure 2.2

**Independent variables****Moderator Variables****Dependent variable**

**Figure 2.2: Conceptual Model of Personality Traits Moderating the Effect of Institution Responsiveness on Institution Competitiveness**

**Source:** Researcher (2016)

Figure 2.2 shows that institution responsiveness, which is the independent variable for this study, manifests itself in public relations, motivation, personal selling,

information and intellectual capital. The dependent variable, university competitiveness, is expressed in terms of adequate facilities, a conducive environment, student's support systems, research and high SSP student's enrolment. The relationship between the two constructs is moderated by personality traits as expressed by its four dimensions; extraversion, agreeableness, conscientiousness and neuroticism. The moderating model shows that under ideal conditions competitiveness of universities is totally dependent on institution responsiveness as it is characterised by one-way flow of information. The moderating effect of personality traits on the relationship between institution responsiveness and competitiveness was also depicted using one way information. This is the typically accepted way of expressing the moderating effect since it is an interaction between predictor and moderator variable (Kim, *et al.*, 2009).

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.0 Introduction

This chapter presents the methodology that was used during the study. It comprises of the study area, research design, target population, sample size and sampling procedure, and data collection. It also contains instrumentation, validity and reliability of the research instruments, data analysis, ethical consideration and limitation.

#### 3.1 Study Area

The study was conducted in Kenya and involved 30 public universities in Kenya which have been offering Self Sponsored Programmes (SSP) in the Faculties of Education and Commerce for a reasonable period of time (Kenya Education Directory, 2014).

#### 3.2 Research Design

A research design is the overall operational pattern or framework of a project that stipulates what information is to be collected, from which sources and by what procedures (Green & Tull, 2009). It provides the specification of methods and procedures for acquiring the information needed in a study. A researcher has to consider a number of factors when deciding which research design to use. These include; the focus of research (orientation of action), the unit of analysis (the person or object of data collection) and the time dimension (Bless & Hiqson-Smith, 1995). The choice of a research design is also guided by the purpose of a study, type of investigation, extent of researcher involvement, the stage of knowledge in the field,

period over which data is to be collected and type of analysis to be carried out (Sekaran, 2003).

The study utilized the explanatory survey research design. This type of design is primarily concerned with determining “what is” and the state of affairs as they exist (Gall *et al.*, 2007). According to Saunders *et al.* (2011) studies that establish causal relationships between variables use explanatory design. The explanatory survey was considered ideal for the study because it involved collecting data at one point in time on institution responsiveness, personality traits and competitiveness of public universities and then establishing their effects without manipulation of variables. The main advantage of the design was that it enabled the researcher to secure the cooperation of the respondents and collected data at one point in time. This made the data collection less expensive in terms of time and cost.

### **3.2.1 Research Paradigm**

Positivism was considered the method-of-choice because of its ability to uphold best the validity of findings and generalizability of results. In the positivistic tradition, proper applications of empirical methods are essential to producing knowledge (Babbie, 2007). Empirical methods specify how the rational structure of scientific investigation is formulated and tested. Positivism assumes an objective world and it seeks to predict and explain causal relations among key variables. Positivism asserts a deterministic and empiricist philosophy, where causes determine effects, and aims to directly observe, quantitatively measure and objectively predict relationships between variables.

### 3.3 Target Population

According to Gay and Airasan (1999), the population of a research comprises all the elements (individuals, subjects, animals, things) that are likely to be affected in one way or another by the outcome of that investigation. The study involved thirty public universities in Kenya as shown (Appendix VIII) because they have been offering several self sponsored programmes in the faculties of education and commerce for a reasonable period of time. The target population for this study comprised 450 senior managers, 60000 support staff and 200000 students of, thirty one public universities. The accessible population of the study comprised of senior managers, support staff and SSP students in the faculties of commerce and education. The university senior managers were chosen because they are in charge of the institution and are best placed to provide data on institution competitiveness. The support staff was selected because they are the implementers of university policies and programmes and are the most appropriate source of data on motivation to work. The students were targeted because they were best placed to provide quality information on personality traits of the universities support staff. A summary of the accessible population is given in Table 3.1

**Table 3.1: Target Population of Senior Managers, Support Staff and Students**

Universities	Respondents	Senior Managers	support staff	Students	Total
30		450	60000	200000	260450
	Total	450	60000	200000	260450

**Source:** Kenya Education Directory (2014)

### 3.3.1 Sample Size and Sampling Procedure

It is usually impossible to involve every member of the target population in research, hence the need for sampling (Sekaran & Bougie, 2010). Borg and Gall (2007) define sampling as the process of selecting an appropriate number of subjects for a defined population. It involves choosing units of the target population which are to be included in a study in such a way that the selected elements represent the population (Wiersma & Jurs, 2005). Best and Khan (2006) state that a sample should be large enough to serve as a representation of the population about which the researcher wishes to generalize, and small enough and economical to manage in terms of subject availability, time and money.

The sample sizes of the universities and three groups namely; senior managers, support staff and students were determined using Slovin's formula as it is recommended for small populations (Dionco-Adetayo, 2011). The formula is given below.

$$n = \frac{N}{1+NE^2}$$

Where: n = sample size

N = population size

E = margin of error or error tolerance (5%)

1 = is a constant

Sample size of universities:

$$n = \frac{N}{1+NE^2} = \frac{30}{1+30 \times 0.05^2} = 28$$

Sample size of senior managers:

$$n = \frac{N}{1+NE^2} = \frac{450}{1+450 \times 0.05^2} = 212$$

Sample size of support staff:

$$n = \frac{N}{1+NE^2} = \frac{60000}{1+60000 \times 0.05^2} = 398$$

Sample size of students:

$$n = \frac{N}{1+NE^2} = \frac{200000}{1+200000 \times 0.05^2} = 400$$

The sample sizes of the senior managers, support staff and students were 212, 398 and 400 respectively. Stratified sampling was used to ensure senior managers, support staff and students from all departments of the universities were involved in the study. Their numbers were then determined using proportionate sampling. At the department level, those who participated in the study were chosen using simple random sampling procedures. Stratified procedures were also used to ensure equitable participation of SSP students from the two faculties of commerce and education. The distribution of the sample is summarized in Table 3.2.

**Table 3.2: Distribution of the Senior Managers, Support Staff and Students**

<b>Samples per University</b>				
<b>Category</b>	<b>Senior Managers</b>	<b>support staff</b>	<b>Students</b>	<b>Total</b>
	$\frac{212}{28} = 8$		$\frac{400}{28} = 14$	37
Per university		$\frac{398}{28} = 14$	5	
Total	8	14	15	37

**Source: Survey study, 2016.**

### **3.4 Data Collection**

Most scholarly inquiries are based on data that researchers set forth to provide evidence to support conclusions of studies (Zikmund *et al.*, 2010). Ability to access and collect data is important as it plays a central role in scholarly inquiry (Leedy &



Ormrod, 2010). During this study, data was gathered from two sources; primary and secondary.

#### **3.4.1 Primary Data**

Primary data is information collected by a researcher specifically for a given research assignment (Hox & Boeyi, 2005). It is specific to a research problem and is collected using procedures that fit the issue under investigation. This means that primary data is original by nature. The main primary data sources are experiments, interviews, observations, focus group discussions, community forums and questionnaires (Driscoll, 2011). These sources generate both qualitative and quantitative data. The primary data of this study on public relations, motivation, personal selling, information and intellectual capital and competitiveness of universities was gathered using questionnaires. The data was provided by the university senior managers, support staff and students. The respondents were identified using university human resource staff lists and students admission records.

#### **3.4.2 Secondary Data**

Secondary data is information that has been collected by other persons for a purpose different from the one under investigation (ACAPS, 2011). Secondary data sources include; research publications, internet resources, policy documents and plans, training manuals, official statistics, administrative, operational and accounts records. During this investigation a variety of secondary data sources were obtained. They included, books, published research work in the area under investigation, university human resource policy and practice documents, students admission records, the internet and related Ministry of Education documents.

### **3.4.3 Data Collection Procedure**

Before proceeding to the field to collect data, an introduction letter was sought from the School of Business and Economics Moi University so as to obtain a research permit from the National Commission for Science, Technology and Innovation (NACOSTI) as required by the law as shown in Appendix I. After being granted the permit, the researcher formally contacted the respondents through their respective universities to explain to them the purpose of the study and seek their consent and cooperation. The dates and venues for administering the questionnaires were fixed in consultation with the respondents. On the appointed dates, the researcher and his assistant explained to the respondents how to fill the questionnaires and then administered them. “Drop-and-pick-later’ method of questionnaire distribution was employed as a way of ensuring reduction in bias errors, greater degree of anonymity for respondents, greater accessibility to geographically dispersed respondents and distorted self-reports and social desirability. The respondents were given ample time to fill the questionnaire, which they did without assistance. The filled questionnaires from each of the universities were collected and arranged awaiting analysis.

Research instruments are measurement tools designed to obtain data on a given research topic of interest (Mouton, 2001). Various instruments are used to collect data, among these are; questionnaires, interviews, observations and experiments (Flick, 2006). Using a variety of tools to collect information enhances the validity and dependability of data (Zohrabi, 2013). This study used questionnaires and a document analysis to collect data. Three questionnaires namely; senior managers, support staff and students were used to gather data. Questionnaires were preferred because they are efficient, economical and practical and allow use of a large sample (Fraenkel & Wallen, 2000). According to Cohen and Manion (2007), questionnaires are cost

effective, free from bias and give respondents adequate time to give well thought answers. Another advantage of questionnaires is that they do not require as much effort from the questioner like verbal or telephone interviews (Salkind, 2009).

Data on public relations, motivation, personal selling, information and intellectual capital, personality traits and competitiveness of universities was gathered using senior managers, support staff and students questionnaires respectively. The questionnaires were constructed using both open and closed-ended items (statements). The close-ended items were of the Likert scale type. The subjects responses to the items in the questionnaire were scored on a 5-point scale (1=Strongly Disagree to 5=Strongly Agree). Responses generated by the items for each construct were averaged and used as its measure. The close-ended items were used because they are easy to fill, takes little time to complete, keeps the respondent' focused on the subject and are fairly easy to tabulate and analyze (Frankfort & Nachmias, 2009). They also allow a researcher to build rapport, encourage participation of respondents in a study and get additional information by asking follow-up questions (Biemer & Lyberg, 2003). Data generated by the open-ended items supplement those generated by the close-ended items.

Document analysis refers to the examination of documents that contain information about the phenomenon under investigation to generate data (Payne & Payne, 2004). Documents are written text and artifacts produced by individuals, groups or organizations in the course of their every day practices and are geared exclusively for their needs (Mouton, 2001). Document analysis is a form of qualitative research in which documents are interpreted by the researcher to give voice and meaning around an assessment topic. It incorporates coding content into themes similar to how focus

group or interview transcripts are analyzed (Lawrence & Robson, 2007). The document analysis guide was used to gather data on students' admission trends, existing personnel and administrative policies and practices in the universities, artifacts such as publications, innovations, handbooks, training manuals and posters.

### **3.5 Measurement Scales**

This study had five independent variables namely; public relations, motivation, personal selling, information and intellectual capital which constituted the institutions' responsiveness. In addition to these were a dependent variable; institution competitiveness and a moderator variable; personality traits. These variables were measured using data generated by three instruments; senior managers, support staff and students questionnaires. The measurement was done via a 1 (strongly disagree) to 5 (strongly agree) point Likert-type scale based on the extent to which the respondents agreed with the statements.

#### **3.5.1 Public Relations**

The measurement for public relations was adopted from the scale used by (Hutton, 1999; Smith, 2005). Twenty items scale was adopted and slightly modified to capture public relations. The construct was measured with respect to its determinants such as reach, awareness, comprehension and behaviour. Reach is about ability to identify and connect with potential clients while awareness is concerned with ability to make the target audience be aware of the message (Sriramesh & Verčič, 2009). Comprehension refers to ability to make the audience understand what they did not before receiving the message while behaviour is concerned with what the target audience does as a result of the message (Wilcox & Cameron, 2011).

### **3.5.2 Motivation**

The measurement for motivation was adopted from the scale used by (Herzberg *et al.*, 1959). Thirty three items scale was adopted and slightly modified to capture motivation. The variable was measured using both intrinsic and extrinsic motivators. Shanks (2004), recommends use of the two in the measurement of motivation as a combination of the two yields better outcomes. Intrinsic aspect of the construct was measured with respect to “that which comes from within the employees” (Ganta, 2014).

### **3.5.3 Personal Selling**

The measurement for personal selling was adopted from the scale used by (Zallocco *et al.*, 2009; Jackson *et al.*, 2010). Twenty six items scale was adopted and slightly modified to capture personal selling. The construct was measured with respect to its three dimensions; knowledgeability/awareness, oral communication and personality.

### **3.5.4 Information Capital**

The measurement for information capital was adopted from the scale used by (Chi & Sin, 2015; Robert *et al.*, 2007; Choy *et al.*, 2013). Twenty one items scale was adopted and slightly modified to capture information capital. Information capital was operationalised as assets, knowledge and skills that enhance an organization’s ability to exchange and share information and gain competitive advantage (Bar-Isaac *et al.*, 2008).

### **3.5.5 Intellectual Capital**

The measurement for intellectual capital was adopted from the scale used by (Kalkan *et al.*, 2014; Kotler, & Armstrong, 2012; Engstrom *et al.*, 2003). Twenty six items scale was adopted and slightly modified to capture intellectual capital. Three aspects

namely; relationship, human and organizational, of intellectual capital were measured during the study. Relationship capital is concerned with relationships a company entertains with external parties, such as suppliers, partners, clients and vendors while human capital refers to knowledge and competencies residing with the company's employees (Majfud, 2009). Organizational capital refers to the collective know how that goes beyond the capabilities of individual employees such as information systems; policies and procedures; intellectual property (Sullivan, 2000).

### **3.5.6 Institution Competitiveness**

The measurement for institution competitiveness was adopted from the scale used by (Anos-Casero & Udomsaph, 2009; Lall, 2001; Malburg, 2000). Twenty three items scale was adopted and slightly modified to capture institution competitiveness. The variable was measured using its four determinants; quality of services, technology, cost, environment and good leadership.

### **3.5.7 Personality Traits**

The measurement for personality traits was adopted from the scale used by (Judge & Ilies, 2002, Ahmed *et al.*, 2013, Yahaya *et al.*, 2012; Hashim *et al.*, 2012). Thirty six items scale was adopted and slightly modified to capture personality traits. The measurement was done via a 1 (strongly disagree) to 5 (strongly agree) point Likert-type scale based on the extent to which the respondents agreed with the statements. The construct was measured with respect to four of the 'Big Five Factor' domains namely; extraversion, agreeableness, conscientiousness and neuroticism. The dimension of openness to experience was not measured because it relates to imaginativeness, artistic, curious, creative and intellectually oriented. The effect of this trait was considered potentially ambiguous given that the study was conducted in

public universities. While flexibility and creativity might be helpful in many occupations, they might be a hindrance in others, especially in occupations which penalize autonomy and non-conformity (Darsana, 2013). In a laboratory setting, Muller and Schwieren (2012) observe a negative impact of openness on performance of public institutions.

### **3.5.8 Control of Common Method Bias**

Common Method bias or variance refers to the spurious correlations among constructs which is due to the fact that their data was obtained from the same respondent and at the same time (Krishnaveni & Deepa, 2013). It is attributed to the measurement method rather than to the constructs the measures represent. According to Podsakoff *et al.* (2012) potential sources of common methods bias are: Use of a common data source or rater for both independent and dependent variables, Poorly designed (complexity, ambiguity and scale format) survey instrument, Item's context (such as its position within the sequence of questions, its spatial relationship to other questions, and the number of questions) which affects the rater's responses based on its stimulus to the rate.

Measurement context (whether the independent and dependent variables are captured at the same point in time, in the same location or using the same medium) and Raters' and instrument characteristics such as knowledge of the subject, their perceived ability to process and understand the subject, the length of the survey instrument. A number of techniques were used during the design of the experiment to reduce the chances of common methods bias. Among these were obtaining independent and dependent variables data from different sources (senior manager, support staff and

students), avoiding double barrelled (compound) items, validating the data collection tools and maintaining confidentiality.

### **3.6 Validity and Reliability of the Research Instruments**

This section covers validity and reliability of the research instruments.

#### **3.6.1 Validity**

Validity is the degree to which an instrument accurately measures what it purports to measure (Gay, 1992). The study validated the instruments through content validity, face validity, criterion validity and construct validity (Zikmund *et al.*, 2010). Validity of an instrument refers to the quality that a procedure or tool used in a research is accurate, correct, true, meaningful and right. Moser and Kalton (1971) defined validity of an instrument or scale as the success of the scale in measuring what it sets out to measure so that differences in individuals scores can be taken as representing true differences in the characteristic under study. Validity is the accuracy and meaning of inferences which are based on the research results. Validity is the degree to which results obtained from the analysis of data actually represents the phenomenon under study (Kerlinger, 1993).

#### **3.6.2 Reliability**

Reliability refers to the degree to which an instrument yields consistent results or data after repeated trials (Tabachnick & Fidell, 2007). Reliability tests enable a researcher to check the items in a data collection tool and clear any ambiguities in it before it is used during a study (Kombo & Tromp, 2006). The senior managers, support staff and students questionnaires were pilot-tested for reliability. The piloting was done using a sample of ten senior managers, fifteen support staff and twenty students from the University of Nairobi. The reliabilities were estimated using the Cronbach Alpha



method. The method is recommended when a test tool is administered only once and has multiple response items (Borg & Gall, 2003). The questionnaires that yielded composite reliability coefficients of 0.7 and above (Fraenkel & Wallen, 2000) were considered reliable.

### **3.6.3 Data Preparation and Cleaning**

Before conducting analysis, data was screened for errors and cleaned. Visual checks were made to identify data entry-errors or implausible values for each variable. Range checks were used to detect invalid and unusual values. Data was also summarised using frequencies and the results used to identify missing variables. The Listwise deletion, which is a Statistical Package for Social Science (SPSS) package default standard was used to exclude the missing items when analysing the data (Field, 2005). Univariate and multivariate outliers were detected using standardized residuals and Mahalabonis distance ( $D^2$ ). Items with standardized residual above 3.0 or below -3 were considered as outliers and deleted (Tabachnick & Fidel, 2007).

### **3.7 Data Analysis**

A code book was prepared for the three questionnaires; senior managers, support staff and students that were used to collect data. A code book is a document that contains the descriptions of how data is coded and resultant codes stored in computer readable format (Pallant, 2007). Three data files; senior managers, support staff and students were created using the SPSS computer application. The coded data was then keyed into the files. Data on institution competitiveness were contained in the senior managers' files while the support staffs file contained data on public relations, motivation, personal selling, information capital and intellectual capital. The students' file had data on personality traits of support staff. The students' data file was linked to

those of the support staff and senior managers during data analysis using primary and foreign keys. A primary key is an attribute that uniquely identifies a record in the parent data table while a foreign key links each record in a child table to the parent table that contains the matching candidate key (Connolly & Begg, 2005). Qualitative techniques namely; frequencies, percentages, means and standard deviation were used to summarize and describe data while simple, multiple and hierarchical regression procedures were used to test hypotheses.

### **3.7.1 Merging of Data**

Data collected from senior managers on institution competitiveness, support staff on institution responsiveness as well as data collected from SSP students on personality traits were each averaged and aggregated to institution level data; a composite index was thus computed to connect senior managers, support staff and SSP students. The basis was that the unit of analysis was each institution. The data were merged by composite index design similar to one utilized by Xu *et al.* (2005). The essence of merging is to develop indices of senior managers, support staff and SSP students' data for each institution.

### **3.7.2 Descriptive Statistics**

Data was described and summarised using frequencies and percentages while the Likert summated method was used to compute the means and standard deviations of the participants' responses to items that were used to measure each variable. The means were then transformed into indices (measures) of the variables. The Kolmogorov Smirnov's and Shapiro Wilk test was used to establish normality of variables while the Pearson's Product Moments Correlations was used to examine the linearity of association between variables.

### **3.7.3 Hypothesis Tests**

Eleven hypotheses tests were conducted during the study using multiple and hierarchical regression procedures. The first five tested effects of public relations, motivation, personal selling, information and intellectual capital on competitiveness of public universities. The sixth hypothesis tested the effect of personality trait on institution competitiveness. The combined effect of public relations, motivation, personal selling, information capital, intellectual capital (institution responsiveness) and personality trait on competitiveness of public universities was then established using multiple regression. Lastly, the moderating effect of personality traits on the relationship between institution responsiveness and competitiveness of public universities was determined using hierarchical regression. This tested hypotheses seven to eleven.

### **3.7.4 Regression Assumption Tests**

Regression analysis makes a number of assumptions about data which if violated negatively affect the results (Pallant, 2005). These assumptions include; normality, linearity between the independent and dependent variables, multicollinearity and homoscedasticity. Diagnostic test were done to ensure that these assumptions were not violated before the regression procedure was conducted. Normality was tested using the Kolmogorov Smirnov and Shapiro Wilk procedure while linearity between the explanatory variables and the outcome was checked using Pearson's Correlations. Presence of multicollinearity was examined using Tolerance and Variance Inflation Factor (VIF) statistics while homoscedasticity was tested using the standardized residual scatter plots.

### 3.7.5 Regression Analysis

The effect of each of the five factors; public relations, motivation, personal selling, information and intellectual capital and their interaction with personality traits on competitiveness of public universities was determined using multiple regression. Multiple regression was used to establish the effect of institution responsiveness as measured by their public relations, motivation, personal selling, and information and intellectual capital combined on competitiveness of public universities. Regression was chosen because it is ideal for determining causal relationship between continuous variables and explaining the power of explanatory variables in accounting for variations in the outcome (Field, 2005). Its other advantage is that it enables exploration of interrelationships among a set of variables and is recommended for investigating complex real life rather than laboratory based research questions (Huizingh, 2007).

### 3.7.6 Analytical Models

Therefore, to test the hypotheses both multiple and hierarchical regression analyses were conducted to analyze moderating effect of personality traits on the relationship between institution responsiveness and institution competitiveness of public universities in Kenya.

### 3.7.7 Testing Hypotheses of Institution Responsiveness on Institution Competitiveness

To test hypotheses H<sub>01</sub>- H<sub>05</sub> multiple regression analysis as shown in model 1 was used.

$$Y = \alpha + \beta_1 ZPR + \beta_2 ZMOT + \beta_3 ZPS + \beta_4 ZINFC + \beta_5 ZINTC + \epsilon \dots \dots \dots (1)$$

Y is institutional competitiveness

$\alpha$  is the intercept

PR is public relations  
 MOT is motivation  
 PS is personal selling  
 INFC is information capital  
 INTC is employee intellectual capital  
 $\beta_1, \beta_5$  are the parameter estimates  
 $\varepsilon$  is the error term  
 Z is Z score

### 3.7.8 Testing Moderator and Interaction with Predictors on Institution Competitiveness

To test effects of moderator and interactions with institution responsiveness, hierarchical regression analysis was conducted on hypotheses H<sub>06</sub>, H<sub>07a</sub>, H<sub>07b</sub>, H<sub>07c</sub>, H<sub>07d</sub> and H<sub>07e</sub>. Personality traits plus interaction effects with institution responsiveness on institution competitiveness were included in the regression models 2 to 7.

$$IC = \alpha + \beta_1 ZPR + \beta_2 ZMOT + \beta_3 ZPS + \beta_4 ZINFC + \beta_5 ZINTC + \beta_6 ZPT + (2) \text{-----}\varepsilon$$

$$IC = \alpha + \beta_1 ZPR + \beta_2 ZMOT + \beta_3 ZPS + \beta_4 ZINFC + \beta_5 ZINTC + \beta_6 ZPT + \beta_7 ZPR * ZPT + \text{-----}\varepsilon$$

(3)

$$IC = \alpha + \beta_1 ZPR + \beta_2 ZMOT + \beta_3 ZPS + \beta_4 ZINFC + \beta_5 ZINTC + \beta_6 ZPT + \beta_7 ZPR * ZPT + \beta_8 ZMOT * ZPT + (4) \text{-----}\varepsilon$$

$$IC = \alpha + \beta_1 ZPR + \beta_2 ZMOT + \beta_3 ZPS + \beta_4 ZINFC + \beta_5 ZINTC + \beta_6 ZPT + \beta_7 ZPR * ZPT + \beta_8 ZMOT * ZPT + \beta_9 ZPS * ZPT + (5) \text{-----}\varepsilon$$

$$IC = \alpha + \beta_1 ZPR + \beta_2 ZMOT + \beta_3 ZPS + \beta_4 ZINFC + \beta_5 ZINTC + \beta_6 ZPT + \beta_7 ZPR * ZPT + \beta_8 ZMOT * ZPT + \beta_9 ZPS * ZPT + \beta_{10} ZINFC * ZPT + (6) \text{-----}\varepsilon$$

$$IC = \alpha + \beta_1 ZPR + \beta_2 ZMOT + \beta_3 ZPS + \beta_4 ZINFC + \beta_5 ZINTC + \beta_6 ZPT + \beta_7 ZPR * ZPT + \beta_8 ZMOT * ZPT + \beta_9 ZPS * ZPT + \beta_{10} ZINFC * ZPT + \beta_{11} ZINTC * ZPT + (7) \text{-----}\varepsilon$$

Where PT=Personality traits.

ZPR\* ZPT = Z score public relations\* Z score personality traits.

ZMOT\*ZPT = Z score motivation\* Z score personality traits.

ZPS\*ZPT= Z score personal selling\* Z score personality traits.

ZINFC\*ZPT= Z score information capital\* Z score personality traits.

ZINTC\*ZPT= Z score intellectual capital\* Z score personality traits.

$\beta_1 - \beta_{11}$  = parameter estimates

### **3.8 Ethical Consideration**

Several ethical issues were considered when conducting this research. Among these were; consent, privacy and safety of the subjects, respecting autonomy and treating respondents equitably. Hammersley and Goldsmith (2012) emphasis that a researcher must obtain informed consent from each respondent before engaging him/her in a study. They add that safety of those who participate in a study should also be of primary concern to the researcher. Hurdley (2010) recommends that informants must be anonymised in research reports to ensure privacy and confidentiality. Ethics further demands that no one should be favoured or unjustly discriminated against (Economic and Social Research Council, 2010).

During the study all the participants were informed about its purpose and objectives. Compliance with ethical boundaries such as informed consent, respect of privacy, avoidance of harm and deception (Frey, 2005) was guaranteed to all respondents. Respondents were also informed about the nature of the study's outputs and how the data collected will be managed during and after the project. The participants were further informed of their right to withdraw from the study at any time. Privacy and confidentiality were ensured by using codes instead of names of the respondents and

reporting only aggregated data. The researcher and his assistants showed the respondents respect and handled them with courtesy during meetings and administration of questionnaires.

### **3.9 Limitations of the Study**

This study like most other researches had some limitations. First, the research used self-report questionnaires as the primary data source. Although data generated by self-report questionnaires have been used in the past to measure variables and test theories with success (Farrington, 2004), validity of their data is always questionable due to response bias. This is due to the tendency of participants to provide information that meets the real or perceived needs of the researcher.

Secondly, the study used perceptual rather than objective measures of institution responsiveness, personality traits and competitiveness of universities. Research has demonstrated that perceptual measures of variables are appropriate when their objective measures are not available (Wall, *et al*, 2004; Delaney & Huselid, 1995). Despite this, use of perceptual measures was considered a limitation as inclusion of more objective measures could have strengthened the research.

The low questionnaires return rate was another limitation. The return rates were fairly low despite the researcher putting in place mechanisms to boost them such as, sending reminders, extending duration of the survey and assuring the subjects of anonymity of their responses (Nulty, 2008). The return rates were 81.1 % (172) for senior managers, 77.9% (310) for support staff and 71.4% (284) for students. According to Sivo *et al.* (2005), low questionnaire return rates leads to a reduction in sample sizes and an increase in non-response error. Ehrmann (2004) asserts that low return rates often lead

to biased findings as the analytic sample is neither representative of the whole sample nor the population. Finally, the study relied heavily on quantitative methods and may thus suffer from its shortcomings. A balanced combination of both quantitative and qualitative methods could possibly provide greater insights and different outcomes.



## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION AND INTERPRETATION

#### 4.0 Introduction

This chapter presents data analysis, results of the study and their interpretations. It is divided into six sections with the first and second examining validity, reliability and questionnaire response rates. The third, fourth and fifth sections are on data cleaning, descriptive analysis and results of the hypothesis tests while the sixth gives a summary of the hypotheses test results.

#### 4.1 Validity and Reliability of the Instruments

The senior managers, support staff and students questionnaires and the document analysis guide together with the objectives of the study were given to four experts in the school of business management, Moi University. They examined the face and content validity of the tools and gave comments and recommendations with respect to language and whether the tools addressed the study objectives. The recommendations of the experts were used to improve the instruments by reframing the items that were not clear and deleting those that were irrelevant and ambiguous before they were used in the field.

The reliabilities of the senior managers, support staff and students questionnaire were estimated using the Cronbach Alpha method. Pilot data was gathered using a sample of ten senior managers, fifteen support staff and 20 SSP students from the University of Nairobi. The internal consistencies of the items measuring each construct in the questionnaires were examined. Those that did not correlate with other items were

deleted or rephrased. Inter-item inconsistencies were observed among statements on openness to experience and were deleted. The senior managers, support staff and students questionnaires yielded composite reliability coefficients of 0.85, 0.78 and 0.72 respectively. The instruments were considered reliable as their reliability coefficients were above the recommended 0.7 threshold (Fraenkel & Wallen, 2000).

#### **4.1.1 Questionnaires Return Rates**

A total of 1010 questionnaires were administered; 212 to senior managers, 398 to support staff and 400 to SSP students. The response rates were above average though somewhat low despite the researcher putting in place mechanisms to boost return rates such as sending reminders, extending duration of the survey and assuring the subjects of anonymity of their responses (Nulty, 2008). The overall response was 81.1% (172) for senior managers, 77.9% (310) for support staff and 71% (284) for students. There is no agreed minimum responses return rate, however, the higher it is the better. Babbie *et al.* (2001) stated that a response rate of 50 per cent is adequate for analysis and reporting while 60 per cent is good. Overall, the used response rates were accepted given that the main objective of conducting a survey is to obtain valid data in a form that can be analysed and conclusions drawn about the target population (Oso & Onen, 2005). The response rates are shown in Table 4.1.

**Table 4.1: Response Rate of Senior Managers, Support Staff and Students**

	Senior Managers	Support Staff	Students
Sample size number	212	398	400
Number responded	172	310	284
Number not responded	40	88	114
Response rate %	81.1	77.9	71

*Source: Survey Data (2015)*

## 4.2 Data Preparation and Cleaning

Once data were collected they were screened and cleaned before analysis was done. Screening and cleaning involved visual and range checks for errors and unusual entries, summarising data using frequencies then identifying missing variables, detection of outliers and carrying out the necessary corrections.

### 4.2.1 Visual and Range Checks

The senior managers, support staff and students' questionnaires that were used to gather data were reviewed to spot any errors and irregularities that escaped notice or correction during data collection. Visual checks were made to identify data entry-errors or implausible values while range checks were use to detect invalid and unusual values in the data files. Each of the three files that contained the senior managers, support staff and students data were inspected row by row and any implausible values corrected or deleted after cross-checking with the entries in the source. Responses to each item were summarized using frequencies, which were then checked

for unusual values. For example the code for gender was 1=male and 2=female, an entry like 3 in the column that stored this piece of information was considered invalid.

#### **4.2.2 Missing Variables**

Missing data is a common problem in social science and health research (Allison, 2002). According to Johnson and Young (2011), missing data is caused by, outright refusal by subjects to answer, respondents overlooking or forgetting to answer some questions in self-administered surveys, not knowing the answer, not having the required information at the time of the survey, and inapplicability of the question. Indices of the constructs were summarised using frequencies and the results used to identify missing variables. Data was explored for possible problem cases such as missing values before data was subjected for further analysis.

In this study, missing values were evaluated with respect to cases as distributed in the five Likert scale points. As demonstrated in the Table 4.2. On the side of senior managers most cases 172 (81.1%) had no missing values, 10 (4.7%) cases had one missing value, 12 cases (5.7%) had two missing values, 6 (2.8%) cases had three missing values while 12(5.7%) had over three missing values. For support staff most cases 310 (77.9%) had no missing values, 27 (6.8%) cases had one missing value, 11 cases (2.8%) had two missing values, 15 (3.8%) cases had three missing values while 35 (8.8%) had over three missing values. For students most cases 284 (71%) had no missing values, 36 (9%) cases had one missing value, 14 cases (3.5%) had two missing values, 20 (5%) cases had three missing value while 46 (11.5%) had over three missing values.

**Table 4.2: Distribution of Number of Missing Values per Case**

Number of missing values	Number of cases Senior Managers	Percentage	Number of cases support staff	Percentage	Number of cases Students	Percentage
0	172	81.1	310	77.9	284	71
1	10	4.7	27	6.8	36	9
2	12	5.7	11	2.8	14	3.5
3	6	2.8	15	3.8	20	5
Over 3	12	5.7	35	8.8	46	11.5
<b>Total</b>	<b>212</b>	<b>100.00</b>	<b>398</b>	<b>100.0</b>	<b>400</b>	<b>100.00</b>

*Source: Survey Data (2016)*

#### 4.2.3 Outliers

All the study variables were screened for presence of univariate and multivariate outliers. The screening was deemed necessary because regression which was one of the procedures used to analyse data works best when outliers are not present (Jose, 2013). The univariate and multivariate outliers were detected using standardized residuals and Mahalabonis distance ( $D^2$ ). The standardized residual method was used to detect the univariate outliers. Items with standardized residual above 3.3 or below -3.3 were considered as univariate outliers (Tabachnick & Fidell, 2007). There were no z-scores outside the set limits hence there was no outlier.

Data on all the dimensions of institution responsiveness; public relations, motivation, personal selling, information and intellectual capital were examined for multivariate outliers using the Mahalabonis distance ( $D^2$ ) test. The  $\alpha = 0.001$  criterion was used to detect the multivariate outliers. The test results showed that there were no multivariate outliers and all the items were subsequently used for further analysis.

#### 4.2.4 Profile of Public Universities

Profile of the participating public universities was considered relevant so as to understand the influence on their competitiveness. The profile of public universities was measured in terms of age, size and location. Institution age often indicates the length of time the university has been in existence and tends to have an effect on institution's responsiveness and institution competitiveness. This is because it can expand over time by accumulating knowledge through learning by doing, increasing confidence in problem solving capability and having the ability to do better in terms of responsiveness. Most universities (n = 15, 53.6%) have been operating for 2 years, (n = 6, 21.4%) for 4 years, (n = 1, 3.6%) for 3 years, (n = 1, 3.6%) for 8 years, (n = 1, 3.6%) for 14 years, (n = 1, 3.6%) for 21 years, (n = 1, 3.6%) for 28 years, while (n = 1, 3.6%) have been operating for 30 years and (n = 1, 3.6%) have been operating for 31years.

Size was measured by the total number of current full-time employees and private sponsored students which was also seen as an important determinant of institution responsiveness and institution competitiveness. Where most institutions (n = 18, 64.3%) employed 1-5000 support staff, (n = 7, 25.0%) employed 5001-10000 support staff, (n = 2, 7.1%) employed 10001-15000 support staff and (n = 1, 3.6%) employed 15001 and above support staff. Pertaining location, it can influence enrolment of self sponsored students. Majority of the universities (n = 16, 57.1%) were located in urban and (n = 12, 42.9%) were located in rural areas as shown in Table 4.3.

**Table 4.3: Profile of Public Universities**

Frequency	Percent
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<b>Age</b>		
2	15	53.6
4	6	21.4
3	1	3.6
8	1	3.6
14	1	3.6
21	1	3.6
28	1	3.6
30	1	3.6
31	1	3.6
<b>Size</b>		
1-5000	18	64.3
5001-10000	7	25.0
10001-15000	2	7.1
15001 and above	1	3.6
<b>Location</b>		
Urban	16	57.1
Rural	12	42.9

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*Source: Survey Data (2016)*

#### **4.2.5 Data Management**

This section presents coding of merged data in statistical software for analysis. This involved assigning values, measures and screening.

#### **4.2.6 Merging of Data**

Data collected from two hundred and twelve (212) senior managers on competitiveness, three hundred and ninety eight (398) support staff on institution responsiveness and from four hundred (400) self sponsored students on personality traits were each averaged and aggregated to institution level data. The basis was that,

the unit of analysis was each institution. The data was merged by composite index design similar to one utilized by Xu *et al.* (2005). The essence of merging is to develop indices of senior managers, support staff and students data for each institution to be used in descriptive and inferential statistics for testing the model.

### **4.3 Descriptive Analysis of Study Variables**

A descriptive analysis of the study variables; employee's public relation, motivation, personal selling, information and intellectual capital, personality traits and competitiveness of the universities was done prior to hypothesis tests. The analysis helped in extracting meaning from data and uncovering emerging trends.

#### **4.3.1 Support Staff Public Relations**

Public relations was measured using 20 items. The respondents were asked to indicate the extent to which they agreed with statements on public relations using a five points (1=strongly disagree to 5=strongly agree) scale. The descriptive results for public relation indicates that on average, support staff arbitrated the construct somehow agreeable with mean and standard deviation values of ( $M = 3.942$ ,  $SD = 0.102$ ) respectively with distribution that was remarkably consistent. The support staff public relations in the universities was rated average given that it was measured out of a maximum of 5 points. The low standard deviation was an indication that variation in the level of the support staff public relations among the universities was not high.

#### **4.3.2 Support Staff Motivation**

The respondents were asked to indicate the extent to which they were motivated at their work places using a set of 33 items. The extent of motivation was rated using a 5 points scale: (1=strongly disagree to 5=strongly agree). The descriptive results for support staff motivation indicates that on average, support staff rated the construct



somewhat agreeable with mean and standard deviation values of ( $M = 3.937$ ,  $SD = 0.106$ ) respectively with distribution that was remarkably consistent. The support staff motivation in the universities was rated average given that it was measured out of a maximum of 5 points. The low standard deviation was an indication that variation in the level of the support staff motivation among the universities was not high.

#### **4.3.3 Personal Selling of Support Staff**

Personal selling was measured using 26 items. The items were used to rate various support staff personal selling abilities as perceived by the respondents on a 1=strongly disagree to 5=strongly agree. The descriptive results for support staff personal selling indicates that on average, support staff rated the construct somewhat agreeable with mean and standard deviation values of ( $M = 3.919$ ,  $SD = 0.101$ ) respectively with distribution that was remarkably consistent. The support staff personal selling in the universities was rated average given that it was measured out of a maximum of 5 points. The low standard deviation was an indication that variation in the level of the support staff personal selling among the universities was not high.

#### **4.3.4 Information Capital of Support Staff**

A set of 21 items were used to measure information capital. The respondents were asked to indicate the extent to which they agree with each of the 21 items using a 5-point scale ranging from 1=Strongly Disagree to 5=Strongly Agree. The descriptive results for support staff information capital indicates that on average, support staff rated the construct somewhat agreeable with mean and standard deviation values of ( $M = 3.921$ ,  $SD = 0.120$ ) respectively with distribution that was remarkably consistent. The support staff information capital in the universities was rated average given that it was measured out of a maximum of 5 points. The low standard deviation

was an indication that variation in the level of the support staff information capital among the universities was not high.

#### **4.3.5 Intellectual Capital of Support Staff**

Intellectual capital was measured using 26 items. The items were on three aspects of intellectual capital namely; relationship, human and organizational. The participants rate support staff intellectual capital using a 5-points scale; 1=strongly disagree to 5=strongly agree. The descriptive results for support staff intellectual capital indicates that on average, support staff rated the construct somewhat agreeable with mean and standard deviation values of (M = 3.906, SD = 0.137) respectively with distribution that was remarkably consistent. The support staff intellectual capital in the universities was rated average given that it was measured out of a maximum of 5 points. The low standard deviation was an indication that variation in the level of the support staff intellectual capital among the universities was not high.

#### **4.3.6 Personality Traits of Support Staff as Per SSP Students**

It was conceptualised that the relationship between support staff responsiveness and competitiveness of universities was moderated by their personality traits. The construct was measured using 36 items. Four aspects of personality traits; extraversion, agreeableness, conscientiousness and neuroticism were measured using Likert 1=strongly disagree to 5=strongly agree. The descriptive results for university competitiveness indicates that on average, support staff rated the construct somewhat agreeable with mean and standard deviation values of (M = 3.955, SD = 0.121) respectively with distribution that was remarkably consistent. The university competitiveness was rated average given that it was measured out of a maximum of 5

points. The low standard deviation was an indication that variation in the level of the university competitiveness among the universities was not high.

#### **4.3.7 Institution Competitiveness of Senior Managers**

Competitiveness of the university was measured using 23 items. The respondents were asked to indicate the extent to which universities were attractive using a 5 points scale; 1=strongly disagree to 5=strongly agree. The descriptive results for university competitiveness indicates that on average, senior managers rated the construct somewhat agreeable with mean and standard deviation values of ( $M = 4.0830$ ,  $SD = 0.100$ ) respectively with distribution that was remarkably consistent. The university competitiveness was rated average given that it was measured out of a maximum of 5 points. The low standard deviation was an indication that variation in the level of the university competitiveness among the universities was not high as shown in Table 4.4.

**Table 4.4: Descriptive Analysis of Study Variables**

	Public Relation	Motivation	Personal Selling	Information Capital	Intellectual Capital	Personality Traits	Competitiveness
Valid	28	28	28	28	28	28	28
Missing	0	0	0	0	0	0	0
Mean	3.942	3.937	3.920	3.921	3.906	3.955	4.083
Median	3.937	3.929	3.925	3.906	3.880	3.937	4.068
Mode	3.73 <sup>a</sup>	3.77 <sup>a</sup>	3.69 <sup>a</sup>	3.57 <sup>a</sup>	3.68 <sup>a</sup>	3.64 <sup>a</sup>	3.89 <sup>a</sup>
Std. Deviation	0.102	0.106	0.101	0.130	0.137	0.121	0.100
Minimum	3.73	3.77	3.69	3.57	3.68	3.64	3.89
Maximum	4.12	4.14	4.13	4.18	4.31	4.29	4.38

a. Multiple modes exist. The smallest value is shown

#### 4.4 Reliability and Validity of the Constructs

Reliability is the extent to which a variable is consistent in what was supposed to measure (Hair *et al.*, 2006). Reliability of the items for the study was assessed by determining the items' Cronbach's alpha coefficients. The generally acceptable level of Cronbach's alpha is above 0.70 and it may decrease to 0.60 in exploratory research (Hair *et al.*, 2006). The desired minimum level of Cronbach's alpha for this study was 0.70.

##### 4.4.1 Reliability Analysis for Public Relations

All the items in the public relations construct had recorded Cronbach's alpha reliability coefficient of 0.708 and standardized item alpha of 0.713. In short, all the dimensions in the construct had exceeded the recommended threshold value of 0.70 for Cronbach's alpha coefficients demonstrating good internal consistency. However, ten items had corrected item-total correlation threshold value of less than 0.30 which according to Nunnally and Bernstein (1994) were identified as unacceptable (Items: 1,

3, 4, 5, 6, 8, 10, 11, 18 and 19) and were deleted from further analysis. Corrected item-total correlation indicates the degree to which each item measuring public relations correlated with the total score. Therefore, the ten items were related systematically to one another in a linear manner because they measured the same construct and were consistent with one another to the extent that each item was free from measurement error as shown in Table 4.5.

**Table 4.5: Reliability Analysis for Public Relations**

<b>Variables</b>	<b>CI-TC</b>	<b>CAID</b>
<b>Public Relations (20 items)</b>		
Responds promptly to inquiries	0.175	0.705
Defends the university effectively when facing challenges to its reputation	0.342	0.700
Always gives information that is credible	0.213	0.703
Able to develop trust between students and the university	0.033	0.717
Creates stories and events that attract public attention	0.240	0.701
Good rapport among the workers themselves	0.223	0.702
Able to articulate clearly the course programmes offered by the university	0.436	0.701
Have good relationship with students	0.224	0.702
Respectful	0.302	0.709
Honest	0.220	0.703
Always friendly to students	0.089	0.719
Prepare messages that are clear/easy to understand	0.330	0.706
Use efficient means to release information/messages to students	0.352	0.706
support staff presents the face of the university well through their good behaviour	0.315	0.703
Have established efficient internal communication channels	0.528	0.705
Uses their knowledge of the university to persuade potential students	0.379	0.700
Able to use social media (internet) to effectively	0.472	0.708

market programmes offered by the universities		
Uses mass media (electronic and print) inform their client	0.089	0.714
Keeps clients informed of activities going on in the university at all times	0.023	0.716
Plans, researches and prepares materials for distribution to university clients	0.636	0.706

*Source: Survey Data (2016)*

#### **4.4.2 Reliability Analysis for Motivation**

All the items in the motivation construct had recorded Cronbach's alpha reliability coefficient of 0.809 and standardized item alpha of 0.819. In short, all the dimensions in the construct had exceeded the recommended threshold value of 0.70 for Cronbach's alpha coefficients demonstrating good internal consistency. However, fourteen items had corrected item-total correlation threshold value of less than 0.30 which according to Nunnally and Bernstein (1994) were identified as unacceptable (Items: 2, 3,5,6,8,9,11,12,13,14,17,19,24 and 26) and were therefore deleted from further analysis as shown in Appendix VI.

#### **4.4.3 Reliability Analysis for Personal Selling**

All the items in the personal selling construct had recorded Cronbach's alpha reliability coefficient of 0.777 and standardized item alpha of 0.787. In short, all the dimensions in the construct had exceeded the recommended threshold value of 0.70 for Cronbach's alpha coefficients demonstrating good internal consistency. However, eleven items had corrected item-total correlation threshold value of less than 0.30 which according to Nunnally and Bernstein (1994) were identified as unacceptable (Items: 2, 4,9,14,15,19,20,21,23,24 and 26) and were therefore deleted from further analysis as shown in Appendix VI.

#### **4.4.4 Reliability Analysis for Information Capital**

All the items in the information capital construct had recorded Cronbach's alpha reliability coefficient of 0.707 and standardized item alpha of 0.725. In short, all the dimensions in the construct had exceeded the recommended threshold value of 0.70 for Cronbach's alpha coefficients demonstrating good internal consistency. However, eight items had corrected item-total correlation threshold value of less than 0.30 which according to Nunnally and Bernstein (1994) were identified as unacceptable (Items: 1, 2, 3,4,5,16,20 and21) and were therefore deleted from further analysis as shown in Appendix VI.

#### **4.4.5 Reliability Analysis for Intellectual Capital**

All the items in the intellectual capital construct had recorded Cronbach's alpha reliability coefficient of 0.769 and standardized item alpha of 0.770. In short, all the dimensions in the construct had exceeded the recommended threshold value of 0.70 for Cronbach's alpha coefficients demonstrating good internal consistency. However, twelve items had corrected item-total correlation threshold value of less than 0.30 which according to Nunnally and Bernstein (1994) were identified as unacceptable (Items: 1,3,4,5,6,7,9,13,14,15,16 and18) and were therefore deleted from further analysis as shown in Appendix VI.

#### **4.4.6 Reliability Analysis for Personality Traits**

All the items in the personality traits construct had recorded Cronbach's alpha reliability coefficient of 0.772 and standardized item alpha of 0.786. In short, all the dimensions in the construct had exceeded the recommended threshold value of 0.70 for Cronbach's alpha coefficients demonstrating good internal consistency. However, eighteen items had corrected item-total correlation threshold value of less than 0.30 which according to Nunnally and Bernstein (1994) were identified as unacceptable

(Items: 2, 3, 4, 5, 7, 9, 14, 15, 16, 17,18,19,20,21,27,28, 32 and 36) and were therefore deleted from further analysis as shown in Appendix VI.

#### **4.4.7 Reliability Analysis for Competitiveness**

All the items in the competitiveness construct had recorded Cronbach's alpha reliability coefficient of 0.760 and standardized item alpha of 0.773. In short, all the dimensions in the construct had exceeded the recommended threshold value of 0.70 for Cronbach's alpha coefficients demonstrating good internal consistency. However, ten items had corrected item-total correlation threshold value of less than 0.30 which according to Nunnally and Bernstein (1994) were identified as unacceptable (Items: 1, 4, 6, 7, 8, 14, 15, 17, 21 and 23) and were therefore deleted from further analysis as shown in Appendix VI.

#### **4.4.8 Validity Independent, Moderator and Dependent Variables**

Validity refers to the extent to which a research instrument measures what it was intended to measure (Zikmund *et al.*, 2010). The goal of the pilot study was to validate the instruments through content validity, face validity, criterion validity and construct validity (Zikmund *et al.*, 2010). Content validity was validated by determining the variables which have been defined and used in literature previously. Face validity was established by inspecting the concepts being studied for their appropriateness to logically appear to reflect what was intended to be measured. Criterion validity is the ability of measures to correlate with other standard measures of similar constructs or established criteria (Zikmund *et al.*, 2010). Construct validity is the extent to which constructs hypothetically relate to one another to measure a concept based on the theories underlying a research (Zikmund, 2000).



#### **4.5 Factor Analysis of Institution Responsiveness, Personality Traits and Institution Competiveness**

Factor analysis (FA) is a significant instrument which is utilized in development, refinement, and evaluation of tests, scales and measures (Williams *et al.*, 2010). All the seven composite scales were subsequently subjected to exploratory factor analysis using PCA extraction and rotated using Varimax rotation with Kaiser Normalization method. Only components with Eigen values greater than one were extracted according to Kaiser (1960) and items with loadings more than 0.6 explained (Nunnally, 1978). Although the generally accepted rule of thumb is to accept those items with loadings over 0.7 according to Cepeda and Roldán (2004), factor loading not lower than 0.60 (Nunnally, 1978), factor loading of 0.50 and above (Hair *et al.*, 2010) are acceptable; but in this study the established cut-off point was 0.60.

##### **4.5.1 Test of Scale Factorability Adequacy**

To check the adequacy of data for factorability, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's test of sphericity were used. Consequently, the threshold according to Hair *et al.* (1995) as well as Tabachnick and Fidell (2001) KMO of 0.50 is considered suitable for factor analysis. However, Netemeyer *et al.* (2003) stated that a KMO correlation above 0.60 - 0.70 is considered adequate for analyzing the factor analysis output. It is clear that values are usually considered to be acceptable if greater than 0.6 according to Hair *et al.* (2006) and this was the threshold adopted for this study. Bartlett's test of Sphericity as per (Bartlett, 1950) should provide a chi-square output that must be significant with indication that the matrix was not an identity matrix and accordingly it should be significant ( $p < 0.05$ ) for factor analysis to be suitable (Hair *et al.*, 2006; Tabachnick & Fidell, 2001).

The results for this study show reasonable factorability of items which provides an adequate basis for proceeding to an empirical examination of adequacy for factor analysis on both overall basis and for each variable. Public relation was measured using twenty items and from the results of Kaiser-Meyer-Okin measure of sampling adequacy test of (0.611) and Bartlett's test of sphericity ( $\chi^2$  (55) = 93.124,  $p < 0.000$ ) indicated that data was accepted for factor analysis. Thirty three items were proposed to measure motivation and results of Kaiser-Meyer-Okin measure of sampling adequacy test of (0.605) and Bartlett's test of sphericity ( $\chi^2$  (91) = 144.773,  $p < 0.000$ ) indicated that data was accepted for factor analysis.

To measure personal selling twenty six items were proposed and results of Kaiser-Meyer-Okin measure of sampling adequacy test of (0.624) and Bartlett's test of sphericity ( $\chi^2$  (105) = 296.239,  $p < 0.000$ ) indicated that data was accepted for factor analysis. Twenty one items were proposed to measure information capital and results of Kaiser-Meyer-Okin measure of sampling adequacy test of (0.794) and Bartlett's test of sphericity ( $\chi^2$  (91) = 279.430,  $p < 0.000$ ) indicated that data was accepted for factor analysis. Intellectual capital was measured using twenty six items and results of Kaiser-Meyer-Okin measure of sampling adequacy test of (0.806) and Bartlett's test of sphericity ( $\chi^2$  (91) = 403.646,  $p < 0.000$ ) indicated that data was accepted for factor analysis. Personality trait was measured using thirty six items and results of Kaiser-Meyer-Okin measure of sampling adequacy test of (0.653) and Bartlett's test of sphericity ( $\chi^2$  (325) = 600.623,  $p < 0.000$ ) indicated that data was accepted for factor analysis. Competitiveness was measured using twenty three items and results of Kaiser-Meyer-Okin measure of sampling adequacy test of (0.681) and Bartlett's test of sphericity ( $\chi^2$  (153) = 201.996,  $p < 0.000$ ) indicated that data was accepted for factor analysis as shown in Table 4.6.

**Table 4.6: Test of Scale Factorability Adequacy**

N=28	PR	MOT	PS	INFC	INTC	PT	COMP
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.611	0.605	0.624	0.794	0.806	0.653	0.681
Approx. Chi-Square	93.124	144.773	296.239	279.430	403.646	600.623	201.996
Bartlett's Test of Sphericity	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**
Degree of freedom	df=55	df=91	df=105	df=91	df=91	df=325	df=153

Notes: \*KMO Threshold > 0.6, \*\*Bartlett's Test of Sphericity significant p < 0.05, df = Degree of freedom, PR = Public relation, MOT = Motivation, PS = Personal selling, INFC = Information capital, INTC = Intellectual capital ,PT = Personality traits , Comp = Competitiveness,

**Source** (survey data, 2015)

#### 4.5.2 Factor Analysis of Public Relations

Public relations was subjected to factor analysis and three components with Eigen values greater than 1 were extracted which cumulatively explained 61.095% of variance as shown in Table 4.7.

**Table 4.7: Rotated Factor Loadings of Public Relations**

Componen t	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.234	29.401	29.401	2.658	24.167	24.167
2	2.131	19.373	48.774	2.214	20.124	44.292
3	1.355	12.321	61.095	1.848	16.803	61.095
4	0.972	8.838	69.933			
5	0.852	7.749	77.682			

**Source:** Survey Data (2016)

When rotated using Varimax with Kaiser Normalization reveals that six items of the scale: “Able to articulate clearly the course programmes offered by the university,”

“Prepare messages that are clear/easy to understand,” “Use efficient means to release information/messages to students,” “Uses their knowledge of the university to persuade potential students,” “Able to use social media (internet) to effectively market programmes offered by the universities” and “Plans, researches and prepares materials for distribution to university clients,” were loaded on the first factor renamed information clarity explained 24.167% of the total variance.

In addition, three items: “Good rapport among the workers themselves,” “Respectful,” and “support staff presents the face of the university well through their good behaviour” were loaded on factor two renamed good rapport which explained 20.124% of the total variance while “Defends the university effectively when facing challenges to its reputation” and “Have established efficient internal communication channels” were loaded on the third factor renamed effective communication which explained 16.803% of the total variance. The resultant eight items had loadings and CR greater than threshold value of 0.60 (see Table 4.8). It was therefore concluded that public relations can be measured by eight items and were used in subsequent multiple hierarchical regression analysis. However, three items “Use efficient means to release information/messages to students” “Able to use social media (internet) to effectively market programmes offered by the universities” and “Respectful” were deleted from subsequent multiple hierarchical regression analysis.

**Table 4.8: Rotated Factor Loadings of Public Relations**

<b>Factors</b>	<b>Loadings</b>	<b>Variance explained</b>
<b>Public Relations</b>	0.832*	61.095
<b>Information Clarity</b>		24.167
Able to articulate clearly the course programmes offered by the university	0.647	
Prepare messages that are clear/easy to understand	0.678	
Use efficient means to release information/messages to students	0.435	
Uses their knowledge of the university to persuade potential students	0.698	
Able to use social media (internet) to effectively market programmes offered by the universities	0.564	
Plans, researches and prepares materials for distribution to university clients	0.780	
<b>Good Rapport</b>		20.124
Good rapport among the workers themselves	0.901	
Respectful	0.559	
support staff presents the face of the university well through their good behaviour	0.889	
<b>Effective Communication</b>		16.803
Defends the university effectively when facing challenges to its reputation	0.875	
Have established efficient internal communication channels	0.811	
Kaiser-Meyer-Olkin	0.611	
Bartlett's Test of Sphericity	0.000 ( $\chi^2$ (55) = 93.124)	
Loading* = Composite reliability		

**Source:** Survey Data (2016)

### 4.5.3 Factor Analysis of Motivation

Motivation was subjected to factor analysis and five components with Eigen values greater than 1 were extracted which cumulatively explained 74.568% of variance as shown in Table 4.9.

**Table 4.9: Rotated Factor Loadings of Motivation**

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.287	34.928	34.928	5.497	30.539	30.539
2	2.670	14.835	49.763	2.773	15.403	45.942
3	1.770	9.836	59.599	2.036	11.311	57.253
4	1.540	8.555	68.154	1.572	8.734	65.986
5	1.154	6.414	74.568	1.545	8.581	74.568
6	0.880	4.889	79.457			
7	0.805	4.472	83.929			

**Source:** Survey Data (2016)

When rotated using Varimax with Kaiser Normalization reveals that ten items of the scale: “Level of Achievement,” “Responsibilities at the workplace,” “Casual dress day,” “A reward system which differentiates good and poor performers,” “Flexibility at work (work hours, dress etc),” “Family friendly employer” “Cutting edge technology,” “Pride in the organization,” “Scholarships for support staff education” and “Performance appraisal which adequately measures support staff performance,” were loaded on the first factor renamed flexible work life explained 30.539% of the total variance.

In addition, three items: “Good rapport among the workers themselves,” “Work culture of fostering mutual reliance and friendship among workers,” and “Being part of a team” were loaded on factor two renamed teamwork which explained 15.403% of the total variance while “Autonomy to perform given tasks” and “Good bosses” were loaded on the third factor renamed empowerment which explained 11.311% of the total variance.

In addition, one item: “Good work environment (safety, lighting, ventilation etc)” was loaded on factor four renamed conducive environment which explained 8.734% of the total variance while “Availability of stress management programmes” and “Jobs designed such that they have distinct and important roles in the organization” were loaded on the fifth factor renamed job responsibility which explained 8.581% of the total variance.

The resultant fifteen items had loadings and CR greater than threshold value of 0.60 (see Table 4.16). It was therefore concluded that motivation can be measured by fifteen items and were used in subsequent multiple hierarchical regression analysis. However, three item “Flexibility at work (work hours, dress etc)” “Good bosses” and “Jobs designed such that they have distinct and important roles in the organization” were deleted from subsequent multiple hierarchical regression analysis as shown in Appendix VII.

#### **4.5.4 Factor Analysis of Personal Selling**

Personal selling was subjected to factor analysis and five components with Eigen values greater than 1 were extracted which cumulatively explained 83.734% of variance as shown in Table 4.10.

**Table 4.10: Rotated Factor Loadings of Personal Selling**

Componen t	Rotation Sums of Squared					
	Initial Eigenvalues			Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.271	35.140	35.140	3.631	24.209	24.209
2	3.231	21.540	56.680	2.849	18.993	43.202
3	1.871	12.476	69.156	2.570	17.135	60.337
4	1.152	7.679	76.834	2.218	14.784	75.121
5	1.035	6.900	83.734	1.292	8.613	83.734
6	0.563	3.757	87.491			
7	0.483	3.221	90.712			

**Source:** Survey Data (2016)

When rotated using Varimax with Kaiser Normalization reveals that five items of the scale: “Awareness of tastes and behaviour of the clients,” “Ability to link with prospective students,” “Familiarity with courses offered,” “Negotiation skills” and “Honesty” were loaded on the first factor renamed clients’ awareness explained 24.209 of the total variance.

In addition, three items: “Prospecting clients,” “Ability to overcome an objection,” and “Awareness of the degree of competition from competitors” were loaded on factor two renamed problem solving which explained 18.993% of the total variance while “Ability to make clients be loyal to the university,” “Ethical when performing duties,” “Well informed about competitors products” and “Ability to convince students to register for courses” were loaded on the third factor renamed marketability which explained 17.135% of the total variance.

In addition, two item: “Ability to make clients be interested in the university” and “Confident” were loaded on factor four renamed persuading which explained 14.784% of the total variance while “Knowledge about university programmes” was



loaded on the fifth factor renamed knowledgeable which explained 8.613% of the total variance. The resultant fourteen items had loadings and CR greater than threshold value of 0.60 (see Table 4.11). It was therefore concluded that personal selling can be measured by fourteen items and were used in subsequent multiple hierarchical regression analysis. However, one item “Ability to convince students to register for courses” was deleted from subsequent multiple hierarchical regression analysis.

**Table 4.11: Rotated Factor Loadings of Personal Selling**

<b>Factors</b>	<b>Loadings</b>	<b>Variance explained</b>
Personal Selling	0.753*	83.734
<b>Clients’ Awareness</b>		24.209
Awareness of tastes and behaviour of the clients	0.827	
Ability to link with prospective students	0.845	
Familiarity with courses offered	0.797	
Negotiation skills	0.753	
Honesty	0.754	
<b>Problem Solving</b>		18.993
Prospecting clients	0.864	
Ability to overcome an objection	0.790	
Awareness of the degree of competition from competitors	0.871	
<b>Marketability</b>		17.135
Ability to make clients be loyal to the university	0.829	
Ethical when performing duties	0.783	
Well informed about competitors products	0.809	
Ability to convince students to register for courses	0.492	
<b>Persuading</b>		14.784

Ability to make clients be interested in the university	0.826	
Confident	0.711	
<b>Knowledgeable</b>		8.613
Knowledge about university programmes	0.908	
Kaiser-Meyer-Olkin	0.624	
Bartlett's Test of Sphericity	0.000 ( $\chi^2$ (105) = 296.239)	
Loading* = Composite reliability		

*Source:* Survey Data (2016)

#### 4.5.5 Factor Analysis of Information Capital

Information capital was subjected to factor analysis and three components with Eigen values greater than 1 were extracted which cumulatively explained 72.176% of variance as shown in Table 4.12.

**Table 4.12: Rotated Factor Loadings of Information Capital**

Componen t	Rotation Sums of Squared					
	Initial Eigenvalues			Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.559	53.995	53.995	4.427	31.619	31.619
2	1.451	10.364	64.360	3.286	23.470	55.089
3	1.094	7.816	72.176	2.392	17.087	72.176
4	0.977	6.976	79.152			
5	0.673	4.806	83.958			

*Source:* Survey Data (2016)

When rotated using Varimax with Kaiser Normalization reveals that six items of the scale: “Use of social media/web facilities has enabled the university to attract a high number of students,” “The university support staff have challenges using computers leading to inefficiency in operations,” “The university is able to manage students

records efficiently because of ICT,” “Use of ICT has enhanced management of university finances,” “Use of ICT has enabled us to take shorter time to register students takes” and “Use of ICT has enable the university to coordinate its operations better,” were loaded on the first factor renamed e-learning explained 31.619% of the total variance.

In addition, four items: “All the required software is available,” “Respectful,” and “support staff presents the face of the university well through their good behaviour” were loaded on factor two renamed software which explained 23.470% of the total variance while “support staff are provided with relevant training in computing,” “There is a working intercom” and “The university website has been a good marketing tool” were loaded on the third factor renamed internet connectivity which explained 17.087% of the total variance. The resultant fourteen items had loadings and CR greater than threshold value of 0.60 (see Table 4.13). It was therefore concluded that information capital can be measured by fourteen items and were used in subsequent multiple hierarchical regression analysis.

**Table 4.13: Rotated Factor Loadings of Information Capital**

<b>Factors</b>	<b>Loadings</b>	<b>Variance</b>
<b>Intellectual capital</b>	0.750*	72.176
<b>E-Learning</b>		31.619
Use of social media/web facilities has enabled the university to attract a high number of students	0.734	
The university support staff staff have challenges using computers leading to inefficiency in operations	0.620	
The university is able to manage students records efficiently because of ICT	0.652	
Use of ICT has enhanced management of university finances	0.855	
Use of ICT has enabled us to take shorter time to register students takes	0.880	
Use of ICT has enable the university to coordinate its operations better	0.855	
<b>Software</b>		23.470
All the required software is available	0.864	
The university has digitized its operations	0.715	
ICT has been integrating in teaching	0.618	
Availability of ICT has enhanced the university's research capability	0.604	
The university portal have enabled us to inform our clients of what is going on at all times	0.765	
<b>Internet Connectivity</b>		17.087
support staff staff are provided with relevant training in computing	0.674	
There is a working intercom	0.793	
The university website has been a good marketing tool	0.777	
Kaiser-Meyer-Olkin	0.794	
Bartlett's Test of Sphericity	0.000 ( $\chi^2$ (91) = 279.430)	
Loading* = Composite reliability		

#### 4.5.6 Factor Analysis of Intellectual Capital

Intellectual capital was subjected to factor analysis and two components with Eigen values greater than 1 were extracted which cumulatively explained 71.525% of variance as shown in Table 4.14.

**Table 4.14: Rotated Factor Loadings of Intellectual Capital**

Component	Initial Eigen values			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.844	63.173	63.173	5.508	39.344	39.344
2	1.169	8.352	71.525	4.505	32.181	71.525
3	0.980	7.002	78.527			
4	0.731	5.219	83.746			

When rotated using Varimax with Kaiser Normalization reveals that eight items of the scale: “Qualification of the support staff,” “Attitudes towards work,” “Effectiveness of administrative systems in place,” “Systems to process information,” “Level of satisfaction of its clients (parents, students, suppliers etc),” “Knowledge of market for its services,” “Reputation” and “Reliability,” were loaded on the first factor renamed know-how explained 39.344% of the total variance.

In addition, six items: “Facilities/infrastructure,” “Work culture,” “Understanding of government/public policies,” “Trust of support staff by clients,” “Lobbying skills,” and “support staff understanding of competing universities” were loaded on factor two renamed strategy which explained 32.181% of the total variance. The resultant thirteen items had loadings and CR greater than threshold value of 0.60 (see Table 4.15). It was therefore concluded that intellectual capital can be measured by twelve items and were used in subsequent multiple hierarchical regression analysis.

However, one item “Reliability” was deleted from subsequent multiple hierarchical regression analysis.

**Table 4.15: Rotated Factor Loadings of Intellectual Capital**

<b>Factors</b>	<b>Loadings</b>	<b>Variance explained</b>
<b>Intellectual Capital</b>	0.789*	72.176
<b>Know-How</b>		39.344
Qualification of the support staff	0.882	
Attitudes towards work	0.587	
Effectiveness of administrative systems in place	0.907	
Systems to process information	0.738	
Level of satisfaction of its clients (parents, students, suppliers etc)	0.744	
Knowledge of market for its services	0.602	
Reputation	0.885	
Reliability	0.462	
<b>Strategy</b>		32.181
Facilities/infrastructure	0.702	
Work culture	0.709	
Understanding of government/public policies	0.824	
Trust of support staff staff by clients	0.743	
Lobbying skills	0.746	
support staff staff understanding of competing universities	0.717	
Kaiser-Meyer-Olkin	0.860	
Bartlett's Test of Sphericity	0.000 ( $\chi^2$ (91) = 403.646)	
Loading* = Composite reliability		

**Source:** Survey Data (2016)

#### 4.5.7 Factor Analysis of Personality Traits

Personality traits was subjected to factor analysis and six components with Eigen values greater than 1 were extracted which cumulatively explained 69.325% of variance as shown in Table 4.16.

**Table 4.16: Rotated Factor Loadings of Personality Traits**

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.629	24.361	24.361	3.080	16.212	16.212
2	2.334	12.287	36.648	2.449	12.891	29.103
3	2.024	10.654	47.302	2.245	11.817	40.920
4	1.633	8.595	55.898	2.093	11.015	51.935
5	1.442	7.591	63.489	1.800	9.475	61.409
6	1.109	5.836	69.325	1.504	7.916	69.325
7	0.965	5.078	74.403			
8	0.921	4.849	79.251			

**Source:** Survey Data (2016)

When rotated using Varimax with Kaiser Normalization reveals that six items of the scale: “Is talkative,” “Perseveres until the task is finished,” “Self-disciplined,” “Kind to everyone,” “Vulnerable” and “Self-conscious” were loaded on the first factor renamed self discipline explained 16.212% of the total variance.

In addition, three items: “Competent,” “Is reserved” and “Starts quarrels with others” were loaded on factor two renamed competent which explained 12.891% of the total variance while “Assertive,” “Warmth” and “Has a forgiving nature” were loaded on the third factor renamed assertive which explained 11.817% of the total variance.

In addition, four item: “Ability to make clients be interested in the university,” “Remains calm in tense situations,” “Orderly” and “Anxious” were loaded on factor four renamed orderly which explained 11.015% of the total variance while “Is relaxed, handles stress well” was loaded on the fifth factor renamed strategist which explained 9.475% of the total variance. Furthermore, two items: “Efficient” and “Can be tense” were loaded on factor six renamed efficiency which explained 7.916% of the total variance

The resultant nineteen items had loadings and CR greater than threshold value of 0.60 (see Table 4.24). It was therefore concluded that personality traits can be measured by sixteen items and were used in subsequent multiple hierarchical regression analysis. However, one item “Orderly” was deleted from subsequent multiple hierarchical regression analysis as shown in Appendix VII.

#### 4.5.8 Factor Analysis of University Competitiveness

Competitiveness was subjected to factor analysis and three components with Eigen values greater than 1 were extracted which cumulatively explained 67.479% of variance as shown in Table 4.17.

**Table 4.17: Rotated Factor Loadings of Competitiveness**

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.019	38.610	38.610	3.672	28.243	28.243
2	2.471	19.008	57.618	2.796	21.510	49.754
3	1.282	9.861	67.479	2.304	17.725	67.479
4	0.887	6.820	74.299			
5	0.858	6.600	80.899			

Source: Survey Data (2016)



When rotated using Varimax with Kaiser Normalization reveals that six items of the scale: “Low cost of programmes,” “Tailor made courses that cater for the needs of learners,” “Efficient customer services provided by support staff,” “Scholarships to students,” “Mentorship programmes for students” and “Incubation centres that promote innovation,” were loaded on the first factor renamed Mentorship explained 28.243% of the total variance.

In addition, four items: “Location of the campus (near my home, easy to access),” “Respectful,” “Ability to secure external funding/grants,” “Good physical infrastructure (buildings, roads, water, electricity, power, communication),” and “Qualified staff” were loaded on factor two renamed location which explained 21.510% of the total variance while three items: “International ranking,” “Adequate learning/research facilities” and “Marketability of its graduates” were loaded on the third factor renamed global which explained 17.725% of the total variance. The resultant thirteen items had loadings and CR greater than threshold value of 0.60 (see Table 4.18). It was therefore concluded that competitiveness can be measured by thirteen items and were used in subsequent multiple hierarchical regression analysis.

**Table 4.18: Rotated Factor Loadings of Competitiveness**

<b>Factors</b>	<b>Loadings</b>	<b>Variance explained</b>
<b>Competitiveness</b>	0.831*	67.479
<b>Mentorship</b>		28.243
Low cost of programmes	0.806	
Tailor made courses that cater for the needs of learners	0.848	

Efficient customer services provided by support staff	0.837	
Scholarships to students	0.603	
Mentorship programmes for students	0.673	
Incubation centres that promote innovation	0.725	
<b>Location</b>		21.510
Location of the campus (near my home, easy to access)	0.870	
Ability to secure external funding/grants	0.640	
Good physical infrastructure (buildings, roads, water, electricity, power, communication)	0.708	
Qualified staff	0.787	
<b>Global</b>		17.725
International ranking	0.804	
Adequate learning/research facilities	0.693	
Marketability of its graduates	0.658	
Kaiser-Meyer-Olkin	0.681	
Bartlett's Test of Sphericity	0.000 ( $\chi^2$ (153) = 2001.996)	
Loading* = Composite reliability		

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**Source:** Survey Data (2016)

#### 4.5.9 Test of Regression Assumptions

##### *Normality*

According to Ghozali (2005), normality can be detected by looking at the p-value of Kolmogorov-Smirnov test. The test compares observed cumulative distribution function of a variable with a specified theoretical normal distribution; a non-significant result ( $p > .05$ ) indicates normality (Pallant, 2005). The test statistics of the five variables are shown in Table 4.19 where Kolmogorov-Smirnov and Shapiro Wilk

test performed showed that the p-values range from 0.065 – 0.989 which were greater than 0.05. The normality assumption of the regression model was therefore met as shown in Table 4.19.

**Table 4.19: Test of Normality of Independent, Moderator and Dependent Variables**

Constructs	Kolmogorov-Smirnov (KS) test			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Public relations	1.008	28	.263	0.963	28	0.404
Motivation	1.006	28	.212	0.931	28	0.065
Personal selling	0.445	28	.989	0.957	28	0.302
Information capital	0.793	28	.556	0.958	28	0.315
Intellectual capital	0.547	28	.926	0.923	28	0.402
Personality traits	0.575	28	.895	0.975?	28	0.728
Competitiveness	1.009	28	.283	0.958	28	0.311

a Lilliefors Significance Correction, Shapiro-Wilk significant at  $p > 0.05$

**Source:** Survey Data (2016)

#### *Linearity among Variables Test Results*

Correlation analysis can be used to assess association between predictor and criterion. The correlations between competitiveness ( $p < .05$ ) and all the other constructs were positive and significant. The significant association among most of the variables is an indication that the linearity assumption was met.

### ***Multicollinearity***

Diagnostics was conducted to find out whether the independent variables were related to each other instead of being related to the criterion variable. Tolerance and VIF statistics were used to carry out the diagnosis. The results of the multicollinearity test in Table 4.20 reveal that the tolerances of the six constructs ranged from 0.187 to 0.816. Meyers *et al.* (2006) suggest a tolerance value of 0.01 or less as an indication of presence of multicollinearity. VIF scores ranged from 1.226 to 5.351. Stevens (1992) suggests that VIF scores that exceed 10 indicate presence of multicollinearity. The results were within normal bounds, indicating multicollinearity was not present among the explanatory variables. The assumption on multicollinearity was deemed to have been met.

**Table 4.20: Multicollinearity Test Results on Explanatory Variables**

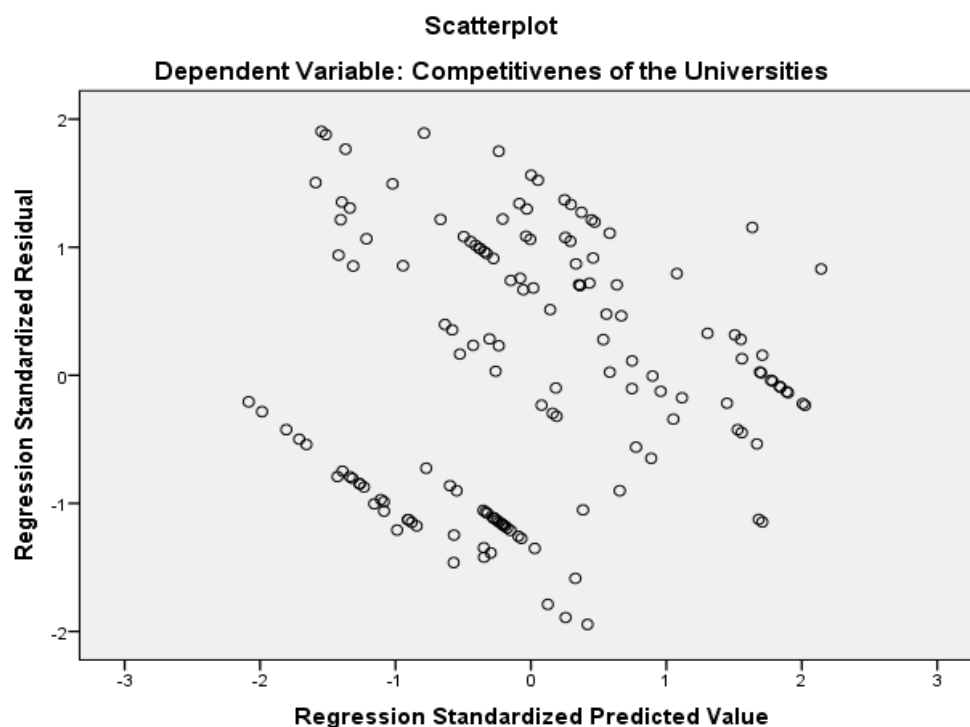
<b>Variable</b>	<b>Tolerance</b>	<b>VIF</b>
public relations	0.356	2.811
motivation to work	0.188	5.319
Personal selling	0.816	1.226
Information capital	0.358	2.792
Intellectual capital	0.686	1.459
Personality traits	0.187	5.351

**Source:** Survey Data (2016)

### ***Homoscedasticity***

Homoscedasticity was checked using the standardized residual scatter plot. According to Huizingh (2007), the distribution of the residuals should be rectangular, with most of the scores concentrated in the centre along the zero (0) point. The results

in Figure 4.1 show that standardized residuals were concentrated in the centre (around 0) and their distribution was rectangular. This is an indication that the variance of the residuals about the dependent variable scores were the same, an indication that homoscedasticity was not a problem. In addition, Durbin-Watson statistics was used to test the presence of serial correlation among the residuals, the assumption of independence of errors which required that the residuals or errors in prediction do not follow a pattern from case to case. Durbin-Watson statistic acceptable range is 1.50-2.50 (Hair *et al.*, 1998). The overall Durbin-Watson statistic for this regression was 2.015 which falls within the acceptable range which indicated that the residuals were not correlated.



**Figure 4.1: Standardized Residuals of the Homoscedasticity Test**

#### **4.6 Correlation Analysis of the Variables**

The correlation matrix indicated that there was positive significant correlation between competitiveness and public relations ( $r = 0.836$ ,  $P < 0.01$ ). The correlation of

competitiveness and motivation was positively significant ( $r = 0.906, P < 0.01$ ). The correlation of competitiveness and personal selling was positively significant ( $r = 0.484, P < 0.01$ ). The correlation of competitiveness and information capital was positively significant ( $r = 0.798, P < 0.01$ ). The correlation of competitiveness and intellectual capital was positively significant ( $r = 0.840, P < 0.01$ ) also the correlation of personality traits and competitiveness was positively significant ( $r = 0.907, P < 0.01$ ). According to Tabachnick and Fidell (1996) independent variables should not be very highly correlated ( $r > 0.90$ ), the range should be between .03-0.9 to avoid multicollinearity. In this study multicollinearity was not a problem. as show in Table 4.21.

**Table 4.21: Correlation of Dependent, Independent and Moderator Variables**

		Correlations						
		ZCOMP	ZPR	ZMOT	ZPS	ZINFC	ZINTC	ZPT
ZCOMP	Pearson	1						
	Correlation							
	Sig. (2-tailed)							
ZPR	Pearson	0.836**	1					
	Correlation							
	Sig. (2-tailed)	0.000						
ZMOT	Pearson	0.900**	0.769**	1				
	Correlation							
	Sig. (2-tailed)	0.000	0.000					
ZPS	Pearson	0.484**	0.670**	.393*	1			
	Correlation							
	Sig. (2-tailed)	0.009	0.000	.038				
ZINFC	Pearson	0.798**	0.605**	0.784**	-0.182	1		
	Correlation							
	Sig. (2-tailed)	0.000	0.001	.000	0.354			
ZINTC	Pearson	0.840**	0.619**	0.869**	0.574**	0.553**	1	
	Correlation							
	Sig. (2-tailed)	0.000	0.000	0.000	0.001	0.002		
ZPT	Pearson	0.900**	0.759**	0.809**	0.194	0.686**	0.123	1
	Correlation							
	Sig. (2-tailed)	0.000	0.000	0.000	0.322	0.000	0.534	

Notes\*. Correlation is significant \*\* $P < 0.01$  and \* $P < 0.05$  level (2-tailed).

ZPR= public relations, ZMOT= motivation, ZPS= personal selling, ZINFC= information capital,

ZINTC= intellectual capital, ZPT= personality traits, ZCOMP= competitiveness.

N = 28

**Source:** Survey Data (2016)

#### **4.7 Multiple Hierarchical Regression Analyses and Hypotheses Testing**

In this part the stepwise analysis included multiple and hierarchical regression models to test the hypotheses. In order to test whether personality traits moderated public relations, motivation, personal selling, information capital and intellectual capital on institution competitiveness their interactions were tested. The study followed the suggestions given by Aiken and West (1991) to standardize all the predictor variables to reduce multi-collinearity problem that arises when a moderator variable is computed as a product of two predictor variables. To avoid multicollinearity risk created by generating a new variable through multiplying two existing variable, interacted variables were converted to Z scores with mean of zero and standard deviation of one. The interaction variables were therefore created by multiplying the standardized variables together.

In seven-step hierarchical regression, step 1, multiple regressions was carried out and the five independent variables of the public relations, motivation, personal selling, information capital and intellectual capital were entered. Step 2, the moderator variable was introduced and they were hypothesized as follows: public relations has no effect on institution competitiveness, motivation has no effect on institution competitiveness, personal selling has no effect on institution competitiveness, information capital has no effect on institution competitiveness, intellectual capital has no effect on institution competitiveness and finally personality traits has no effect on institution competitiveness.

Step 3, 4, 5, 6 and 7 interactions of personality traits and the five variables of institution responsiveness were introduced and explained as follows. First, personality trait was hypothesized not to moderate effect of public relations on institution

competitiveness (sub-hypothesis HO7a ).Second, personality trait was hypothesized not to moderate effect of motivation on institution competitiveness (sub-hypothesis HO7b). Third, personality trait was hypothesized not to moderate effect of personal selling on institution competitiveness (sub-hypothesis HO7c). Fourth, personality trait was hypothesized not to moderate effect of information capital on institution competitiveness (sub-hypothesis HO7d). Lastly personality trait was hypothesized not to moderate effect of intellectual capital on institution competitiveness (sub-hypothesis HO7e).

#### **4.7.1 Model Summary of Institution Responsiveness and Personality Traits Predicting Institution Competitiveness**

Regression model summary results between institution responsiveness and institution competitiveness, indicates that the five variables explained 93.1% ( $R^2 = 0.931$ ) of the variance on institution competitiveness and they were statistically significant as shown in model 1. Personality trait explained only 94.4% ( $R^2 = 0.944$ ) of the variance on institution competitiveness thus contributing an additional  $R^2$  of 0.013 (1.3%) which was significant as shown in model 2. Model summary interaction results shows that model 3 interaction of Z score personality trait \*Z score public relations which explained 94.4% ( $R^2 = 0.944$ ) of the variance on institution competitiveness which resulted in  $R^2$  change of 0.00 (0%) which was not significant as shown in model 3.

In addition interaction of Z score personality trait \* Z score motivation explained 94.9% ( $R^2 = 0.949$ ) of the variance in institution competitiveness. This contributed additional  $R^2$  of 0.005 (0.5%) which was not significant as shown in model 4. interaction of Z score personality trait \* Z score personal selling explained 95.3 % ( $R^2 = 0.953$ ) of the variance in institution competitiveness. This contributed additional  $R^2$



of 0.004 (0.4%) which was not significant as shown in model 5. interaction of Z score personality trait \* Z score information capital explained 96.7% ( $R^2 = 0.967$ ) of the variance in institution competitiveness. This contributed additional  $R^2$  of 0.014 (1.4%) which was significant as shown in model 6. Finally, interaction of Z score personality trait \*Z score intellectual capital as shown in model 7 explained 96.7% ( $R^2=0.00$ ) of the variance in institution competitiveness resulting in  $R^2$  change of 0.00(0%) which was not statistically significant. According to Croux and Dehon (2003) models with value of  $0 \leq R^2 \leq 1$  or closed to 1 indicated the preferred model as shown in Table 4.22.

**Table 4.22: Model Summary of Interactions between PT and IR Variables on IC**

<b>Model Summary<sup>h</sup></b>										
Model	R	<b>Change Statistics</b>								
		R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.965 <sup>a</sup>	.931	.916	.29067385	.931	59.512	5	22	.000	
2	.972 <sup>b</sup>	.944	.928	.26784633	.013	4.910	1	21	.038	
3	.972 <sup>c</sup>	.944	.925	.27445037	.000	.002	1	20	.969	
4	.974 <sup>d</sup>	.949	.927	.27048177	.005	1.591	1	19	.222	
5	.976 <sup>e</sup>	.953	.929	.26686632	.004	1.518	1	18	.234	
6	.983 <sup>f</sup>	.967	.948	.22867376	.014	7.515	1	17	.014	
7	.984 <sup>g</sup>	.967	.945	.23437371	.000	.183	1	16	.674	2.015

**Source:** Survey Data (2016)

#### 4.7.2 ANOVA Results

Results indicated by model 1,2,3, 4, 5,6 and 7 shows good model fit as illustrated by overall test of significance with F-test values of 59.512, 59.225, 48.351, 43.757, 40.124, 49.933 and 43.230 with p value  $0.000 < 0.05$  (level of significance) were statistically highly significant. In other words public relations, motivation, personal selling, information capital, intellectual capital and their interaction with personality trait were statistically highly significant predictors of institution competitiveness (Table 4.23). Thus, models 1-7 in chapter three was valid and fit to predict institution

competitiveness using interaction of the five independent variables with institution competitiveness.

**Table 4.23: ANOVA Model of Interactions between PT and IR Variables on IC**

		ANOVA <sup>a</sup>				
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	25.141	5	5.028	59.512	0.000 <sup>b</sup>
	Residual	1.859	22	0.084		
	Total	27.000	27			
2	Regression	25.493	6	4.249	59.225	0.000 <sup>c</sup>
	Residual	1.507	21	0.072		
	Total	27.000	27			
3	Regression	25.494	7	3.642	48.351	0.000 <sup>d</sup>
	Residual	1.506	20	0.075		
	Total	27.000	27			
4	Regression	25.610	8	3.201	43.757	0.000 <sup>e</sup>
	Residual	1.390	19	0.073		
	Total	27.000	27			
5	Regression	25.718	9	2.858	40.124	0.000 <sup>f</sup>
	Residual	1.282	18	0.071		
	Total	27.000	27			
6	Regression	26.111	10	2.611	49.933	0.000 <sup>g</sup>
	Residual	.889	17	0.052		
	Total	27.000	27			
7	Regression	26.121	11	2.375	43.230	0.000 <sup>h</sup>
	Residual	.879	16	0.055		
	Total	27.000	27			

**Source:** Survey Data (2016)

#### **4.7.3 Hierarchical Regression Analysis of Institution Responsiveness and Personality Traits Predicting Institution Competitiveness**

Research hypotheses that include interaction effects should be centered (Aiken & West, 1991). Centering is standardizing and computation of the variance inflation factor (VIF) to avoid multicollinearity risk created by generating a new variable through multiplying two existing variables. Interacted variables were converted to Z scores with mean of zero and standard deviation of one. Therefore, estimates of

standardized beta regression coefficients offer an indication of the predictive ability of the independent variables. Standardized beta regression coefficients range from +1 to -1 and the higher the regression coefficient (in absolute terms), the better the prediction of the dependent variable. It logically follows that if a variable significantly predicts an outcome, then it should have a  $\beta$  value significantly different from zero.

The regression coefficients for public relations on institution competitiveness ( $\beta = 0.230$ ,  $t = 2.458$ ,  $P < 0.05$ ), motivation on institution competitiveness ( $\beta = 0.638$ ,  $t = 4.944$ ,  $P < 0.05$ ), personal selling on institution competitiveness ( $\beta = 0.220$ ,  $t = 3.545$ ,  $P < 0.05$ ), information capital on institution competitiveness ( $\beta = 0.209$ ,  $t = 2.240$ ,  $P < 0.05$ ) and intellectual capital on institution competitiveness ( $\beta = -0.160$ ,  $t = -2.364$ ,  $P < 0.05$ ) were statistically significant. In this study therefore the results met the criteria of introducing moderator. Since moderator variable can be considered when the relationship between a predictor variable and a dependent variable was strong, but most often it is considered when there is an unexpectedly weak or inconsistent relationship between a predictor and a dependent variable (Holmbeck, 1997).

Hypothesis  $H_{01}$  predicted that there was no significant effect of public relations on institution competitiveness. The results led to rejection of the hypothesis  $H_{01}$  suggesting that there was positive and significant relationship between public relations and institution competitiveness.

Hypothesis  $H_{02}$  postulated that there was no significant effect of motivation on institution competitiveness. The results led to rejection of the hypothesis  $H_{02}$  suggesting that there was positive and significant relationship between motivation and institution competitiveness.

Hypothesis H<sub>03</sub> predicted that there was no significant effect of personal selling on institution competitiveness. The results led to rejection of the hypothesis H<sub>03</sub> suggesting that there was positive and significant relationship between personal selling and institution competitiveness.

Hypothesis H<sub>04</sub> predicted that there was no significant effect of information capital on institution competitiveness. The results led to rejection of the hypothesis H<sub>04</sub> suggesting that there was positive and significant relationship between information capital and institution competitiveness.

Hypothesis H<sub>05</sub> predicted that there was no significant effect of intellectual capital on institution competitiveness. The results led to rejection of the hypothesis H<sub>05</sub> suggesting that there was positive and significant relationship between intellectual capital and institution competitiveness.

In the second step it was possible to accurately assess the true impact of personality traits on institution competitiveness. The hierarchical regression results indicated that personality traits ( $\beta = 0.264$ ,  $t = 2.216$ ,  $P < 0.05$ ), was positive and statistically significant predictors of institution competitiveness. This indicated that personality trait at this stage was a moderator as it influenced institution competitiveness.

Hypothesis H<sub>06</sub> predicted that there was no significant effect of personality traits on institution competitiveness. The results led to rejection of the hypothesis H<sub>06</sub> suggesting that there was positive and significant relationship between personality traits and institution competitiveness as shown in Table 4.24.

**Table 4.24: Regression Coefficients of PT and IR Variables Predicting IC**

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	-4.313E-15	0.055		.000	1.000		
Zscore(MPR)	0.230	0.094	0.230	2.458	0.022	0.356	2.811
Zscore(MMOT)	0.638	0.129	0.638	4.944	0.000	0.188	5.319
Zscore(MPS)	0.220	0.062	0.220	3.545	0.002	0.816	1.226
Zscore(MINFC)	0.209	0.093	0.209	2.240	0.035	0.358	2.792
Zscore(MINTC)	-0.160	0.068	-0.160	-2.364	0.027	0.686	1.459
2 (Constant)	-3.209E-15	0.051		0.000	1.000		
Zscore(MPR)	0.182	0.089	0.182	2.043	0.054	0.334	2.990
Zscore(MMOT)	0.464	0.143	0.464	3.251	0.004	0.131	7.649
Zscore(MPS)	0.125	0.071	0.125	1.750	0.095	0.522	1.915
Zscore(MINFC)	0.173	0.088	0.173	1.978	0.061	0.346	2.891
Zscore(MINTC)	-0.111	0.066	-0.111	-1.673	0.109	0.608	1.644
Zscore(MPT)	0.264	0.119	0.264	2.216	0.038	0.187	5.351

Notes\* Zscore MPR= public relations, Zscore MMOT= motivation, Zscore MPS= personal selling, Zscore MINFC= information capital, Zscore MINTC= intellectual capital, Zscore MPT= personality traits.

**Source:** Survey Data (2016)

#### 4.7.4 Moderated Regression Results

A moderator effect could increase the effect of the exogenous on the endogenous variable called enhancing moderator, decrease the effect of the exogenous on the endogenous variable called buffering moderator or reverse the effect of the exogenous variable on the endogenous variable called antagonistic moderation (Aiken & West, 1991).

#### 4.7.5 Moderating Effect of Personality Traits on the Relationship between Public Relation and Institution Competitiveness

The regression coefficients of interaction between personality traits and public relations on institution competitiveness ( $\beta = -0.002$ ,  $t = -0.039$ ,  $P > 0.05$ ). Hypothesis  $H_{07a}$  stated that personality trait does not moderate the relationship between public

relations and institution competitiveness. The results led to acceptance of the hypothesis H<sub>07a</sub> suggesting personality traits does not moderated the effect of public relations on institution competitiveness. This confirmed that personality trait buffered and antagonized the effect of public relations on institution competitiveness as shown in Table 4.25.

**Table 4.25: Regression Coefficients of Interaction between PT and PR Predicting IC**

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Error Std.	Beta	T	Sig.	Tolerance	VIF
3 (Constant)	0.001	0.062		0.021	0.983		
Zscore(MPR)	0.183	0.092	0.183	1.980	0.062	0.328	3.051
Zscore(MMOT)	0.464	0.147	0.464	3.160	0.005	0.129	7.730
Zscore(MPS)	0.125	0.073	0.125	1.708	0.103	0.521	1.919
Zscore(MINFC)	0.174	0.090	0.174	1.928	0.068	0.344	2.906
Zscore(MINTC)	-0.110	0.068	-0.110	-	0.120	0.606	1.651
Zscore(MPT)	0.263	0.126	0.263	2.086	0.050	0.176	5.698
ZPT*PR	-0.002	0.046	-0.002	-	0.969	0.901	1.109
				0.039			

Notes\* Zscore MPR= public relations, Zscore MMOT= motivation, Zscore MPS= personal selling, Zscore MINFC= information capital, Zscore MINTC= intellectual capital, Zscore MPT= personality traits, ZPT\*PR = Z score personality traits \* Z score public relations

**Source:** Survey Data (2016)

#### 4.7.6 Moderating Effect of Personality Traits on the Relationship between Motivation and Institution Competitiveness

The regression coefficients of interaction between personality traits and motivation on institution competitiveness ( $\beta = -0.138$ ,  $t = -1.261$ ,  $P > 0.05$ ). Hypothesis H<sub>07b</sub> stated that personality trait does not moderate the relationship between motivation and institution competitiveness. The results led to acceptance of the hypothesis H<sub>07b</sub>

suggesting personality traits does not moderated the effect of motivation on institution competitiveness. This confirmed that personality trait buffered and antagonized the effect of motivation on institution competitiveness as shown in Table 4.26.

**Table 4.26: Regression Coefficients of Interaction between PT and MOT Predicting IC**

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	T	Sig.	Tolerance	VIF
4 (Constant)	-0.027	0.065		-.419	0.680		
Zscore(MPR)	0.190	0.091	0.190	2.084	0.051	0.326	3.063
Zscore(MMOT)	0.434	0.147	0.434	2.957	0.008	0.126	7.943
Zscore(MPS)	0.106	0.074	0.106	1.444	0.165	0.500	2.000
Zscore(MINFC)	0.137	0.093	0.137	1.466	0.159	0.311	3.218
Zscore(MINTC)	-0.115	0.067	-0.115	-1.718	0.102	0.604	1.657
Zscore(MPT)	0.309	0.130	0.309	2.387	0.028	0.161	6.192
ZPT*PR	0.185	0.154	0.185	1.195	0.247	0.127	7.870
ZPT*MOT	-0.138	0.110	-0.138	-1.261	0.222	0.305	3.276

Notes \* Zscore MPR= public relations, Zscore MMOT= motivation, Zscore MPS= personal selling, Zscore MINFC= information capital, Zscore MINTC= intellectual capital, Zscore MPT= personality traits, ZPT\*PR= Z score personality traits \* Z score public relations, ZPT\*MOT= Z score personality traits \* Z score motivation.

**Source:** Survey Data (2016)

#### 4.7.7 Moderating Effect of Personality Traits on the Relationship between Personal Selling and Institution Competitiveness

The regression coefficients of interaction between personality traits and personal selling on institution competitiveness ( $\beta = -0.103$ ,  $t = -1.232$ ,  $P > 0.05$ ). Hypothesis  $H_{07c}$  stated that personality trait does not moderate the relationship between personal selling and institution competitiveness. The results led to acceptance of the hypothesis

H<sub>07c</sub> suggesting personality traits does not moderated the effect of personal selling on institution competitiveness. This confirmed that personality trait buffered and antagonized the effect of personal selling on institution competitiveness as shown in Table 4.27.

**Table 4.27: Regression Coefficients of Interaction between PT and PS Predicting IC**

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.	Collinearity Statistics	
	B	Std. Error	Beta	T		Tolerance	VIF
5 (Constant)	-0.054	0.068		-0.803	0.433		
Zscore(MPR)	0.170	0.091	0.170	1.864	0.079	0.316	3.161
Zscore(MMOT)	0.387	0.150	0.387	2.586	0.019	0.118	8.490
Zscore(MPS)	0.071	0.078	0.071	0.911	0.374	0.433	2.309
Zscore(MINFC)	0.138	0.092	0.138	1.499	0.151	0.311	3.218
Zscore(MINTC)	-0.091	0.069	-0.091	-1.319	0.204	0.555	1.802
Zscore(MPT)	0.352	0.132	0.352	2.658	0.016	0.150	6.651
ZPT*PR	0.212	0.154	0.212	1.374	0.186	0.616	1.623
ZPT*MOT	-0.152	0.109	-0.152	-1.396	0.180	0.867	1.153
ZPT*PS	-0.103	0.083	-0.103	-1.232	0.234	0.768	1.302

Notes \* Zscore MPR= public relations, Zscore MMOT= motivation, Zscore MPS= personal selling, Zscore MINFC= information capital, Zscore MINTC= intellectual capital, Zscore MPT= personality traits, ZPT\*PR= Z score personality traits \* Z score public relations, ZPT\*MOT= Z score personality traits \* Z score motivation, ZPT\*PS= Z score personality traits \* Z score personal selling.

**Source:** Survey Data (2016)

#### 4.7.8 Moderating Effect of Personality Traits on the Relationship between Information Capital and Institution Competitiveness

The regression coefficients of interaction between personality traits and information capital on institution competitiveness ( $\beta = -0.219$ ,  $t = -2.741$ ,  $P < 0.05$ ). Hypothesis H<sub>07d</sub> stated that personality trait does not moderate the relationship between information capital and institution competitiveness. The results led to the rejection of



the hypothesis  $H_{07d}$  suggesting personality traits does moderated the effect of information capital on institution competitiveness. This confirmed that personality trait enhanced and antagonized the effect of information capital on institution competitiveness as shown in Table 4.28.

**Table 4.28: Regression Coefficients of Interaction between PT and INFC Predicting IC**

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	T	Sig.	Tolerance	VIF
6 (Constant)	-0.071	0.058		-1.211	0.243		
Zscore(MPR)	0.221	0.080	0.221	2.750	0.014	0.299	3.339
Zscore(MMOT)	0.266	0.136	0.266	1.958	0.067	0.105	9.502
Zscore(MPS)	0.083	0.067	0.083	1.233	0.234	0.431	2.318
Zscore(MINFC)	0.260	0.091	0.260	2.870	0.011	0.236	4.241
Zscore(MINTC)	-0.077	0.059	-0.077	-1.303	0.210	0.551	1.815
Zscore(MPT)	0.306	0.115	0.306	2.663	0.016	0.147	6.799
ZPT*PR	0.280	0.134	0.280	2.087	0.052	0.776	1.289
ZPT*MOT	-0.008	0.107	-0.008	-0.073	0.943	0.521	1.921
ZPT*PS	-0.094	0.072	-0.094	-1.316	0.206	0.767	1.304
ZPT*INFC	-0.219	0.080	-0.219	-2.741	0.014	0.115	8.668

Notes \* Zscore MPR= public relations, Zscore MMOT= motivation, Zscore MPS= personal selling, Zscore MINFC= information capital, Zscore MINTC= intellectual capital, Zscore MPT= personality traits, ZPT\*PR= Z score personality traits \* Z score public relations, ZPT\*MOT= Z score personality traits \* Z score motivation, ZPT\*PS= Z score personality traits \* Z score personal selling, ZPT\*INFC= Z score personality traits \* Z score information capital

**Source:** Survey Data (2016)

#### 4.7.9 Moderating Effect of Personality Traits on the Relationship between Intellectual Capital and Institution Competitiveness

The regression coefficients of interaction between personality traits and intellectual capital on institution competitiveness ( $\beta = -0.103$ ,  $t = -0.428$ ,  $P > 0.05$ ). Hypothesis  $H_{07e}$  stated that personality trait does not moderate the relationship between intellectual capital and institution competitiveness. The results led to acceptance of the hypothesis  $H_{07e}$  suggesting personality traits does not moderated the effect of

intellectual capital on institution competitiveness. This confirmed that personality trait buffered and antagonized the effect of intellectual capital on institution competitiveness as shown in Table 4.29.

**Table 4.29: Regression Coefficients of Interaction between PT and INTC Predicting IC**

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
7 (Constant)	-	0.060		-1.153	0.266		
Zscore(MPR)	0.069	0.088	0.234	2.666	0.017	0.264	3.788
Zscore(MMOT)	0.234	0.140	0.260	1.862	0.081	0.104	9.586
Zscore(MPS)	0.260	0.069	0.082	1.193	0.250	0.431	2.319
Zscore(MINFC)	0.082	0.098	0.273	2.797	0.013	0.214	4.677
Zscore(MINTC )	-	0.072	-0.061	-0.851	0.407	0.396	2.525
Zscore(MPT)	0.061	0.125	0.288	2.309	0.035	0.131	7.639
ZPT*PR	0.288	0.153	0.252	1.648	0.119	0.518	1.929
ZPT*MOT	0.252	0.128	0.020	0.160	0.875	0.210	4.769
ZPT*PS	-	0.076	-0.102	-1.349	0.196	0.721	1.386
ZPT*INFC	0.102	0.082	-0.219	-2.670	0.017	0.115	8.669
ZPT*INTC	-	0.085	-0.037	-0.428	0.674	0.367	2.721
	0.219						
	0.037						

Notes \* Zscore MPR= public relations, Zscore MMOT= motivation, Zscore MPS= personal selling, Zscore MINFC= information capital, Zscore MINTC= intellectual capital, Zscore MPT= personality traits, ZPT\*PR= Z score personality traits \* Z score public relations, ZPT\*MOT= Z score personality traits \* Z score motivation, ZPT\*PS= Z score personality traits \* Z score personal selling, ZPT\*INFC= Z score personality traits \* Z score information capital, ZPT\*INTC= Z score personality traits \* Z score intellectual capital.

**Source:** Survey Data (2016)

#### 4.8 Discussion of Empirical Results and Related Literature of the Findings

Eleven hypotheses tests were conducted during the study. The results of the tests showed that six were significant while four were not.

**H<sub>01</sub>: Public Relation has no Significant Effect on Institution Competitiveness**

The hypothesis test results indicated that public relations is a significant predictor of institution competitiveness ( $\beta = 0.230, p < .05$ ). This is an indication that it affects institution competitiveness. The results did not support the first hypothesis which stated that public relation has no significant effect on institution competitiveness, and was thus rejected. In line with past studies empowering support staff through training, caring for them, enhancing their job security, establishing good communication channels have been found to boost organizational performance through increased profits and productivity. Similarly, the attitudes and behaviour of the employees towards the public is very important to the success of a firm as they portray a good image and attract clients (Ni, 2006).

Moreover, the results are consistent with those of Hutton (1999) who observed that organizations with good public relation tend to have an advantage over their competitors. Hutton attributed this to the personal warmth of the employees of such organization and their ability to persuade clients to think or act in ways that benefit the organization. Grunig *et al.* (2002) support Hutton by contending that public relations involves identifying mutual interests, values and benefits between a client-organization and its publics and dealing with them effectively. They aver that this is what makes organizations with good public relations keep ahead of their competitors. The results are also in harmony with the findings of a study done in Czechoslovakia by Pelsmacker *et al.* (2003). They noted that empowering employees, and enhancing the identity, image, and brand of universities were key factors in winning new students.

**H<sub>02</sub>: Motivation has no Significant Effect on Institution Competitiveness**

The results of the regression analysis showed that motivation ( $\beta = 0.638, p < .05$ ) influence institution competitiveness. The results contradicted the second hypothesis which stated that motivation has no significant effect on institution competitiveness. It was thus rejected. This was consistent with finding of Snezanal and Pejicic (2012) that motivation of employees are of great of interest to contemporary human resource management, because only by creating the high quality motivation system can the organization improve its competitive ability and advantage in the market. In addition, Ganta (2013) noted that motivation enhances employees' ability to meet personal goals, job satisfaction and efficiency; this in turn boosts a company's chances of meeting its goals. Matthew *et al.* (2009) concurs with Ganta (2013) by asserting that an internally satisfied, delighted and motivated worker is highly productive and this contributes significantly to an organization's efficiency, effectiveness and profits.

Moreover, these observations are consistent with the findings of Zampetakis and Moustakis (2007). They observed that motivation leads to employees' satisfaction, placing a firm in a better position to deliver quality goods and services needed to satisfy external customers. Reena *et al.* (2009) considers motivation as an internal strength that drives individuals to pull off personal and organizational goals hence its influence on firm performance and competitiveness. The results support those of Yazdani *et al.* (2011) who found out that motivation affect performance of organizations and their competitiveness. They attributed this to the fact that motivated employees are happier, work extra hours, and are more productive and willing to help clients. The results are also in harmony with those of Ganta (2014) who noted that the level of motivation within the workplace have a direct impact on employee productivity. Workers who are motivated and excited about their jobs carry out their

responsibilities to the best of their ability, resulting into increased productivity. Such employees are likely to be persistent, creative and productive, turning out high quality work that they willingly undertake. Ganta (2014) adds that unmotivated employees are likely to spend little or no effort in their jobs, avoid the workplace as much as possible, quit the organization if given the opportunity and produce low quality work.

The results of the study are in line with those of Cheung and Chan (2012) which was conducted across 33 countries. They noted that high motivation score of a country conferred advantages such job satisfaction and productivity, on both employees and their organizations. Studies have shown that lack of organizational commitment and job satisfaction leads to absenteeism, tardiness and high labour turnover (Latham, 2007; Lambert & Hogan, 2009). These behaviours not only affect performance of organizations but also their competitiveness. A similar opinion is held by Rutherford (1990) who asserts that a motivated employee is responsive to goals and objectives he/she must achieve and thus directs his/her efforts in that direction. Rutherford adds that organizations with a motivated work force are more successful because employees always do their best even when under stress.

Human resource is considered to be at the heart of an enterprise's competitive advantage. (Doyle, 2004) argued organizations may have access to virtually the same inputs, information and technology but, it is the people within those organizations and their interaction which make the real difference (Latham, 2007). Organizations that excel are ones that have learnt how to tap people's commitment and capacity to learn at all levels in the enterprise/organization (Stead, 2009); one of the ways of ensuring these is through motivation. Vithessonthi and Schwaninger (2008) stresses that employee motivation is one the most crucial variables affecting other work related variables and outcomes. It is positively associated with work performance,

organizational commitment, and adaptive responses to organizational changes. Universities should consider employee motivation as one of the mitigation measures against competitiveness challenges.

### **H<sub>03</sub>: Personal Selling has no Significant Effect on Institution Competitiveness**

The hypothesis test results indicated that personal selling is a significant predictor of institution competitiveness ( $\beta = 0.220, p < .05$ ). This is an indication that it affects institution competitiveness. The results did not support the third hypothesis which stated that personal selling has no significant effect on institution competitiveness. It was thus rejected. In line with previous finding of Cheney *et al.* (2011) established that there was a significant positive association between a salesperson's skills and a firm's performance. They argued that personal selling involves direct personal communications between a consumer and a salesperson, with the latter conveying the product or service. In support Messah and Namulia's (2012) study on the effect of selected marketing communication tools on student enrolment in private universities in Kenya established that personal selling during career days helps institutions to significantly increase students' enrolment.

In addition, the results support those of Boles (2002) who observed that organisations with employees with personal selling skills tend to have a competitive edge over their rivals. Boles attribute this to the fact that salespersons and employees of such organizations are fully familiar with the product, the firm, and the market and well-informed about the competitor's products and the degree of competition. They are also well acquainted with the motives and behaviour of prospective clients/buyers. The results are also in harmony with those of Moncrief and Marshall (2005) who noted that personal selling skills enables salespersons to give an accurate presentation

of products or services to the potential clients/customers, continuously holding their attention and creating interest in the product. Schwepker (2003) concurs with Moncrief and Marshall and adds that the success of those with personal selling skills lies in their ability to persuade a potential client by explaining the utility and distinctive qualities of the product so that the prospect realizes the need for the product.

Personal selling is a useful communication tool during the buying process, particularly in building up customers'/clients' first choices. Armstrong (2001) opines that personal selling is important especially for educational institutions, as it enables them to communicate with prospective students in a timely and personal manner. The interactive nature of personal selling makes it an ideal tool for building relationships with potential customers and gaining a competitive advantage. Barney (2001) adds that organizations can gain sustained competitive advantage by implementing strategies that exploit their internal strengths, responding to environmental opportunities, while neutralizing external threats and avoiding internal weaknesses. Institutions of higher learning can use support staff personal selling as one of their internal strengths for enhancing competitiveness.

#### **H<sub>04</sub>: Information Capital has no Significant Effect on Institution Competitiveness**

The hypothesis test results indicated that information capital is a significant predictor of institution competitiveness ( $\beta = 0.209, p < .05$ ). This is an indication that it affects institution competitiveness. The results did not support the fourth hypothesis which stated that information capital has no significant effect on institution competitiveness. It was thus rejected. In line with past studies of Wang *et al.* (2007) many firms have recognized the potential and advantages of information capital and infused it into their

operations to facilitate business growth and enhance competitiveness. Information capital enhances growth and competitiveness because it enables firms to develop new products, services, re-engineer business processes, and improve decision-making, coordination and flexibility (Chi & Sin, 2015).

The results are consistent with the findings of a research carried out by Davis III *et al* (2011) on Internal Marketing Communications of Higher Education Institutions. They noted that reduced information flow led to the loss of prospective students to competing institutions. They attributed the reduced information flow to the unwillingness of academic staff members to participate in marketing their University/faculties. The results contradict those of Gomes and Murphy (2003) who consider communication as an important aspect of information capital whose breakdown leads to students run around and dissatisfaction. They assert that this affects enrolment and competitiveness of institutions. Several other studies have showed that aspects of information capital such as social media are powerful marketing tools.

Subsequently, Barnes and Lescault (2011) noted that 100 per cent of the accredited institutions of higher learning in USA sampled in their study reported using some form of social media to reach their clients, with Facebook (98%) and Twitter (84%) being the most used. Harris (2008) found out that admission offices use blogs to showcase student experiences as a recruitment tool. Swartzfager (2007) observed that twitter provides institutions with the opportunity to create live, up-to-the minute notices of commencement programs, homecoming events, class re-unions and live chat sessions thus enhancing their attractiveness to potential students.



The results conflict with the findings of Chi and Sun, (2015) who observed that employees that are able to utilize existing information do their jobs effectively at less costs, making a firms products less expensive and more competitive. The results also contradict those of Madden (2010) who established that use of social media technologies such as Facebook and twitter to connect with students enhances enrolment in universities as it is more personal. Du lap Lowenthal (2009) adds that use of social media to create on line courses, live chat session, up-to-minute notices, class reunions and homecoming events boosts the popularity of an institution among its students. These studies show that information capital plays an important role in attractiveness and competitiveness of institutions. It is therefore essential that institutions enhance their information capital by providing their support staff with the skills and facilities as they are the people who are most frequently contacted for information by clients.

**H<sub>05</sub>: Intellectual Capital has no Significant Effect on Institution Competitiveness**

The hypothesis test results indicated that support staff intellectual is a significant predictor of institution competitiveness ( $\beta = -0.160, p < .05$ ). This is an indication that it affects competitiveness of universities. The results did not support the fifth hypothesis which stated that intellectual capital has no significant effect on institution competitiveness. It was thus rejected. In line with previous finding of Nejadivani *et al.* (2012) examined the effects of intellectual capital on the performance of tax offices in North Khorasan Province. Using a sample of 125 respondents, the results of the investigation indicated that the relationship between the two constructs was significant. Studies carried out in Jordan among pharmaceutical firms results by Sharabati *et al.* (2010) using path analysis indicated that three elements of intellectual capital combined had a positive and significant effect on business performance.

The results showed that intellectual capital had a negative and significant effect on universities competitiveness. The results are in line with those of Sullivan (2000) who found that intellectual capital contributes significantly to success and sustainability of organizations. Sullivan attributes success of such organizations to aspects of intellectual capital such as specialized technical knowledge, mastery of business rules and processes and the data that supports their job among other factors. Stead (2009) adds that employees with extensive knowledge about their job know what works best and always make things happen.

This millennium requires that less people do physical work and more people do brain work as economic wealth and success is driven more by knowledge and information than the production process (Jurczak, 2008). Intellectual capital is closely related to knowledge and experiences of employees, customers, and technologies of an organization (Lonnquist & Mettanen, 2002). Intellectual capital is important for people, firms and countries as it encompasses applied experience, organizational technology, customer relationships and professional skills that provide a competitive advantage in the market (Roos & Fernstrom, 2005). The fortunes and value of firms can increase or decrease depending on how well they manage their intellectual capital. Strengthening their intellectual capital can be one of the strategies that business organizations and institutions of higher learning can adopt to enhance their competitiveness.

**H<sub>06</sub>: Personality trait has no significant effect on institution competitiveness**

The hypothesis test results indicated that personality trait is a significant predictor of institution competitiveness ( $\beta = 0.264$ ,  $p < .05$ ). This is an indication that it affects institution competitiveness. The results did not support the sixth hypothesis which

stated that employees' personality trait has no significant effect on institution competitiveness. It was thus rejected. This was consistent with finding of the five-factor model of personality traits. Neuroticism, often labelled by the positive pole of the trait Emotional Stability is the tendency to show poor emotional adjustment in the form of stress, anxiety, and depression. Extraversion represents the tendency to be sociable, dominant, and positive (Watson & Clark, 1997). Individuals who score high on Openness to Experience are creative, flexible, curious, and unconventional (McCrae, 1996). Agreeableness consists of tendencies to be kind, gentle, trusting and trustworthy, and warm. Finally, conscientious individuals are achievement-oriented and dependable (Barrick & Mount, 1991), as well as orderly and deliberate (Costa & McCrae, 1992). Neuroticism and Conscientiousness are two of big five traits and the most important correlates of job performance (Hurtz & Donovan, 2000; Salgado, 1997).

The study hypothesised that personality traits do not significantly moderate the relationship between institution responsiveness and institution competitiveness. The results of the hierarchical regression analysis revealed that personality traits moderate the relationship between institution responsiveness and competitiveness of universities. The findings supported those of a number of studies that demonstrated that personality traits moderate the relationship between institution responsiveness and organization competitiveness Hashim's *et al.* (2012) study showed that agreeableness, conscientiousness and openness to experience significantly moderate the relationship between willingness of employees to serve and job performance in a telecommunication company in Malaysia. The results are in harmony with those of Khosla (2009) who observed that personality traits are extremely important in today's

competitive organizational settings. Often the 'wrong' kind of personality proves disastrous and causes undesirable tensions and worries in organization.

In addition, the results do not support those of Kreitner and Kinicki, (2007) who found out that conscientiousness, openness to experience, agreeableness, extraversion and emotional stability were dimensions that influence support staff willingness to understand needs of customers and giving them individual attention. Misha *et al.* (2015) noted that people who are agreeable tend to reduce personal and professional conflict by resolving the problem through cooperation and collaborations. In most cases they tend to agree with those they serve for the benefit of the organization rather than argue and create more conflict.

**H<sub>07a</sub>: Personality traits do not moderate the relationship between public relations and institution competitiveness**

Hypothesis (H<sub>07a</sub>) stated that personality trait does not moderate the effect of public relations on institution competitiveness ( $\beta = -0.002$ ,  $p > 0.05$ ) and the hypothesis was supported. The study found that personality trait had negative and not significant factor in moderating public relations on institution competitiveness. The results supported the hypothesis and could therefore not be rejected. In line with previous finding of Fernandez *et al.* (2014) analysed the impact of the big five personality traits on performance. Using a sample of 359 University of New South Wales students, the experimental tests revealed that more neurotic subjects perform worse, and that more conscientious individuals perform better. Another study by Eswaran *et al.* (2011) investigated the relationship between the Big Five Personality Dimensions and job involvement in the Northern Region of Malaysia. Using a sample of 105 sales/customer service staff of foreign based banking institution, the results of the

regression analysis revealed that extroversion and agreeableness are positively related to job involvement. Further, the results showed that emotional stability/neuroticism, conscientiousness and openness to experience did not show any significant relationship with job involvement.

**H<sub>07b</sub>: Personality traits do not significantly moderate the relationship between motivation and institution competitiveness**

Hypothesis (H<sub>07b</sub>) stated that personality trait does not moderate the effect of motivation on institution competitiveness ( $\beta = -0.138, p > 0.05$ ) and the hypothesis was supported. The study found that personality trait had negative and not significant factor in moderating motivation on institution competitiveness. The results did support the hypothesis and was thus accepted. This was consistent with finding of Sarwar *et al.* (2013) who investigated the relationship between personality traits of employees and their turnover in public and private organizations. Further, the study explored the kinds of personality traits that are more dominant in those employees who have high turnover intentions or having high job quitting probability. Using 301 employees, the results from the regression analysis indicated that personality traits like extraversion, emotional stability, conscientiousness and agreeableness were found to be negatively associated to individuals' intents to quit, while openness to experience were observed to be positively related with intention to quit.

**H<sub>07c</sub>: Personality traits do not significantly moderate the relationship between personal selling and institution competitiveness**

Hypothesis (H<sub>07c</sub>) stated that personality trait does not moderate the effect of personal selling on institution competitiveness ( $\beta = -0.103, p > 0.05$ ) and the hypothesis was supported. The study found that personality trait had positive and not significant factor in moderating of personal selling on institution competitiveness. The results did support the hypothesis and was thus accepted. This was in line Costa and McCrae (1992) findings on the personality traits introduced in the literature under big five model. Employees in the marketing offices are observed to alter their behaviour

during a customer interaction or across customer interactions based on perceived information about the nature of the selling situation (Echchakoui, 2013). In other words, to practice adaptive selling, a salesperson must change or adapt his/her selling strategies for each client/customer. According to Echchakoui (2013), data about the relationship between personality traits and salesperson's performance is limited. In spite of this, primary studies and meta-analyses have shown that under certain conditions, there are or no relationships between personality traits and salesperson's performance.

**H<sub>07d</sub>: Personality traits do not significantly moderate the relationship between information capital and institution competitiveness**

Hypothesis (H<sub>07d</sub>) stated that personality trait does not moderate the effect of information capital on institution competitiveness ( $\beta = -0.219$ ,  $p < 0.05$ ) and the hypothesis was not supported. The study found that personality trait had negative and significant factor in moderating information capital on institution competitiveness. The results did support the hypothesis and was thus rejected. In line with previous finding of Wang and Yang (2005) explored the role that personality plays on unified theory of Acceptance and Use of Technology. Using a sample of 240 respondents of online stocking, the following findings were established. First, agreeableness with internet experience moderates the social influence-intention relationship. Secondly, conscientiousness was found to moderate the effect of social influence on intention and the effect was negative. Thirdly, neuroticism was found to significantly moderate the facilitating condition-intention relationship with positive effect. This is because a neurotic individual appears to be more anxious for facilities, so he will feel secure in the attempt to a new technology.

**H<sub>07e</sub>: personality traits do not significantly moderate the relationship between intellectual capital and institution competitiveness**

Hypothesis (H<sub>07e</sub>) stated that personality trait does not moderate the effect of intellectual capital on institution competitiveness ( $\beta = -0.037$ ,  $p > 0.05$ ) and the hypothesis was supported. The study found that personality trait had negative and not significant factor in moderating intellectual capital on institution competitiveness. The results did support the hypothesis and was thus accepted. A study by Wei (2010) explored the effect of personality traits on knowledge sharing under extrinsic rewards system. Some researchers have observed that in spite of the large amount of research investigating personality-performance relationships; very little research has examined the mechanisms through which personality influence performance (Barrick *et al.*, 2002). Consequently, Biderman *et al.* (2007) examined the relationship between conscientiousness, time-on-task, and academic performance. Using a sample of 188 undergraduate students enrolled in an introductory psychology course at a Southern University, the regression analysis indicated weak relationships when simple summated conscientiousness scores were analysed.

In light of this, Salleh and Kamaruddin (2011) study examined the effects of personality traits in determining the sales performance of Takaful (Islamic Insurance) agents. Three personality dimensions were used: self-efficacy, self-monitoring and locus of control and how these factors are related to sales performance. Using a sample of 289 respondents of the Insurance Industry in Malaysia, it was established that two of the three personality dimensions were found to be inversely related to sales performance, that is, self-efficacy and self-monitoring, while locus of control was found to be inversely related to sales performance.



**Table 4.30: Summary of Hypotheses Testing**

<b>Hypotheses</b>	<b>Results</b>
H <sub>01</sub> : Public relation has no significant effect on institution competitiveness.	Rejected
H <sub>02</sub> : Motivation has no significant effect on institution competitiveness.	Rejected
H <sub>03</sub> : Personal selling has no significant effect on institution competitiveness.	Rejected
H <sub>04</sub> : Information capital has no significant effect on institution competitiveness.	Rejected
H <sub>05</sub> : Intellectual capital has no significant effect on institution competitiveness.	Rejected
H <sub>06</sub> : Personality traits have no significant effect on the relationship between institution responsiveness and institution competitiveness.	Rejected
H <sub>07a</sub> : Personality traits do not significantly moderate the effect of public relations on institution competitiveness.	Fail to reject
H <sub>07b</sub> : Personality traits do not significantly moderate the effect of motivation on institution competitiveness.	Fail to reject
H <sub>07c</sub> : Personality traits do not significantly moderate the effect of personal selling on institution competitiveness.	Fail to reject
H <sub>07d</sub> : Personality traits do not significantly moderate the effect of information capital on institution competitiveness.	Rejected
H <sub>07e</sub> : Personality traits do not significantly moderate the effect of intellectual capital on institution competitiveness.	Fail to reject

**Source:** Survey Data (2016)

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.0 Introduction

The chapter begins with summary of the findings and conclusions. The conclusions are drawn with respect to theoretical and human resource management contributions of the study, recommendations and future research areas.

#### 5.1 Summary of the Findings

This study had one general and five specific objectives. The general objective of the study was to investigate the moderating effect of personality traits on the relationship between institution responsiveness and competitiveness of public universities in Kenya. The specific objectives of the study examined the five aspects of institution responsiveness namely; public relations, motivation, personal selling, information, intellectual capital and moderator personality traits on competitiveness of public universities. Eleven hypotheses were drawn from these objectives and tested.

The first hypothesis was hypothesised that public relations had no significant effect on competitiveness of public universities ( $\beta = 0.230$ ,  $t = 2.458$ ,  $P < 0.05$ ). The test results of this first hypothesis showed that public relation was a significant predictor of competitiveness of public universities.

The second hypothesis tested whether motivation had no significant effect on competitiveness of public universities ( $\beta = 0.638$ ,  $t = 4.944$ ,  $P < 0.05$ ). An examination of the data revealed that motivation was a significant predictor of public universities competitiveness.

The third hypothesis was for determining whether personal selling had a significant effect on competitiveness of public universities ( $\beta = 0.220$ ,  $t = 3.545$ ,  $P < 0.05$ ). The test results showed that personal selling was a significant predictor of public universities competitiveness.

The fourth hypothesis tested whether information capital had a significant effect on competitiveness of public universities ( $\beta = 0.209$ ,  $t = 2.240$ ,  $P < 0.05$ ). The results indicated that information capital was a significant predictor of public universities competitiveness.

The fifth hypothesis tested whether intellectual capital had a significant effect on competitiveness of public universities ( $\beta = -0.160$ ,  $t = -2.364$ ,  $P < 0.05$ ). The test results revealed that intellectual capital was a significant predictor of public universities competitiveness.

The sixth hypothesis tested whether personality traits has a significant moderating effect on competitiveness of public universities or not ( $\beta = 0.264$ ,  $t = 2.216$ ,  $P < 0.05$ ). The hierarchical regression analysis results showed that personality trait was a significant predictor of public universities competitiveness.

The seventh hypothesis tested whether personality traits moderate the effect of public relations on institution competitiveness ( $\beta = -0.002$ ,  $t = -0.039$ ,  $P > 0.05$ ). The results of the hierarchical regression analysis revealed that personality traits do not moderate the relationship between public relations and public universities competitiveness.

The eighth hypothesis tested whether personality traits moderate the effect of motivation on institution competitiveness ( $\beta = -0.138$ ,  $t = -1.261$ ,  $P > 0.05$ ). The results of the hierarchical regression analysis revealed that personality traits do not moderate the relationship between motivation and public universities competitiveness.

The ninth hypothesis tested whether Personality traits moderate the effect of personal selling on institution competitiveness ( $\beta = -0.103$ ,  $t = -1.232$ ,  $P > 0.05$ ). The results of the hierarchical regression analysis revealed that personality traits do not moderate the relationship between personal selling and public universities competitiveness.

The tenth hypothesis tested whether Personality traits moderate the effect of information capital on institution competitiveness ( $\beta = -0.219$ ,  $t = -2.741$ ,  $P < 0.05$ ). The results of the hierarchical regression analysis revealed that personality traits moderate the relationship between information capital and public universities competitiveness.

The eleventh hypothesis tested whether Personality traits moderate the effect of intellectual capital on institution competitiveness ( $\beta = -0.103$ ,  $t = -1.232$ ,  $P > 0.05$ ). The results of the hierarchical regression analysis revealed that personality traits do not moderate the relationship between intellectual capital and public universities competitiveness.

## **5.2 Conclusions**

Eleven hypotheses tests were conducted during the study. The results of the tests showed that seven were significant while four were not. Eleven conclusions were drawn from these hypotheses tests. The results of the first hypothesis tested showed that public relations explained a significant variation in universities competitiveness. This is an indication that the explanatory variable affects the outcome. On the basis of the tested results it was concluded that support staff public relations affects competitiveness of universities. The tested results of hypothesis two showed that motivation accounted for a small but significant variance in competitiveness of universities. This means that predictor variable affects universities competitiveness.

The study therefore concluded that universities competitiveness is affected by motivation of support staff.

The third hypothesis tested results showed that personal selling caused a reasonable and significant variation in competitiveness of universities about its mean. This is an indicator that the explanatory variable affects the outcome. On the basis of the results, it was concluded that personal selling affects competitiveness of universities. Hypothesis four tested results revealed that information capital accounted for significant variation in universities competitiveness. The conclusion drawn from this result was that information capital does affect competitiveness of public universities.

The tested results of hypothesis five indicated that intellectual capital explains significant variation in universities competitiveness. The conclusion made on the basis of this observation was that intellectual capital affects universities competitiveness. The sixth hypothesis tested revealed that the  $R^2$  change and F change were significant. The conclusion drawn from these results was that personality traits affects universities competitiveness.

The tested results of hypothesis seven indicated that personality traits had insignificant moderating effect on the relationship between public relations and institution competitiveness. The tested results of hypothesis eight indicated that personality traits had insignificant moderating effect on the relationship between motivation and institution competitiveness. The tested results of hypothesis nine indicated that personality traits had insignificant moderating effect on the relationship between personal selling and institution competitiveness.

The tested results of hypothesis ten indicated that personality traits had significant moderating effect on the relationship between information capital and institution

competitiveness. The tested results of hypothesis eleven indicated that personality traits had insignificant moderating effect on the relationship between intellectual capital and institution competitiveness. The overall F test of 43.230 which was statistically highly significant confirmed the moderating role of personality traits on the relationship between institution responsiveness and institution competitiveness.

In conclusion, this study has contributed to the current understanding of the link between institution responsiveness and institutional competitiveness. It has highlighted the critical role of public relations, motivation, personal selling, information and intellectual capital in enhancing public universities competitiveness and therefore provides a more complete test of the RBV theory. Studies (Schwab, 2014; Thomas Jr. *et al.*, 2008; Porter, 2004) have shown that the enhanced employees and organization performance is a strong indicator of its competitiveness. The study has also highlighted that personality traits significantly affect competitiveness of public universities.

The results are in harmony with those of Hameed and Waheed (2011) who argued that firms which prioritize institution responsiveness deliver a higher level of customer service that ultimately leads to a higher level of profitability. Responsiveness serves as a catalyst for improved productivity, lower labour costs, reduced turnover and increased employee commitment as well as customer retention, referrals and loyalty. The results confirms the works of Aguilera *et al.*(2005) who established that institution responsiveness increases competitive advantage by fuelling innovation, creating high work performance, enhancing organization's reputation as well as maintaining client/customer trust.

### **5.3 Implication of the Study to Theory and Practice**

This section covers contribution to theory and practice.

#### **5.3.1 Theoretical Contributions**

The finding on the moderating effects of personality traits contributes to institution responsiveness and institution competitiveness literature. In this regard, this study supports paradigm for the resource based view, knowledge based view and dynamic capabilities as well as Eysenck and five factor model. This research has both practical and theoretical significance, in the provision of information that will help in understanding the link between institution responsiveness and competitiveness of universities under the moderating effects of personality traits. One major contribution is the presentation of the empirical evidence supporting the causal-effect relationship between institution responsiveness and competitiveness of public universities. The results, in conjunction with theoretical arguments, showed that aspects of institution responsiveness such as public relations, motivation, personal selling and intellectual capital play an antecedent role in competitiveness of universities.

This study also provides evidence that contradicts findings by several scholars (Madden, 2010; Harris, 2008; Swartzfager, 2007) which showed that interaction of personality traits enhances effect of information capital on organizations performance and competitiveness. The study further demonstrated that the relation between institution responsiveness and competitiveness of universities was moderated by personality traits. The study lends support to those of a study by Davis III *et al.* (2011) on Internal Marketing Communications of Higher Education Institutions. They noted that reduced information flow led to the loss of prospective students to competing

institutions. This means that information capital is only effective when/ if it is adequate, timely and from reliable sources.

### **5.3.2 Managerial Contributions**

The findings have important implications for the management of institutions of higher learning and universities in particular. Firstly, the study demonstrated that institution responsiveness affects competitiveness of universities. Aguilera *et al.* (2005) asserted that institution responsiveness increases competitive advantage by fuelling innovation, creating high work performance, enhancing organization's reputation as well as maintaining client/customer trust. These programmes enhance employees' motivation, knowledge, behaviour and attitudes towards work and boost their ability to understanding the needs and wants of the customers, giving individual attention to customers and carry out their transactions safely (Kumar *et al.*, 2009). The finding of this study should inform the human resource management practices of universities by adopting employees' empowerment programmes. Such an adoption will go a long way in boosting the institution responsiveness. Mani (2010) is of the view that no matter how automated an organization may be, its success depends on employees' empowerment in areas such as public relations, motivation and personal selling.

### **5.4 Recommendations**

This study established that institution responsiveness as measured by its public relations, motivation, personal selling, information and intellectual capital affect competitiveness of universities. In addition, the study observed that personality traits moderated the relationship between institution responsiveness and competitiveness of universities. The study observed that public relations affect competitiveness of universities. According to Li (2002), the manner in which an organization relates with



its internal and external clients significantly influences its success and competitiveness. Some scholars argued that it is the most fundamental driver of business performance. Gay *et al.* (2005) assert that developing a cordial relationship among workers; management and various branches of an organization elicit positive attitudes and behaviours that are instrumental in the implementation of the competitive strategies. The study therefore recommends that university senior managers come up with policies and practices that enhance public relations as a way of boosting the competitiveness of their institutions.

The study also observed that motivation relations affect competitiveness of universities. According to Li (2002), the manner in which an organization relates with its internal and external clients significantly influences its success and competitiveness. The study also observed that motivation affects competitiveness of universities. Ganta (2013) noted that motivation enhances employees' ability to meet personal goals, job satisfaction and efficiency; this in turn boosts a company's chances of meeting its goals. Matthew *et al.* (2009) concurs by asserting that an internally satisfied, delighted and motivated worker is highly productive and this contributes significantly to an organization's efficiency, effectiveness and profits. Universities should adopt pragmatic motivational practices as mitigation measures against the decline in demand for their SSP programmes.

The test results of the third hypothesis showed that personal selling affects competitiveness of universities. Schwepker (2003) attributes the success of those with personal selling skills to their ability to persuade a potential client by explaining the utility and distinctive qualities of the product. According to Burkitt and Zealley (2006), organizations whose employees have personal selling skills always succeed because they play a key role in marketing an organization because they are the main

link between it and the external public. Universities should therefore empower their employees thus enhancing their ability to build and maintain long-term customer relationships by listening to them, assessing their needs, and solving their problems. This will not only improve the organization's attractiveness but also its competitiveness.

It was observed that information capital affect university competitiveness. This observation supports the findings of several scholars (Choy *et al.*, 2014; Rashed *et al.*, 2010). According to Oriarewo *et al.* (2013), organizations can only reap the benefits associated with information capital if they have the capacity to use it to capture business opportunities that bring success. The capacity is usually expressed in terms of availability of information and communication technology facilities, employees' knowledge, expertise and behaviour towards work. It is recommended that universities provide the employees with facilities and training for them to reap the benefits associated with information capital.

The study found that intellectual capital affected competitiveness of universities. This demands that organizations must be rich in aspects of intellectual capital such as knowledge and experience (Lonnquist & Mettanen, 2002). Jurczak (2008) asserts that the 21 millennium requires less people who do physical work and more who do brain work as economic wealth and success is driven more by knowledge and information than the production process. It is recommended that universities should boost their intellectual capital base by empowering its employees through training and skill up-scaling courses for them to be competitive.

The study findings indicated that personality traits moderate the relationship between institutional responsiveness and universities competitiveness. It is important to note that

both institution responsiveness and personality traits affect competitiveness of institution. Hameed and Waheed (2011) argue responsiveness serves as a catalyst for improved productivity, lower labour costs, reduced turnover and increased employee commitment as well as customer retention, referrals and loyalty. Kreitner and Kinicki, (2007) who found out that personality trait like conscientiousness, openness to experience, agreeableness, extraversion and emotional stability were dimensions that influence employees' willingness to understand needs of customers and giving them individual attention. It is recommended that universities put in place mechanisms that enhance institution responsiveness and positive aspects of personality trait as a way of improving their performance and attractiveness to clients.

### **5.5 Suggestion for Future Research**

Even though this study provided valuable findings, it also offered insight on issues that remain unanswered and require further investigation. This study involved only public universities. Future studies involving both private and public universities would improve the generalizability of the results.

Data for the study was collected at one point in time given that it utilized the explanatory survey research design (Cohen *et al.*, 2007). Measurement of constructs like competition should be done over a reasonable period of time due to the ever changing market environment. The study could possibly have yielded different results had a research design that has provisions for a longer data collection time-frame been chosen, hence the need for a longitudinal study.

The valid data used in this study was from a sample of 28 universities, 212 senior managers, 398 support staff and 400 students. While the samples sizes were considered sufficient for the study, it limited the researchers' ability to perform

additional analysis within the sample around each of the variables. Future research should be done using a larger sample that allows performance of these additional analyses.

The study provided evidence that the institution responsiveness as measured by their public relations, personal selling motivation, information and intellectual capital significantly affect organizational competitiveness. Future research should include other dimensions of employee responsiveness such as training and attitudes to get a better understanding of the association between it and institutional competitiveness.

Finally, although the results of the study indicated personality traits moderate the relationship between institution responsiveness and institution competitiveness, they may produce different results in other organizational settings hence the need for future research covering multiple organizations.

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## APPENDIXES

### Appendix I: Introductory Letter

Dear Sir/Madam,

I am a student at Moi University pursuing a PhD in Business Management. I am conducting a research titled *Effects of institution Responsiveness on Competitiveness of Public Universities in Kenya* as part of the course work. You have been chosen to participate in this study because I believe you have information that can significantly contribute to the success of the study. I am therefore kindly requesting you to participate in the study by filling this questionnaire. Please note that data collected using this questionnaire is purely for purposes of the study and will be treated with utmost confidentiality.

May I thank you in advance for taking your time to fill the questionnaire

Yours faithfully,

Nyenze M. Christopher



## Appendix II: University Support Staff Questionnaire (USQ)

### General Demographic

1. Age of the institution:

1-10  11-20  21-30  31-40  41-50  51 and above

2. Total number of employees:

1-400  401-800  801-1200  1201-1600  1601-2000

2001 and above

3. Location of the institution:      Urban       Rural

### Section A: Public Relations

Indicate the extent to which you agree with each of the statements on public relations of the university. Use the given scale

Scale: Strongly Disagree (1), Disagree (2), Undecided, (3) Agree (4), Strongly Agree (5)

No	Statement	1	2	3	4	5
1	Responds promptly to inquiries					
2	Defends the university effectively when facing challenges to its reputation					
3	Always gives information that is credible					
4	Able to develop trust between students and the university					
5	Creates stories and events that attract public attention					
6	Good rapport among the workers themselves					
7	Able to articulate clearly the course programmes offered by the university					

8	Have good relationship with students					
9	Workers are respectful					
10	Workers are Honest					
11	Always friendly to students					
12	Prepare messages that are clear/easy to understand					
13	Use efficient means to release information/messages to students					
14	Support staff presents the face of the university well through their good behaviour					
15	Have established efficient internal communication channels					
16	Uses their knowledge of the university to persuade potential students					
17	Able to use social media (internet) to effectively market programmes offered by the universities					
18	Uses mass media (electronic and print) inform their client					
19	Keeps clients informed of activities going on in the university at all times					
20	Plans, researches and prepares materials for distribution to university clients					

### Section B: Motivation

Use the given scale to indicate the extent to which you agree with motivation at the work place in the areas stated in the below table.

Scale: Strongly Disagree (1), Disagree (2), Undecided, (3) Agree (4), Strongly Agree (5)

No	Statement	1	2	3	4	5
1	Facilitate high level of achievement					
2	There is recognition of everybody					
3	Work that is interesting and challenging					
4	Responsibilities at the workplace					
5	Fair career advancement pace					
6	Opportunities for Personal growth					
7	Provision of skill enhancement training					
8	Leadership roles are proper					
9	There is team spirit at work place					
10	Casual dress day is encouraged					
11	Days for social events are set a side					
12	Occasional time-offs are granted					
13	Availability of stress management programmes					
14	Work culture of fostering mutual reliance and friendship among workers					
15	A reward system which differentiates good and poor performers					
16	Jobs designed such that they have distinct and important roles in the organization					

17	Transparency in management of all processes in the organization					
18	Autonomy to perform given tasks					
19	Given a feedback whenever necessary					
20	Good bosses who are motivational					
21	Being part of a team					
22	Fun at work is encouraged					
23	Flexibility at work (work hours, dress etc)					
24	Inspiring leadership is present					
25	Location of work station					
26	There is Job security					
27	Good work environment (safety, lighting, ventilation etc)					
28	Family friendly employer					
29	Cutting edge technology					
30	Pride in the organization					
31	Realistic and achievable goals set by the organization					
32	Scholarships for support staff education					
33	Performance appraisal which adequately measures support staff performance					

### Section C: Personal Selling

The items in the below table are on university personal selling. Use the given scale to rate their abilities.

Scale: Strongly Disagree (1), Disagree (2), Undecided, (3) Agree (4), Strongly Agree (5)

No	Statement	1	2	3	4	5
1	Knowledgeable about university programmes					
2	Knowledgeable of the needs of students					
3	Awareness of tastes and behaviour of the clients					
4	Ability to make tailor made courses					
5	Ability to link with prospective students					
6	Familiarity with courses offered					
7	Negotiation skills are exercised well					
8	Ability to make clients be loyal to the university					
9	Ability to help clients assess their needs					
10	Ethical when performing duties					
11	Honesty in the courses they offer					
12	Well informed about competitors products					
13	Aware of prospecting clients					
14	Smart in techniques of approaching clients					
15	Negotiation skills are well outlined					
16	Ability to overcome an objection					
17	Ability to make clients be interested in the university					

18	Awareness of the degree of competition from competitors					
19	Ability to provide accurate information					
20	Understanding of clients problems					
21	Providing solutions to students/clients problems					
22	Ability to convince students to register for courses					
23	Creating a good image of university					
24	Efficient in delivering their courses					
25	Confident in delivering their courses					
26	Dedicated in delivering their courses					

#### Section D: Information Capital

Indicate the extent to which you agree with each of the statements on information capital of the university. Use the given scale

Scale: Strongly Disagree (1), Disagree (2), Undecided, (3) Agree (4), Strongly Agree (5)

No	Statement	1	2	3	4	5
1	The university has adequate number of computers					
2	The university has a reliable internet connectivity					
3	All the required software is available					
4	All the departments in the university have computers					
5	All the support staff have access to computers					

6	Support staff have the necessary computing skills					
7	Support staff are provided with relevant training in computing					
8	Use of social media/web facilities has enabled the university to attract a high number of students					
9	The university support staff have challenges using computers leading to inefficiency in operations					
10	There is a working intercom					
11	The university has digitized its operations					
12	ICT has been integrating in teaching					
13	Availability of ICT has enhances the university's research capability					
14	The university is able to manage students records efficiently because of ICT					
15	Use of ICT has enhanced management of university finances					
16	Use of ICT has enabled us to take shorter time to register students takes					
17	Use of ICT has enable the university to coordinate its operations better					
18	The university website has been a good marketing tool					
19	The university portal have enable us to inform our clients of what is going on at all times					
20	The university is now able to offer on-line courses since it has reliable ICT facilities					
21	Improved overall efficiently as a result of adoption of ICT					

### Section E: Intellectual Capital

The items in the below table are on the university intellectual capital. Use the given scale to rate them.

Scale: Strongly Disagree (1), Disagree (2), Undecided, (3) Agree (4), Strongly Agree (5)

No	Statement	1	2	3	4	5
1	Enough number of support staff					
2	Qualification of the employees is key					
3	Work experience is key					
4	Employees are knowledgeable across the institution					
5	Support staff are committed to work					
6	Opportunities for support staff further training					
7	Innovativeness of support staff					
8	Attitudes towards work is good					
9	Patents owned by the university					
10	Facilities/infrastructure are upto standards					
11	Effectiveness of administrative systems in place					
12	Work culture is good					
13	Staff relations within the university					
14	Structures to help the university meet the requirements of the market					
15	Support staff are creativity					
16	They have capacity to come up with new courses					
17	Systems to process information are available					



18	There is Links with clients/associates of the university					
19	Level of satisfaction of its clients (parents, students, suppliers etc) is high					
20	Knowledgeable of market for its services					
21	Understanding of government/public policies					
22	Their reputation among clients is high					
23	Their reliability is guaranteed					
24	Trust of support staff by clients					
25	The employees have lobbying skills					
26	Support staff understanding of competing universities					

### Appendix III: University Students' Questionnaire (USTQ)

#### Section F: Personality Traits

The following statements are about the personality attributes of the university support staff. Indicate the extent to which you agree with each attribute by placing a tick in the appropriate cell. Use the given scale

Scale: Strongly Disagree (1), Disagree (2), Undecided, (3) Agree (4), Strongly Agree (5)

No	Statement	1	2	3	4	5
1	Staff are talkative					
2	They are helpful and unselfish with others					
3	They can be somewhat careless					
4	They are energy					
5	They are emotionally stable, not easily upset					
6	They are assertive					
7	They are excitement seekers					
8	They are warmth hearted					
9	They are active					
10	They are forgiving in nature					
11	They are generally trusted					
12	Perseveres until the task is finished					
13	Remains calm in tense situations					
14	Likes to co-operate with others					
15	They are tender mindedness					
16	They are straight forward					
17	They are modest in their thinking					
18	They perform their task thorough					
19	They are relaxed and can handles stress well					

20	They are reliable workers					
21	They are considerate workers					
22	They are orderly					
23	They are self-disciplined					
24	They are efficient					
25	They are kind to everyone					
26	They are competent					
27	They tend to find fault with others					
28	They are depressed					
29	They are reserved					
30	They can start quarrels with others					
31	They can be tense					
32	They are always angry					
33	They are anxious					
34	They are vulnerable					
35	They are self-conscious					
36	They are impulsive					

#### **Appendix IV: University Senior Managers Questionnaire (UMQ)**

##### **Section G: University Competitiveness**

Using the given scale, indicate the extent to which you agree with the competitiveness of the university by the statements (indicators) listed in the below table.

Scale: Strongly Disagree (1), Disagree (2), Undecided, (3) Agree (4), Strongly Agree (5)

No	Statement	1	2	3	4	5
1	Variety of programmes offered by the university					
2	Low cost of programmes					
3	Tailor made courses that cater for the needs of learners					
4	Use of ICT technology to manage the university's programmes (eg application, on-line registration, release of results)					
5	Location of the campus (near my home, easy to access)					
6	International outlook (links with foreign institutions, number of foreign students)					
7	Linkages to labour market (industry, services sector, employment agencies)					
8	It has fame/reputation					
9	Good international ranking					
10	Ability to secure external funding/grants					
11	Good physical infrastructure (buildings, roads, water, electricity, power, communication)					
12	Adequate learning/research facilities					
13	It has qualified staff					
14	A conducive learning environment (eg safe, quite, clean, orderly)					
15	Quality of teaching is good					
16	Efficient customer services provided by support staff					

17	High calibre research is undertaken					
18	Scholarships to students is available					
19	Marketability of its graduates is good					
20	Mentorship programmes for students					
21	Outreach programmes are relevant					
22	Incubation centres that promote innovation					
23	Experienced support staff					

## Appendix V: Reliability Results

### Reliability Analysis for Motivation

Variables	CI-TC	CAID
<b>Motivation (33 items)</b>		
Level of Achievement	0.353	0.803
Recognition	0.253	0.806
Work that is interesting and challenging	0.142	0.810
Responsibilities at the workplace	0.326	0.803
Fair career advancement pace	0.209	0.809
Opportunities for Personal growth	0.104	0.814
Provision of skill enhancement training	0.359	0.802
Leadership roles	0.265	0.806
Team spirit at work place	0.170	0.809
Casual dress day	0.373	0.802
Days for social events	0.227	0.807
Occasional time-offs	0.239	0.808
Availability of stress management programmes	0.330	0.803
Work culture of fostering mutual reliance and friendship among workers	0.404	0.800
A reward system which differentiates good and poor performers	0.340	0.803
Jobs designed such that they have distinct and important roles in the organization	0.431	0.799
Transparency in management of all processes in the organization	0.027	0.814
Autonomy to perform given tasks	0.346	0.803
Given a feedback whenever necessary	0.221	0.807
Good bosses	0.355	0.802
Being part of a team	0.293	0.804
Fun at work	0.278	0.805

Flexibility at work (work hours, dress etc)	0.404	0.801
Inspiring leadership	0.074	0.812
Location of work station	0.437	0.799
Job security	0.185	0.808
Good work environment (safety, lighting, ventilation)	0.484	0.797
Family friendly employer	0.616	0.792
Cutting edge technology	0.466	0.798
Pride in the organization	0.599	0.798
Realistic and achievable goals set by the organization	0.269	0.805
Scholarships for employees education	0.344	0.803
Performance appraisal which adequately measures support staff performance	0.378	0.801

---

Reliability 0.809\*\*, based on standardized items 0.819\*\*

Notes: Item deleted \* Corrected Item-Total Correlation < 0.30, \*\*Cronbach's Alpha > 0.70 , CI-TC = Corrected Item-Total Correlation, CAID = Cronbach's Alpha if Item Deleted

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**Source:** Survey Data (2016)

**Reliability Analysis for Personal Selling**

<b>Variables</b>	<b>CI-TC</b>	<b>CAID</b>
<b>Personal Selling (26 items)</b>		
Knowledge about university programmes	0.454	0.762
Knowledge of the needs of students	0.291	0.771
Awareness of tastes and behaviour of the clients	0.362	0.766
Ability to make tailor made courses	0.125	0.782
Ability to link with prospective students	0.385	0.766
Familiarity with courses offered	0.364	0.767
Negotiation skills	0.547	0.056
Ability to make clients be loyal to the university	0.411	0.763
Ability to help clients assess their needs	0.228	0.774
Ethical when performing duties	0.424	0.764
Honesty	0.547	0.756
Well informed about competitors' products	0.313	0.769
Prospecting clients	0.445	0.762
Techniques of approaching clients	0.221	0.776
Negotiation skills	0.271	0.771
Ability to overcome an objection	0.429	0.764
Ability to make clients be interested in the university	0.371	0.768
Awareness of the degree of competition from competitors	0.422	0.766
Ability to provide accurate information	0.283	0.771
Understanding of clients problems	0.018	0.783
Providing solutions to students/clients problems	0.051	0.785
Ability to convince students to register for courses	0.311	0.769
Creating a good image of university	0.190	0.776
Efficient	0.131	0.779



Confident	0.512	0.764
Dedication	0.020	0.783

---

Reliability 0.777\*\*, based on standardized items 0.787\*\*

Notes: Item deleted \* Corrected Item-Total Correlation < 0.30,  
 \*\*Cronbach's Alpha > 0.70 , CI-TC = Corrected Item-Total Correlation,  
 CAID = Cronbach's Alpha if Item Deleted

---

**Source:** Survey Data (2016)

### Reliability Analysis for Information Capital

Variables	CI-TC	CAID
<b>Information Capital (21 items)</b>		
The university has adequate number of computers	0.156	0.708
The university has a reliable internet connectivity	0.058	0.719
All the required software is available	0.184	0.704
All the departments in the university have computers	-0.138	0.739
All the support staff have access to computers	0.016	0.718
Support staff have the necessary computing skills	-0.124	0.735
Support staff are provided with relevant training in computing	0.417	0.705
Use of social media/web facilities has enabled the university to attract a high number of students	0.501	0.707
The university support staff have challenges using computers leading to inefficiency in operations	0.370	0.708
There is a working intercom	0.475	0.709
The university has digitized its operations	0.413	0.704
ICT has been integrating in teaching	0.307	0.709
Availability of ICT has enhances the university's	0.521	0.706

research capability		
The university is able to manage students records efficiently because of ICT	0.418	0.703
Use of ICT has enhanced management of university finances	0.417	0.705
Use of ICT has enabled us to take shorter time to register students takes	0.501	0.705
Use of ICT has enable the university to coordinate its operations better	0.370	0.707
The university website has been a good marketing tool	0.475	0.709
The university portal have enable us to inform our clients of what is going on at all times	0.413	0.704
The university is now able to offer on-line courses since it has reliable ICT facilities	0.091	0.711
Improved overall efficiently as a result of adoption of ICT	0.117	0.708

---

Reliability 0.707\*\*, based on standardized items 0.725\*\*

Notes: Item deleted \* Corrected Item-Total Correlation < 0.30,  
 \*\*Cronbach's Alpha > 0.70 , CI-TC = Corrected Item-Total Correlation,  
 CAID = Cronbach's Alpha if Item Deleted

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**Source:** Survey Data (2016)

### Reliability Analysis for Intellectual Capital

Variables	CI-TC	CAID
<b>Intellectual Capital (26 items)</b>		

Number of support staff	0.164	0.768
Qualification of the support staff	0.543	0.747
Work experience	0.179	0.768
Knowledge	0.011	0.778
Commitment to work	0.120	0.770
Opportunities for support staff further training	0.214	0.766
Innovativeness of support staff	0.053	0.777
Attitudes towards work	0.322	0.760
Patents owned by the university	0.032	0.776
Facilities/infrastructure	0.300	0.761
Effectiveness of administrative systems in place	0.440	0.754
Work culture	0.300	0.763
Staff relations within the university	0.235	0.765
Structures to help the university meet the requirements of the market	0.178	0.768
Support staff to creativity	0.018	0.774
Capacity to come up with new courses	0.180	0.769
Systems to process information	0.555	0.744
Links with clients/associates of the university	0.220	0.766
Level of satisfaction of its clients- parents, students, suppliers	0.431	0.755
Knowledge of market for its services	0.656	0.737
Understanding of government/public policies	0.303	0.762
Reputation	0.306	0.762
Reliability	0.705	0.731
Trust of support staff by clients	0.506	0.751
Lobbying skills	0.577	0.754
Support staff understanding of competing universities	0.006	0.761

---

Reliability 0.769\*\*, based on standardized items 0.770\*\*

Notes: Item deleted \* Corrected Item-Total Correlation < 0.30,  
 \*\*Cronbach's Alpha > 0.70 , CI-TC = Corrected Item-Total Correlation,  
 CAID = Cronbach's Alpha if Item Deleted

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**Source:** Survey Data (2016)

**Reliability Analysis for Personality Traits**

<b>Variables</b>	<b>CI-TC</b>	<b>CAID</b>
<b>Personality Traits (36 items)</b>		
Is talkative	0.343	0.762
Is helpful and unselfish with others	0.159	0.770
Can be somewhat careless	0.191	0.770
Is full of energy	0.074	0.774
Is emotionally stable, not easily upset	0.155	0.770
Assertive	0.317	0.764
Excitement seeking	0.223	0.768
Warmth	0.313	0.764
Active	0.196	0.769
Has a forgiving nature	0.407	0.759
Is generally trusting	0.418	0.759
Perseveres until the task is finished	0.439	0.759
Remains calm in tense situations	0.415	0.760
Likes to co-operate with others	0.134	0.772
Tender mindedness	0.035	0.776
Straight forwarded	-0.013	0.781
Modest	0.217	0.768
Does a thorough job	0.051	0.775
Is relaxed, handles stress well	0.183	0.770
Is a reliable worker	0.165	0.771
Is considerate	0.118	0.773
Orderly	0.563	.756
Self-disciplined	0.380	0.764
Efficient	0.366	0.763
Kind to everyone	0.480	0.758
Competent	0.390	0.759

Tend to find fault with others	0.007	0.781
Is depressed	0.198	0.770
Is reserved	0.290	0.765
Starts quarrels with others	0.253	.767
Can be tense	0.354	0.763
Always angry	0.199	0.769
Anxious	0.299	0.765
Vulnerable	0.527	0.753
Self-conscious	0.614	0.753
Impulsive	0.161	0.770

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Reliability 0.772\*\*, based on standardized items 0.786\*\*

Notes: Item deleted \* Corrected Item-Total Correlation < 0.30, \*\*Cronbach's Alpha > 0.70 , CI-TC = Corrected Item-Total Correlation, CAID = Cronbach's Alpha if Item Deleted

---

**Source:** Survey Data (2016)

### Reliability Analysis for Information Capital

Variables	CI-TC	CAID
<b>Information Capital (21 items)</b>		
The university has adequate number of computers	0.156	0.708
The university has a reliable internet connectivity	0.058	0.719
All the required software is available	0.184	0.704
All the departments in the university have computers	-0.138	0.739
All the support staff have access to computers	0.016	0.718
Support staff have the necessary computing skills	-0.124	0.735
Support staff are provided with relevant training in computing	0.417	0.705
Use of social media/web facilities has enabled the university to attract a high number of students	0.501	0.707
The university support staff have challenges using computers leading to inefficiency in operations	0.370	0.708
There is a working intercom	0.475	0.709
The university has digitized its operations	0.413	0.704
ICT has been integrating in teaching	0.307	0.709
Availability of ICT has enhances the university's research capability	0.521	0.706
The university is able to manage students records efficiently because of ICT	0.418	0.703
Use of ICT has enhanced management of university finances	0.417	0.705
Use of ICT has enabled us to take shorter time to register students takes	0.501	0.705
Use of ICT has enable the university to coordinate its operations better	0.370	0.707
The university website has been a good marketing tool	0.475	0.709

The university portal have enable us to inform our clients of what is going on at all times	0.413	0.704
The university is now able to offer on-line courses since it has reliable ICT facilities	0.091	0.711
Improved overall efficiently as a result of adoption of ICT	0.117	0.708

---

Reliability 0.707\*\*, based on standardized items 0.725\*\*

Notes: Item deleted \* Corrected Item-Total Correlation < 0.30, \*\*Cronbach's Alpha > 0.70 , CI-TC = Corrected Item-Total Correlation, CAID = Cronbach's Alpha if Item Deleted

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**Source:** Survey Data (2016)

## Appendix VI: Factor Analysis Results

### Rotated Factor Loadings of Motivation

Factors	Loadings	Variance explained
<b>Motivation</b>	0.809*	74.568
<b>Flexible Work Life</b>		30.539
Level of Achievement	0.751	
Responsibilities at the workplace	0.629	
Casual dress day	0.778	
A reward system which differentiates good and poor performers	0.694	
Flexibility at work (work hours, dress etc.)	0.554	
Family friendly employer	0.848	
Cutting edge technology	0.679	
Pride in the organization	0.810	
Scholarships for support staff education	0.742	
Performance appraisal which adequately measures support staff performance	0.727	
<b>Teamwork</b>		15.403
Provision of skill enhancement training	0.860	
Work culture of fostering mutual reliance and friendship among workers	0.907	
Being part of a team	0.657	
<b>Empowerment</b>		11.311
Autonomy to perform given tasks	0.826	
Good bosses	0.557	



<b>Conducive Environment</b>		8.734
Good work environment (safety, lighting, ventilation etc.)	0.905	
<b>Job Responsibility</b>		8.581
Availability of stress management programmes	0.900	
Jobs designed such that they have distinct and important roles in the organization	0.549	
Kaiser-Meyer-Olkin	0.605	
Bartlett's Test of Sphericity	0.000 ( $\chi^2$ (91) = 144.773)	
Loading* = Composite reliability		

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Source: Survey Data (2016)

#### Rotated Factor Loadings of Personality Traits

Factors	Loadings	Variance explained
Personal Selling	0.778*	83.734
<b>Self-Discipline</b>		16.212
Is talkative	0.657	
Perseveres until the task is finished	0.705	
Self-disciplined	0.590	
Kind to everyone	0.717	
Vulnerable	0.725	
Self-conscious	0.644	
<b>Competent</b>		12.891
Competent	0.827	
Is reserved	0.803	
Starts quarrels with others	0.865	
<b>Assertive</b>		11.817
Assertive	0.819	

Warmth	0.644	
Has a forgiving nature	0.642	
<b>Orderly</b>		11.015
Is generally trusting	0.820	
Remains calm in tense situations	0.605	
Orderly	0.433	
Anxious	0.598	
<b>Strategist</b>		9.475
Is relaxed, handles stress well	0.848	
<b>Efficiency</b>		7.916
Efficient	0.625	
Can be tense	0.764	
Kaiser-Meyer-Olkin	0.653	
Bartlett's Test of Sphericity	0.000 ( $\chi^2$	
(325) = 600.623)		
Loading* = Composite reliability		

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**Source:** Survey Data (2016)

## Appendix VII: List of Accredited Universities in Kenya



# COMMISSION FOR UNIVERSITY EDUCATION

*Quality: The Agenda*

P.O. Box 54999-00200 Nairobi Redhill Rd. off Limum Rd.  
Gigiri Tel: + 254 (02) 7205000 Email: [info@cue.or.ke](mailto:info@cue.or.ke)  
Website: [www.cue.or.ke](http://www.cue.or.ke)

## UNIVERSITIES AUTHORISED TO OPERATE IN KENYA

The Commission for University Education (CUE) was established under the Universities Act, No. 42 of 2012, as the successor to the Commission for Higher Education. It is the Government agency mandated to regulate university education in Kenya.

The Universities Regulations, 2014 were gazetted on 12<sup>th</sup> June 2014 and are currently in force. All stakeholders of university education are being advised to familiarise themselves and strictly adhere to the provisions of the Universities Regulations, 2014.

In line with Section 28 (4) of the Act, CUE shall cause to be published, the list of universities accredited to undertake university education in Kenya. The following is the list of accredited universities in Kenya:

	<b>ACCREDITED UNIVERSITIES</b>	<b>DATE OF ACCREDITATION</b>
1.	University Of Nairobi (UoN)	Established - 1970 Chartered - 2013
2.	Moi University (MU)	Established - 1984 Chartered - 2013
3.	Kenyatta University (KU)	Established - 1985 Chartered - 2013
4.	Egerton University (EU)	Established - 1987 Chartered - 2013
5.	Jomo Kenyatta University of Agriculture and Technology (JKUAT)	Established - 1994 Chartered - 2013
6.	Maseno University	Established - 2001 Chartered - 2013
7.	Masinde Muliro University of Science and Technology	Established - 2007 Chartered - 2013
8.	Dedan Kimathi University of Technology	2012
9.	Chukka University	2013
10.	Technical University of Kenya	2013
11.	Technical University of Mombasa	2013
12.	Pwani University	2013
13.	Kisii University	2013
14.	University of Eldoret	2013
15.	Masaai Mara University	2013
16.	Jaramogi Oginga Odinga University Of Science And Technology	2013
17.	Laikipia University	2013
18.	South Eastern Kenya University	2013
19.	Meru University Of Science And Technology	2013

20.	Multimedia university of kenya	2013
21.	University of kabianga	2013
22.	Karatina university	2013
<b>Public University Constituent Colleges</b>		
1.	Murang'a University College (JKUAT)	2011
2.	Machakos University College (KU)	2011
3.	The Co-Operative University Of Kenya (JKUAT)	2011
4.	Embu University College (UoN)	2011
5.	Kirinyaga University College (JKUAT)	2011
6.	Rongo University College (MU)	2011
7.	Kibabii University College (MMUST)	2011
8.	Garissa University College (MU)	2011
9.	Taita Taveta University College (JKUAT)	2011
<b>Private Chartered University</b>		
1.	Catholic University of Eastern Africa (CUEA)	2013
2.	Day Star University	
3.	Scott Christian University	2013
4.	United States International University	
5.	Africa Nazarene University	2013
6.	Kenya Methodist University	
7.	St. Pauls University	2013
8.	Pan Africa Christian University	
9.	Strathmore University	2013
10.	Kabarak University	
11.	Mount Kenya University	2013
12.	Africa International University	
13.	Kenya Highlands Evangelical University	2011
14.	Great Lakes University Of Kisumu	2012
15.	KCA University	2013
16.	Adventist University of Africa	2013
<b>Private University Constituent Colleges</b>		
1.	Hekima University College (CUEA)	1993
2.	Tangaza University College (CUEA)	1997
3.	Maris International University College (CUEA)	2002
4.	Regina Pacis University College (CUEA)	2010
5.	Uzima University College (CUEA)	2012
<b>Institutions with Letter of Interim Authority</b>		
1.	Kiriri Women's University of Science and Technology	2002



