DETERMINANTS OF INTRAPRENEURIAL ACTIVITIES IN SELECTED UNIVERSITY LIBRARIES IN KENYA

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D86/5053/2004

A THESIS SUBMITTED TO THE SCHOOL OF BUSINESS IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY IN ENTREPRENEURSHIP DEVELOPMENT OF KENYATTA UNIVERSITY

OCTOBER 2016
DECLARATION

This thesis is my original work and has not been submitted for examination for any degree at any other university.

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To my late brother and friend Pithon N. Mathu and my children Emmah Njeri and Andrew Mathu
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<td>CABI</td>
<td>Commonwealth Agricultural Bureau International</td>
</tr>
<tr>
<td>CAS</td>
<td>Current Awareness Services</td>
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<td>CCTV</td>
<td>Closed Circuit Television</td>
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<tr>
<td>CE</td>
<td>Corporate Entrepreneurship</td>
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<td>CEAI</td>
<td>Corporate Entrepreneurial Assessment Instrument</td>
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<tr>
<td>CEED</td>
<td>Centre for Excellence in Entrepreneurship Development</td>
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<td>CUE</td>
<td>Commission for University Education</td>
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<td>CUEA</td>
<td>Catholic University of East Africa</td>
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<td>ICT</td>
<td>Information and Communication Technology</td>
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<td>IL</td>
<td>Information Literacy</td>
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<tr>
<td>INASP</td>
<td>International Network for the Availability of Scientific Information</td>
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<tr>
<td>IR</td>
<td>Institutional Repository</td>
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<tr>
<td>ISO</td>
<td>International Standard Organisation</td>
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<tr>
<td>JAWS</td>
<td>Job Access With Speech</td>
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<tr>
<td>KLISC</td>
<td>Kenyan Libraries and Information Services Consortium</td>
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<tr>
<td>OPAC</td>
<td>Online Public Access Catalogue</td>
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<tr>
<td>PEST</td>
<td>Political Economic Social Technological</td>
</tr>
<tr>
<td>RFID</td>
<td>Radio Frequency Identification Devise</td>
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<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
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<tr>
<td>USIU</td>
<td>United States International University</td>
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OPERATIONAL DEFINITION OF TERMS

Competitive aggressiveness

Propensity to directly challenge competitors by making effort to outperform them in the entry improvement of their position in the information provision market.

Corporate Entrepreneurship (CE)

A process whereby an individual or groups of people in association with an organization such as a university library instigates strategic renewal or changes through innovation within the library, with the intention of infusing entrepreneurial behavior and deviating from the customary practices.

Dynamism

Instability and continuing changes that require continual renewal to compete in an organization such as a university library.

Entrepreneurship

A dynamic process of innovation evolving from recognition of opportunities and converting those opportunities into workable/marketable ideas that add value to the products and services through time, effort, money or skills.

Gender

The socially constructed roles, behaviors, activities and attributes that a given society
considers appropriate for men and women.

**Intrapreneur**

An innovator within a university library who recognizes and seizes opportunities and connects them into marketable ideas in view of the competitive market.

**Intrapreneurial activities**

Innovative and creative activities indicating a change from the conventional activities in an organization such as a university library.

**Intrapreneurship**

A process of innovating new products, services, technologies, administrative techniques, strategies or new units in an organization.

**Innovativeness**

The extensiveness and frequency of product innovation in a library setting and the related tendency toward technological leadership.

**Learning organization**

An organization such as a university library in which everyone is engaged in identifying and solving problems, enabling the organization to continuously experience, improve and increase its capability.
ABSTRACT

Infusion of intrapreneurial spirit has been recognized and embraced as an effective way of improving efficiency, accomplishing organizational goals and giving a better competitive posture in both profit and non profit making organisations. However, empirical evidence shows that many university libraries in Kenya have remained less intrapreneural and the level of adoption of intrapreneural activities remains unclear. The purpose of this study was to investigate the status of these activities and their determinants in selected university libraries in Kenya. The objectives of the study were to examine the individual staff factors, determine the internal organization factors and establish the external environmental conditions that determine intrapreneural activities in university libraries in Kenya. The study used the explanatory and descriptive research design to examine the relationship between the variables. The study targeted two public and two private university libraries with a total of 162 library staff. A sample of 114 library staff was selected using proportionate stratified random sampling. A structured questionnaire and two interview guides were used to collect primary data from library staff, university librarians and university management staff respectively. Quantitative data was analysed using descriptive and inferential statistics, while thematic analysis was applied to analyse qualitative data. The study findings showed that although individual staff factors, internal organization factors and external environmental conditions had a positive correlation with intrapreneural activities, individual staff factors had a stronger correlation with 63.9 percent compared to the other two variables. The regression analysis indicated that individual staff factors was a stronger predictor of intrapreneural activities, followed by external environmental conditions, while internal organizational factors had no contribution. The study arrived at the conclusion that institutionalizing intrapreneural activities, was a response strategy of adding value to library operations, empowering individual employees and leading the libraries to become more competitive. Individual staff factors had a strong contribution to intrapreneural activities and hence the need for more supportive policies from university management. Internal organization factors were weak and did not contribute much to intrapreneural activities, implying that university management should take the necessary measures to ensure that these factors do not negate the intrapreneurial spirit in the libraries. Although external environmental conditions contributed to intrapreneural activities, university libraries should be more proactive and maintain a competitive posture inorder to remain relevant. Therefore, universities should focus more on younger members of library staff so that they model into intrapreneural activities in their workplace. A review of the training programmes for library staff by the relevant authorities is necessary so as to infuse critical aspects of entrepreneurship. Universities should also ensure adequate and readily available funds to support staff idea/project development and implementation. Decision making in respective universities need to be devolved in order to give staff more freedom to make decisions on development and implementation of their ideas/projects without alot of bureaucracies.
CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The infusion of entrepreneurial thinking through corporate structure has become an increasingly important concept to both private and public sector organizations including university libraries. Such organizations are trying to remain competitive and efficient in the rapidly changing global marketplace (Ahmad, Nasurdin & Zainal, 2011; Belousova, Gaily & Basso, 2010; Anu, 2007). Previous studies suggested that corporate entrepreneurship (CE) also referred to as intrapreneurship goes on inside any organization regardless of size or type and leads to innovative activities, including: new product development, process and service improvement (Karimi, Daryani & Rezvanfar, 2011; Ahmad et al.,2011; Antoncic & Hisrich, 2001). Intrapreneurship in this case is regarded as a concept linked to the entrepreneurial orientation in an established organization.

Antoncic (2007), further perceived intrapreneurship as a process by which individuals inside organizations pursue opportunities without regard to the resources they currently control by displaying emergent intentions and behaviors that deviate from the customary way of doing business. Intrapreneurship is therefore geared towards creating an entrepreneurship culture within an established organization such as a library. In addition CE is perceived to be a method which offers an organization a strategic option for refining its business concept, meeting changing customer needs and expectations, enhancing its competitive posture and improving organizational flexibility and reactivity (Urbano, Alvarez, & Turro, 2013).
Even though there is consensus in the literature that CE is multidimensional, there is still disagreement among scholars on the actual dimensions of the CE construct. According to Antoncic and Hisrich (2003); Dess, Ireland, Zahra, Floyd, Janney and Lane, (2003), the most frequently tested dimensions of intrapreneurship are; new venture and new business, risk taking, innovativeness, proactiveness, competitiveness and self renewal. Antoncic and Hisrich (2003), further argued that by analyzing, nurturing and advancing these dimensions, managers could make significant improvements in the performance of their organizations. However, it was noted that these intrapreneurship dimensions were associated with business firms in developed countries and their linkage with intrapreneurial activities in university libraries required further investigation.

With environments constantly changing and becoming more competitive, organizations including libraries have to be flexible, innovative and take advantage of emerging opportunities. CE has thus gained growing academic interest (Heilbrunn, 2008). Benefits associated with the CE process have been identified in the literature as: organizational survival, growth, profitability, renewal, vitality, implementation of novel ideas by employees and strategic value of organisations (Belousova et al., 2010), boosting the organisation’s overall performance and leading to considerable competitive advantage (Ayudurai & Sohail, 2005; Antoncic & Hisrich, 2001); diversified products markets and impressive financial results (Kuratko, Ireland & Hornsby, 2001). Although these findings were associated with business firms of the developed countries, observations based on various studies indicate that universities worldwide have also embraced these benefits by engaging in intrapreneurial activities as a reform agenda (Nafukho & Wawire, 2003; Williams, 2003 & Neal, 2001).
Likewise, university libraries in both public and private sectors are being encouraged to foster intrapreneurial behavior and innovativeness to ensure success of higher education sector. By becoming intrapreneural, these libraries will also become more responsive to the changing economic, social and technological realities. Such expectations are expressed in the respective university policy documents, strategic plans and Commission for University Education (2013), guidelines and regulations in Kenya. Such a move was supported by Mamdouh (2005), who observed that although a lot of CE research has focused on business firms, literature in the non-profit sector has also recognized the existence of entrepreneurship as part of life or intrinsic force in this sector.

University libraries in many developing countries are faced with multiple challenges and demands including: increasing number of users with varied behaviors and needs; constrained financial, human, and physical resources; competition from other information providers; information explosion and rapid changes in technology (Smith, 2012; Dasqupta, 2002). In Kenya for instance, university libraries are considered instrumental to realizing vision 2030 by providing the pertinent standard and quality information for individual and national development (Republic of Kenya, 2006). However, these libraries are also operating in a global competitive information business environment, and gaining a competitive posture to improve their operations and meet the society’s expectations has become a big challenge.

Wawire and Messah (2010), argued that the role of university libraries in Kenya is likely to be looked down upon if amicable solutions to the existing challenges are not addressed. Their study observed that the challenges have made a great impact on these libraries compelling
them to find new ways and strategies to fulfill their mandate. Parker, Nitse and Flowers (2005), likewise opined that libraries must determine how best to react to these challenges. The scholars thus suggested that the libraries must not only continue to complement their traditional role with digital collections and services, but they must also embrace opportunities to expand the services that they offer.

A study of university libraries in Kenya by Mukuvi (2013), suggested that most university libraries in Kenya are still engaged in their traditional practices thus lacking entrepreneurial and management skills. The study focused more on quality services and did not link up with intrapreneurial activities in these libraries or factors determining them. Wawire and Messah (2010), posited that most university librarians in Kenya resisted change from their traditional librarian’s roles to the present user centred services librarian. The study was also limited since it expounded more on the challenges faced in establishing university libraries in Kenya and failed to show the association between these challenges with determinants of intrapreneurial activities in these libraries. Britz, Lor and Bothma (2007), were of the opinion that the big challenge in improving libraries in Africa lies in changing the mindset of the librarians especially that of the library manager. These views were further supported by Nafukho and Wawire (2003), who argued that being intrapreneurial requires those involved to think differently from the way they have always thought, implying a complete shift in their mental disposition.

Widespread calls have been made in various studies for university libraries to change from their customary way of doing things and come up with innovative and sustainable
alternatives if they are to continue being relevant and competitive (Okojie, 2010; Gastinger, 2006; Boadi, 2006; Malhan, 2006; Toftoy, 2002 & Neal, 2001). The studies emphasized that academic libraries can no longer assume that they are automatically valued by their communities. The libraries have to demonstrate the significance of their services by finding new ways to add value and remain relevant in this rapidly changing environment. In future the importance of academic libraries will be measured by the benefits that they offer to their users (Parker et al., 2005). The study of intrapreneurship imply engaging in intrapreneurial activities conducted within an existing organization such as a university library (Gundogdu, 2012). The need to engage in intrapreneurial activities has therefore been advanced as one of the response strategies to enable university libraries meet the challenges they face as well as alter the rules of the competitive landscape in their favour.

1.1.1 Intrapreneurial Activities

Intrapreneurial activities in essence entails a shift from the customary way of doing things by introducing new changes through creativity and innovation in an organization such as a university library. Although various definitions have been proposed, there remains a lack of general agreement between researchers over what constitutes precisely either creativity or innovation. However, Anderson, Potocnik and Zhou (2014), posited that creativity and innovation at work are the process, outcomes and products of attempts to develop and introduce new and improved ways of doing things. Creativity stage of this process refers to idea generation, and innovation refers to the subsequent stage of implementing ideas towards better procedures, practices or products. In support of these views, Gomez-Haro et al. (2011), asserted that the key element to combining entrepreneurial orientation and intrapreneurial
activities is innovation. Innovation has therefore been recognized as a key element in the intrapreneurial process (Ireland, Kuratko & Morris, 2006; McFadzean, O’Loughlin & Shaw, 2005). The scholars further emphasized that innovativeness more than any other aspect is always present in any entrepreneurial process (activities) and without it there is no CE regardless of the presence of other dimensions.

Monnavarian and Ashena (2009), observed that different types of organizations are eagerly promoting diverse intrapreneurial activities within their organizational staff and management teams. Available CE literature has identified a wide range of these activities as: new product development, product improvement, new production methods and procedures, new services, administrative techniques and technologies in production (Augusto, Rodrigues & Caldeirinha, 2012); competitive postures (Karimi et al., 2011; Belousova et al., 2010; Antoncic & Hisrich, 2004, 2001); new venture creation, strategies, creation of new organizational routines and procedures and frame breaking changes (Brunaker & Kurvinen, 2006). The extensiveness and frequency of these activities is considered a major characteristic of corporate entrepreneurship.

However, for purposes of this study, the diverse activities were grouped into five categories in line with the available CE literature as: new product development and improvement; new service development and improvement; new organization routines and procedures; new venture creation and new strategies. Wunderer (2001), argued that the objective of engaging in such intrapreneurial activities is to safeguard and to increase the organizational value in the long term by optimizing the benefits of the central stakeholders who in this study are
considered as the library staff.

Engaging in successful intrapreneurial activities in an organization such as a university library requires a conducive intrapreneurial friendly environment that unleashes the entrepreneurial spirit where the employees’ perceptions of intrapreneurial activities are both feasible and desirable. This ensures that the employees are placed in an innovative working environment where mechanisms of building and reinforcing intrapreneurial behavior and attitude are put in place (Antoncic & Hisrich, 2004; Birley & Muzyka, 2000). However, if a library maintains traditional, rigid and conservative organizational structure, it is likely to have a stifling effect on intrapreneurial efforts (Hisrich, Peters & Shepherd, 2009; Carland & Carland, 2007; Kuratko & Hodgetts, 2007; Sathe 2003). In this regard, university libraries in Kenya are expected to make an effort to create an intrapreneurial culture, whereby they are willing to break with traditions by embracing initiatives that run counter to the way they have traditionally operated.

1.1.2 Determinants of Intrapreneurial Activities

1.1.2.1 Individual Staff Factors

Although some previous studies have not acknowledged individual staff factors as key determinants of intrapreneurial activities in an organisation, Urbano et al. (2013), Anu (2007), Rutherford and Holt (2007) and Zhao (2005), have upheld the importance of employees (intrapreneurs) as an important asset in today’s knowledge-based economy. These are the people who initiate and carry out intrapreneurial activities in an organization. Organisations become innovative, proactive and take risks through the initiatives of the
intrapreneurs. Steele and Murray (2004) and Wunderer (2001), further supported that employees are a potential resource or intellectual capital who add value and long-term investment in organizations. Such employees should then be regarded as co-operating organizational members who initiate actions to fill the currently unsatisfied needs and claims or do more efficiently what is already being done (Wunderer, 2001).

The social intrapreneurs including library staff too, have been regarded as creative thinkers in coping effectively with environmental complexity and the dynamics of social changes as well as the customer changing needs and demands (Mamdouh, 2005). Several proposed CE theories and models have also integrated employee factors as an important component (Amabile, 2012; Schumpeter, 1934; Rutherford & Holt, 2007; Ferreira, 2002; Tushman & Nadler, 1997). These views and concerns hence justified the consideration of individual staff characteristics as an important determinant of intrapreneurial activities in university libraries in this study.

1.1.2.2 Internal Organisation Factors

Research has shown that a positive relationship exists between intrapreneurial activities and tangible and intangible outcomes (Ireland et al., 2006; Kuratko et al., 2001; Antoncic & Hisrich, 2001). Based on this perception, researchers have been actively trying to identify factors that promote and diffuse intrapreneurial activities in organizations. Antoncic and Hisrich (2004), argued that internal organization factors were the most defining factors of intrapreneurial activities because this set of antecedents can be directly influenced by the organization. The internal organisation factors that have been studied mostly include:
management support, work discretion, rewards, time availability and organizational boundaries (Hornsby et al., 2002).

In general, organizations with innovative climate or culture are expected to be more receptive to intrapreneurial activities (Ahmad et al., 2011). Additionally, non hierarchical based organizations are expected to be more receptive to intrapreneurial activities because the individual employees (intrapreneurs) have more autonomy that stimulate these activities. For non profit organizations such as university libraries, to foster successful intrapreneurial activities they require to create a conducive environment that incorporates employee participation. The libraries should also have an adaptive and learning internal environment with a flat flexible structure and a culture of trust and creativity (Mamdouh, 2005).

1.1.2.3 External Environmental Conditions

External environmental conditions are also considered as important antecedents of intrapreneurial activities in an organization. These conditions have been conceptualized as favourable (munificent) or unfavourable (hostile). The favorable ones are: dynamism, technological opportunities, growth and demand for new products and services (Antoncic, 2007; Antoncic & Hisrich, 2001). The unfavourable conditions are unfavourability of change which refers to the extent which the environment is perceived unfavourable to an organisation’s goals and mission. Competitive rivalry referring to the intensity of competition is also considered as unfavourable. Nevertheless, both favourable and unfavourable characteristics have the potential to stimulate the pursuit of intrapreneurial activities and adoption of an entrepreneurial posture (Antoncic, 2007). The external environment thus affect organizations by imposing demands, imposing constraints and
providing opportunities. Organisations have little or no control over the external environmental conditions, but should be flexible and adaptable to rapidly changing conditions to remain competitive.

Although there is adequate empirical evidence (Alpkan, Bulut, Gunday, Ulusoy, Killic, 2010; Rutherford & Holt, 2007; Antoncic, 2007; Antoncic & Hisrich, 2004), on the role of individual staff factors, internal organizational factors, and external environmental conditions as determinants that influence intrapreneurial activities in organizations, these studies focused on large business firms in developed countries of the West and emerging economies of Central and Eastern Europe. This implies that knowledge of the factors that determine intrapreneurial activities in university libraries with a focus on Kenya is limited. This has created a growing interest and concern among academia and policy makers in determining how university libraries can become more intrapreneurial as a competitive strategy and as away of improving performance to meet the changing user needs and demands.

Previous studies on university libraries in Kenya focused on various aspects such as: knowledge management (Gichuhi, 2014), challenges on use (Mutwiri, 2014: Wawire & Messah, 2010), quality service (Mukuvi, 2013; Makori, 2010), technology (Odera-Musakari & Mutula, 2007) and funding (Kavulya, 2006). Although these studies contributed to knowledge on different aspects of university library operations, they did not link up these aspects to intrapreneurial activities or factors that determined them in these libraries, a gap that this study identified and sought to fill.
1.2 Statement of the Problem

Despite the research findings that there is a positive relationship between an organisation’s engagement in intrapreneurial activities and its competence, survival, growth and competitiveness, most university libraries in Kenya have not embraced such activities. While the potential for intrapreneurial activities may be present in these libraries, it has not been considerably exploited to innovatively transform their customary operations as envisaged by the Commission for University Education (2013), standards and guidelines.

Whatever level of intrapreneurial efforts may be present in university libraries in Kenya, no study has been conducted to establish their status. This means there exists a gap in knowledge in this area. Previous studies reviewed in the background to this study showed that individual staff factors, internal organization factors and external environmental conditions are key determinants of intrapreneurial activities in an organization. Despite existence of various models and concepts in the intrapreneurship literature that have evolved based on business firms of developed countries to explain these determinants, their validation and applicability in university libraries in Kenya has not been established. Previous studies therefore have not given empirical direction on what individual staff factors, internal organization factors and external environmental conditions or any other factors that may determine intrapreneurial activities in university libraries. This means there is limited knowledge of these determinants of intrapreneurial activities in university libraries in Kenya. Studies by Behram and Ozdemirei (2014) and Urbano et al. (2013), suggested that given the increasing findings in the literature that support a positive relationship between intrapreneurial activities and organizational survival, growth and competitiveness, it is
imperative to identify and examine factors that stimulate or impede such activities.

Failure to attain an entrepreneurial posture through engaging in intrapreneurial activities for whatever reason may have significant consequences for university libraries in Kenya including: loss of value, irrelevance, poor public image, loss of competitive posture, user dissatisfaction, reactiveness or becoming obsolete. This study therefore sought to examine the status of intrapreneurial activities in university libraries in Kenya with a view to establishing their determinants.

1.3 Objectives of the Study

The overall objective of this study was to investigate the factors that determine intrapreneurial activities in university libraries in Kenya. The specific objectives that guided the study were to:

i) Examine individual staff factors that determine intrapreneurial activities in university libraries in Kenya.

ii) Determine internal organizational factors that influence intrapreneurial activities in university libraries in Kenya.

iii) Establish external environmental conditions that determine intrapreneurial activities in university libraries in Kenya.

1.4 Research Questions

The study was guided by the following questions:

i) What are the individual staff factors that determine intrapreneurial activities in university libraries in Kenya?
ii) What are the internal organization factors that determine intrapreneurial activities in university libraries in Kenya?

iii) What are the external environmental conditions that determine intrapreneurial activities in university libraries in Kenya?

1.5 Significance of the Study

The Kenya Government is keen to improve the quality and relevance of higher education sector in the country. University libraries are expected to play a key role in adding value and relevance to higher education by facilitating access to the relevant information services to enhance learning, teaching and research. The Government could therefore learn from the findings of this study and draw up policies that would be implemented to strengthen intrapreneurial activities in university libraries. The Commission for University Education (CUE) in Kenya which sets the standards and guidelines for university libraries in Kenya may also benefit from this study in its efforts to improve on the libraries’ operations.

It is anticipated that the findings of this study may inform the various university management teams to come up with more supportive, flexible and sound policies that would facilitate and encourage intrapreneurial undertakings in these libraries. On the other hand, donors and other stakeholders who give moral, material and financial support to university libraries may also benefit from the findings of this study.

The findings of this study may enable the library managers who are also policy makers in understanding the determinants influencing intrapreneurial activities and hence come up with
sound policies on embracing the same. The findings of this study may also broaden the knowledge base of library staff, researchers and practitioners in areas related to intrapreneurship in libraries and similar departments in the universities and other educational institutions.

1.6 Scope of the Study

The study covered the main libraries of two (2) public universities namely: Kenyatta University (KU) and Egerton University; as well as two (2) private universities namely: United States International University (USIU) and Catholic University of East Africa (CUEA). The selected libraries were more than ten years old since establishment. The size in terms of user population, number of library staff, accessibility of data, physical infrastructures and exhibition of some degree of intrapreneurship were important considerations in the selection of the four (4) libraries. The subjects of the study were library staff, university librarians and university management staff. These are people who are knowledgeable about the activities within their libraries. A study of both private and public university libraries was considered necessary for purposes of broad understanding of different types of libraries and their engagement in intrapreneurial activities. The study results would also help the different types of libraries in learning from each other.

1.7 Assumptions of the Study

The study assumed that the libraries under study were engaged in institutionalised intrapreneurial activities and therefore the staff were in a position to identify their determinants. It was also assumed that the university management staff and university
librarians would cooperate in availing accurate and relevant information on determinants of intrapreneurial activities in their respective libraries from a management perspective.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction
This chapter provides an overview of the relevant literature concerning determinants influencing intrapreneurial activities in university libraries in Kenya. The chapter begins by discussing the theories and the models on which the study was based. The concept of intrapreneurship is explained, followed by a description of the environment of an intrapreneurial organization. A general status of the intrapreneurial activities in university libraries in Kenya is explained. Determinants of intrapreneurial activities are explored in line with the research objectives as follows: individual staff factors, internal organizational factors, and external environmental conditions. A summary of the literature review and the research gaps therein are discussed, and finally the conceptual framework that guided this study is explained.

2.2 Theoretical Review
Intrapreneurship is a multidisciplinary and multidimensional field and as such various approaches have been used to generate theories and models that could be used to explain it. The study therefore used assumptions from different schools of thought. This study was guided by the componential theory of organizational creativity and innovation, Joseph Schumpeter’s innovation theory, the congruence model of organization analysis and an integrating conceptual model of corporate entrepreneurship.
2.2.1 The Componential Theory of Organisational Creativity and Innovation

The theory centres on the components that influence employees’ (intrapreneurs) creativity and innovation positively or negatively in an organization. The theory was articulated by Amabile in 1983 and has undergone considerable evolution with a recent review in 2012. The theory is designed to be comprehensively useful for both psychological and organizational creativity and innovation research (Amabile, 2012). The most important premise of this theory is that work environments have an impact on creativity and innovation by affecting components that contribute to creativity which represent a basic source for organization innovation.

Anderson, Potocnik and Zhou (2014), perceived creativity and innovation at work as the process, outcomes and products of attempts to develop and introduce new and improved ways of doing things. Creativity stage of this process refers to idea generation while innovation refers to the subsequent stage of implementing the idea towards better procedures, practices or products. Creativity and innovation can occur at the level of the individual, work team, organization or at more than one of these levels combined but will invariably result in identifiable benefits at one or more of these levels of analysis.

The current study considered creativity and innovation as the process of intrapreneurial activities conducted within an existing organization such as a university library, whereby individual employees or teams create new products, services, procedures, ventures or strategies. The individual staff factors that determine intrapreneurial activities in university libraries in Kenya was one of the concerns of this study. The componential theory upholds
that there are three components that influence creativity and innovation within an organization. The domain-relevant skills component which includes; knowledge, expertise, technical skills, intelligence and talent in the particular domain where the intrapreneur is engaged. This means that for an employee (intrapreneur) working in a university library to be creative and innovative, he/she should have the appropriate level of professional education, be trained in order to acquire the pertinent skills in entrepreneurship and display the requisite knowledge in entrepreneurship. Amabile (2012), posits that these traits comprise the raw materials upon which the intrapreneurs can draw throughout the creation and innovation process.

The creativity-relevant processes/skill component includes a cognitive style and personality characteristics that are conducive to: independence, risk taking, taking new perspectives on problems, disciplined work style and skills in generating new ideas. In addition the intrapreneurs should have the ability to break out of traditions and have a tolerance for ambiguity. The fundamental thinking behind this component is that employees working in a university library should be willing to embrace new opportunities and take responsibility for effecting creative change as propounded by Morris (2001). At the same time, library employees should be willing to “think outside the box”, take calculated risks and be comfortable with the ambiguity and the uncertainty of the changes that they encounter in the libraries where they work.

Amabile assumes that a central tenet of the componential theory is the intrinsic motivation principle of creativity and innovation. The theory advocates that employees are most creative
and innovative when they feel motivated primarily by the interest, enjoyment, satisfaction and challenge of the work itself rather than by extrinsic motivators such as rewards, surveillance, competition or evaluation. This tenet thus incorporates the works of McClelland on achievement motivation that stipulates that human beings have a need to succeed, achieve and excel (Simpeh, 2011). However of all the theory tenets, the intrinsic motivation has been the most disputed although it has been tested and supported in several studies.

Intrapreneurial activities are concerned with intrapreneurial process of creativity and innovation and an intrapreneur’s psychological make up alone may not be able to steer a library to be more intrapreneurial. Scholars including Mokaya (2012), Anu (2007) and Hill (2003), disputed the intrinsic motivation component by supporting the use of appropriate rewards and recognition methods as an effective way of motivating intrapreneur’s creative and innovative efforts that would enhance intrapreneurial activities in a library.

The current study also aimed at determining the internal organization factors that influenced intrapreneurial activities in university libraries in Kenya. The componential theory focused on the social environment in which the intrapreneurs work. This included all the extrinsic motivators that serve as obstacles or stimulants to intrinsic motivation to creativity and innovation in an organization. Four main components were identified as: organization motivation to innovate, resources (finance, time availability, personnel), managerial practices and supervisory encouragement (Amabile, 2012). The theory assumed that all organizations portray the same characteristics in their social environments which is not always the case. For instance, business firms may portray different social environments from the service
oriented non profit making organizations such as libraries.

However, the study takes the view that organizational support is very crucial because without this important component, employees would not make much creativity and innovation efforts. This implies that the willingness of the top management support to facilitate, encourage and promote intrapreneurial efforts in an organization such as a university library is crucial. This can be done by: championing innovative ideas, providing necessary resources or expertise, having open and strong communication systems, training and trusting staff. Strategies for enhancing creativity and innovation should be developed and implemented. Employees should be given adequate free time for creativity and freedom to make decisions about performing their work. With supportive structures and fluid, flexible boundaries, employees would be encouraged to share ideas across the organization.

The componential theory of organizational creativity and innovation is distinctive in the sense that it is relatively comprehensive in scope covering skills and motivation within the individual and social environments which were of concern in the current study. The theory has also specified the impact of the components at each stage of the creative and innovative process. It has also emphasized on the social environment and the impact it has on the individual engaged in creative and innovative process. The theory has also specified that creativity and innovation requires a confluence of all components. However, notable shortcomings of this theory are that it focuses on factors within an organization and fails to include external conditions such as client preferences, economic, technological or political changes that may influence creativity and innovation process in an organization. This limits
the comprehensiveness of the theory in its current form. However, inspite of these sentiments, the componential theory is still distinctive in many ways such as determining factors that influence intrapreneurial activities in university libraries in Kenya.

2.2.2 Joseph Schumpeter’s Innovation Theory

Schumpeter (1934), was famous in the contribution of innovation theory in entrepreneurship. According to Schumpeter, carrying out innovations is the only function which is fundamental in the history of an organization. He accented the symbiotic relationship between innovation and entrepreneurship. He further posited that the function of the intrapreneur as the innovator is to revolutionise the pattern of production by exploiting an invention or an untried technological possibility for producing a new commodity or improving an existing one.

The current study regarded intrapreneurship as entrepreneurship within a university library. The library staff were the innovative intrapreneurs who operate with new products, services, new organization routines and procedures, new ventures and strategies. These are the intrapreneurial activities that entail a shift from the customary way of doing things by introducing changes through creativity and innovation in the libraries. Schumpeter’s view was that innovation was at the core of economic development and growth of a country or an organization, thus adding value to them. Through the changes brought about by innovation, existing products, services, processes and procedures may become obsolete and lose their value. This is inevitable and the result is what Schumpeter referred to as creative destruction. By this he suggested that innovation leads to changes and growth in an organization. The current study takes the view that intrapreneurial innovation and experimentation constantly
destroy the old and introduce new equilibria, making possible higher standards of performance and growth in an organization such as a university library.

On the other hand, if an organization such as a university library does not encourage and support innovation, it is likely to become stagnant, less effective and less competitive. The role of the intrapreneurs referred to as agents of change by Schumpeter in this change process is a pioneer who is able to act with confidence beyond the range of familiar routines. This amounts to breaking up the old traditions and creating new traditions regardless of the uncertainties and the risks thereof. Although initially Schumpeter considered smaller companies as ideal to carry out innovations because of their flexibility, he later acknowledged that large organizations such as university libraries have advantage to develop innovations because of their stability, resources and large market power.

Schumpeter’s innovative theory emphasized the need for a conducive environment for the intrapreneurs to remain innovative. This is where the intrapreneurs occupy the central place and are able to initiate ideas/projects and carry them forward to implementation. In a university library, the staff become revolutionary, upsetting the established order to create dynamic change. To accomplish this, the staff require not only technical knowledge in entrepreneurship but also financial and non-financial resources. This calls for management support as proposed by Schumpeter. The study took library staff as a key determinant of intrapreneurial activities in university libraries. Schumpeter also believed that innovation is an essential driver of competitiveness and economic dynamics. This is because inability to compete with other successful organizations may lead to losses and obsoleteness in an
organization. The issue of competitiveness in university libraries was of concern in this study. This was because several information providers have emerged in the information provision sector posing as competitors. To avert such threats, these libraries need to engage in more innovativeness to gain an aggressive competitive posture.

Shumpeter further emphasized that today’s knowledge-based economies are dependent on a dynamic technological progress. Engagement in innovation no longer depends on intrapreneurs but involves cooperation of many different factors. This implied that other external factors including technology are at interplay and may influence the innovation process in an organization. External factors were considered as key determinants of intrapreneurial activities in university libraries in the current study.

Critics of Schumpeter’s theory have argued that he failed to account for what causes clustering of innovations at certain times and not others. Also, the innovation theory has no empirical foundation and there is no strong evidence to support a relationship between the size of an organization and its ability to innovate. The theory also regards the innovator as an ideal person, which may not always be the case. In addition, Schumpeter regards innovation as the main cause of economic development disregarding other factors that contribute to such development. However, inspite of these sentiments, Schumpeter’s innovation theory is universal and still evolving in principles of modern organizations such as libraries.
2.2.3 An Integrating Conceptual Model of Corporate Entrepreneurship

Corporate entrepreneurship refers to intrapreneurial activities conducted within an established organization. The proposed model by Ferreira (2002), focused more on the level of integration or relative harmony between the firm, external environment and individual employee (intrapreneur) characteristics which were of interest in the current study. According to Ferreira, the level of integration between these three constructs creates a better understanding of the intrapreneurial process (activities) in an organization. This implies that an analysis of a firm’s level of entrepreneurship in terms of: management support, resource availability, organizational culture and reward system is crucial to understanding that process. These tenets of internal organization factors were of concern in this study. The study took the view that a conducive environment that supports creative and innovative efforts in a library is essential to enhance intrapreneurial activities.

In addition, Ferreira posited that the external environmental conditions such as dynamism, hostility, and heterogeneity that are likely to impact on an organization should be taken into account. These are the conditions beyond the control of the firm but are likely to influence the intrapreneurial process of the organisation. With regard to university libraries, this means that the extent to which they are adaptable and flexible to external environment will determine their success in fostering intrapreneurial activities.

The individual employee (intrapreneur) characteristics in terms of capabilities, values, beliefs and networks are also considered important in the intrapreneurial process. Individual staff characteristics was one of the concerns of this study. This is because these are the people
who interact to get work done and their contributions in a firm’s entrepreneurial process is crucial. Such people are perceived as movers of organisations and thus determine their success or failure. From the model, each of the three constructs; the firm, the external environment and the intrapreneurs have multiple components that vary in their potential, positive or negative to influence the firm’s strategic orientation in terms of; risk taking, innovation, proactiveness and autonomy. The strategic orientation of an organization in turn determines its growth and performance which ultimately influence the level of intrapreneurial activities in an organization such as a university library.

This study took into consideration Ferreira’s suggestions since individual staff factors, internal organization factors and external environmental conditions were the main concerns of the current study. The extent to which these three constructs are integrated would determine the level of intrapreneurial activities in university libraries in Kenya. The study took this view and a conceptualization of this model was adapted to a library setting as shown in the conceptual framework Figure 2.1 on page 67.

2.2.4 The Congruence Model for Organisation Analysis

The congruence model proposed by Tushman and Nadler (1997), assumes that organizations are interacting components that exist in relative harmony or fit with each other. The four main components suggested in the model include; individuals, tasks, formal processes and informal processes. Organisational problems arise when there is poor fit between these components. Changes in one component ultimately affect other components because of the personal and process linkages that exist within the organization. The model places the
greatest emphasis on the transformation process between inputs and outputs. The tenets in the inputs include external environment, assuming that every organization including libraries is influenced by a larger environment comprising of: people, other organizations, social economic forces, legal constraints, markets, government regulations and technological changes. The environment hence affects the organization in terms of imposing demands, imposing constraints and providing opportunities.

External environmental conditions that determine intrapreneurial activities in university libraries in Kenya were a concern of this study. The external environment is the source of external key opportunities and threats that constitute external success factors for intrapreneurial activities in university libraries in Kenya. The study takes it that when libraries are flexible and adaptable to external environmental conditions, they are able to handle a lot of challenges as well as keep up with global competition particularly in information provision sector. Financial, human and other resources are also considered as key tenets in the inputs. Without this important dimension, intrapreneurial efforts in an organization would be halted.

Organisational culture and structure is also considered an important input in terms of how distinct or rigid are the lines of authority, how the work is standardized and how the work is evaluated or rewarded. It is also concerned with whether the organization is mechanistic or organic, as well as the strategic decisions made to meet the future challenges and opportunities. Internal organization factors that determine intrapreneurial activities in university libraries in Kenya was one of the concerns of this study. These are factors that
could promote or impede pursuit of intrapreneurial activities in these libraries. The study takes that intrapreneurial activities can only thrive in a conducive library environment where the top management is willing to facilitate, encourage and promote intrapreneurial efforts through championing innovative ideas, provision of necessary resources and developing an organizational culture with strong communication systems.

Tushman and Nadler considered individual employees as instrumental in the transformation process of an organization. These are people who interact to get work done. Their skills, knowledge, experience, education and competencies are considered important in the process. Their demographic profiles in terms of age, gender and ethnicity are also taken into account. In addition, the employees’ preferences and expectations for compensation, rewards, recognition, career progression and organizational commitment are key tenets in the transformation process.

The current study was concerned about the individual staff factors that determine intrapreneurial activities in university libraries in Kenya. This is because employees are perceived as key players in the transformation process of an organization such as a university library from its traditional practices to an intrapreneurial posture. The study takes it that a university library that has employees with the requisite skills, knowledge, experience and relevant competencies is more likely to be transformed into an intrapreneurial organization than those without. Tushman and Nadler thus suggested that if an organization such as a university library has the right calibre of employees, the organization structure is conducive and supportive for intrapreneurial activities and it is flexible and adaptive to
external environment; and if these characteristics are aligned and mutually supportive of each other, then the library will become efficient, effective and qualify to be considered intrapreneurial in nature.

The congruence model has been considered distinctive in terms of providing a rigorous framework for analyzing complex organizational problems. The model does not place restrictions on managers. It is a tool for thinking through organizational problems not a rigid template for classifying observations. It does not specify a particular approach for designing organizational structures or processes as long as there is a fit between the various components. However, critics of the congruence model (Basu, 2016), argued that applying the model could be a long expensive process especially for global organizations with several employees. Also the model does not specify a direct way of incorporating group dynamics into organizational analysis. Although the model is general in nature, the current study considered it as a useful basis for a more specific conceptual framework (Figure 2.1, page 67) on determinants of intrapreneurial activities in university libraries in Kenya.

Despite the fact that the discussed theories and models form a good basis for intrapreneurial studies, on the conceptual front, there is lack of an integrative theory or model of intrapreneurship with regard to university libraries which are service oriented non profit making organisations. Furthermore, the theories and the models were based on business firms of western countries. Few studies attempted to develop a theory or model focusing on individual staff, internal organizational and external environmental factors and their influence on intrapreneurial activities in university libraries. Most studies considered
individual employee (intrapreneur) as an important component of the organizational factors. Hence the major emphasis in previous studies was on organization and environmental constructs with performance as the most important consequence.

A close analysis of the discussed theories and the models revealed that intrapreneurship is a process in an established organisation that is determined and influenced by various antecedents that interact positively to cause success in intrapreneurial activities. The basis of such success is that the organization, in this case the library, must have an entrepreneurial orientation and create an environment that is conducive to change. Subsequently, the library must have individual employees who are willing and capable of identifying opportunities, taking risks, trying new ideas and who are innovative. The library therefore translates from the customary way of doing things to a more entrepreneurial posture in order to remain viable and competitive. The extent to which the library is able to respond to such stimuli will therefore depend, to a large extent, on the individual capabilities, the internal organizational factors and the external environmental conditions working in tandem to facilitate intrapreneurial activities. The tenets in the two theories and in the research models were used to compliment each other in this study to examine the linkages between individual staff factors, internal organization factors and external environmental conditions with intrapreneurial activities in university libraries in Kenya.

2.3 Empirical Review

2.3.1 The Concept Intrapreneurship

The concept of intrapreneurship is linked to entrepreneurial orientation of an organization. It
was originally coined by Pinchot in the 1980s, as a process by which large organizations seek to utilize, maintain or retain the edge in innovation and profit making by asking employees to spawn businesses within business (Anu, 2007). Since then, various concepts, constructs and definitions have been introduced and analysed to describe these activities including: corporate entrepreneurship, corporate venturing, intrapreneurship and entrepreneurial mindset which have formed the basis of research describing these activities (Behram & Ozdemirai, 2014; Hornsby et al., 2002; Kuratko et al., 2001). In most cases however, the difference between these concepts, are ambiguous and unspecified.

Belousowa et al. (2010); Gapp and Fisher (2007), attempted to differentiate between intrapreneurship and corporate entrepreneurship (CE). They argued that intrapreneurship is primarily an individual activity initiated bottom up by an employee to fulfill their own interest. On the other hand, they perceived corporate entrepreneurship (CE) as conducted at the organizational level, initiated at the top in order to follow the organization’s strategy and increase its competitive advantage. The specific terms such as intrapreneurship or corporate entrepreneurship have not been strictly associated with the above distinctions and are used interchangeably in this study which deals with entrepreneurship in an established library. This is in line with the available literature that has explored both intrapreneurship and corporate entrepreneurship (CE) recognizing overlaps in these concepts.

Felicio et al. (2012); Ahmad et al. (2011) and Drucker (2007), concurred that intrapreneurship is a process in which innovative products, services or processes and projects
are developed by creating an entrepreneurial culture within an established organisation. These views were supported by Kuratko and Hodgetts (2007) and Daft (2007), who asserted that the major thrust of intrapreneurship is to create or develop an entrepreneurial spirit within organizational boundaries thereby creating an atmosphere of innovation to flourish. This meant that when effectively promoted and channeled, intrapreneurship not only fosters innovation but also helps the employees with good ideas to better channel the resources of an organisation to develop more successful products and services (Hill, 2003).

Intrapreneurship therefore, refers to entrepreneurial activities that receive the organization’s sanctions and resource commitment for the purpose of innovation (Kuratko & Hodgetts, 2007). This implied that a supportive environment is an enabler for intrapreneurship behavior to flourish among the employees in an organisation. The willingness of individual employees to embrace new opportunities and take responsibility for effecting creative change therefore becomes crucial (Morris, 2001). This is because the employees pursue opportunities without regard to resources they currently control and depart from the customary to pursue new opportunities (Antoncic & Hisrich, 2003). These views were consistent with those of Wunderer (2001), who conceded that intrapreneurship involves cooperating organization’s members who innovate and create business opportunities, assemble and coordinate new combinations or arrangement of resources to yield or enhance organisational value.

From the foregoing discussions, it is clear that the objective of intrapreneurship in an organisation is to fill or meet currently unsatisfied needs and claims to do more efficiently
what is already being done. The idea is to safeguard and to increase the organisational value in the long term by optimizing the benefits of the central stakeholders. To achieve this objective, the commitment and support of the top management in developing or crafting a conducive internal environment is vital. Such commitment and support is necessary because intrapreneurship includes the set of activities required to move a concept or idea right through to implementation and this requires a combination of clarity and boldness of vision and purpose (Dyer, 2001).

Contrary to the traditional beliefs, studies carried out show that intrapreneurship is no longer the domain of small scale firms. It is also associated with large organizations that have realized the benefits of intrapreneurial activities and hence the need to utilize their employee capabilities (Karimi et al., 2011; Belousova et al., 2010; Hill, 2003; Antoncic & Hisrich, 2001). In such large organizations, the intrapreneurs are willing to take calculated risks and they are comfortable with the ambiguity and the uncertainty of the changes that they are making. The intrapreneurs work within the organization to develop new products, increase innovation and build employees’ morale. Intrapreneurship therefore appeals to some employees because it gives them a chance to pursue creative business ideas with the support of the organization (Anu, 2007).

Based on their involvement in the intrapreneurial activities in an organisation, Mokaya (2012), described the intrapreneurs as people who violate the organisation’s policy, ignore the chain of command, defy the established procedures and come up with a new product, service or process for the organisation. Additionally, intrapreneurs form underground teams and
networks that routinely “bootleg” the organisation’s resources or “steal” the organization’s time to accomplish their mission. As idea champions, intrapreneurs provide the time and energy to make things happen. They fight to overcome natural resistance to change and convince others of the benefits of a new idea. Anu (2007), referred to library staff as “acadepreneurs”. These are academic champions within a university library who envision, start and grow a program irrespective of whether they have the resources. Available literature records that intrapreneurs in any organization including libraries expect appreciation and recognition for their efforts from the top management, otherwise they may opt to depart for more supportive organizations or for self employment (Mokaya, 2012; Anu, 2007).

Although the whole essence of intrapreneurship is innovation, previous studies have come up with a multidimensional coporate entrepreneurship constructs classified into four dimensions as: new business venturing, innovativeness, self-renewal, and proactiveness. The new business venturing dimension refers to the creation of new businesses that are related to existing products, services or market regardless of the level of autonomy (Antoncic & Hisrich, 2003, 2000). The innovative dimension is inclined towards the creation of new products, services and technologies or improvement of the existing ones (Australian Institute for Commercialization, 2010; Martins & Terblanche, 2003). The frequency and the extensiveness of product/service innovation and the related tendency of technology leadership is a reflection of an organisation’ innovativeness (Karimi et al., 2011; Antoncic & Hisrich, 2001).
The self renewal dimension focuses on the strategy reformulation, reorganisation and organisational change. It reflects the renewal of the key ideas on which an organisation is built (Antoncic & Hisrich, 2003). Self renewal also includes a redefinition of the business concepts; re-organisation and introduction of system-wide changes for innovation (Agbor, 2010). In addition, adaptability, flexibility to changes and continuity are aspects of self renewal dimension. Proactive dimension of intrapreneurship is related to the aggressive posturing and pioneering leadership relative to competitors (Karimi, et al., 2011) and initiative taking in pursuing new market opportunities or entering new markets (Caruana et al., 2002). Proactive dimension therefore reflects the orientation of top management in pursuing enhanced competitiveness including initiative, risk taking, competitive aggressiveness and boldness.

In search of better understanding of corporate entrepreneurship (CE) construct, Davis (2006), after analyzing and synthesizing the various definitions of intrapreneurship presented in previous studies concluded that there is considerable ambiguity regarding the specific behaviours and activities that reflect corporate entrepreneurship. Davis concluded that most studies perceive corporate entrepreneurship as a multidimensional construct, but do not seem to agree on what dimensions comprise it. The definitions however focused mostly on innovativeness, proactiveness and risk taking.

2.3.2 The Environment for an Intrapreneurial Organisation

Intrapreneurship has been considered as important for the survival, growth, profitability and renewal particularly in large organisations. Monanavarian and Ashena (2009), contended that different kinds of organizations are eagerly engaging in intrapreneurial activities by
involving their employees and management teams. Failure to do this could result in stagnation, loss of personnel or decline. Daft (2007), further observed that turbulence and complexity have replaced stability and predictability as defining characteristics of modern organisations. Researches carried out show that in contrast to previous decades, changes, innovations and improvements are now very common in the market place due to today’s high-tech economy (Kuratko & Hodgetts, 2007). At the same time different types of organizations are being encouraged to develop an intrapreneurial spirit within their organizational boundaries, thus allowing for an atmosphere of innovation to flourish (Agbor, 2010). Additionally, Antoncic and Hisrich (2001), were of the view that intrapreneurial organizations engage in new business venturing, are innovative, continuously renew themselves and are proactive.

Mokaya (2012), observed that intrapreneurial organizations demonstrate willingness to break with traditions by embracing initiatives that run counter to the customary. To achieve this, Kuratko and Hodgetts (2007) and Hill (2003), suggested that an intrapreneurial organization should examine, revise or develop an intrapreneurial philosophy which sets aside traditions in favour of new processes and procedures and developing a new culture with new values. Such a philosophy should assist in the creation of a workforce that can help maintain the organisation’s competitiveness and promote a climate conducive to high achievement. Kuratko and Hodgetts (2007), further conceded that organisations facing a rapidly changing, faster paced competitive environment need to formulate an entrepreneurial strategy to stimulate corporate entrepreneurship. Such a strategy should encompass: developing the vision of innovation, encouraging innovation, structuring for an intrapreneurial climate,
developing individual managers for corporate entrepreneurship and developing venture teams.

Other approaches that could encourage creativity and innovation in an organisation as suggested by Mokaya (2012), were: in undating creativity-inclined people with exhortations to think outside the box, to think sideways about problems and to network with others with different perspectives. It is also important to offer rewards and recognition to successful innovators, exhort supervisors and gatekeepers and to be receptive to new ideas, to wink at and ignore time taken from assigned projects and to by-pass bureaucratic procedures created for new ideas.

Corporate entrepreneurship (CE) embodies entrepreneurial efforts that require organisational sanctions and resource commitment for purposes of carrying out innovative activities in the form of product process and organisation’s innovations (Agbor, 2010). Martins and Terblanche (2003), further emphasised that corporate innovation can be a broad concept that includes the generation, development and implementation of new ideas or behaviours. In this context, an innovation can be a new product, service, an administrative system, new plan or programme. From these observations, Morris (2001), perceived an intrapreneurial organisation as one that proactively seek to grow and is not constrained by the resources currently under its control. This is regarded as a kind of “new corporate revolution” that represents an appreciation for and a desire to develop intrapreneurs within the corporate structure. Furthermore, intrapreneurial organizations may also acquire ideas or innovations
externally (exopreneurship) in form of franchising, subcontracting and strategic alliances (Mokaya, 2012).

Different schools of thought also perceived an intrapreneurial organisation as one where not only new knowledge is continuously created, but learning is also taking place (Jones, 2010; Daft, 2007; Kreitner & Kinicki, 2001). The organisation in this regard proactively creates, acquires and transfers knowledge that changes its behavior on the basis of new knowledge and insight. Such information/knowledge is broadly shared rather than being concentrated with top managers (Daft, 2007; Hill, 2003). The question of creating and designing an organizational setting to promote creativity and innovation becomes a crucial issue. Being able to continually generate new and better ways of doing things gives such an organisation a sustainable competitive advantage over the competitors (Hill, 2003).

Moreover, in a learning organisation, structures are changed and become horizontal involving empowered teams working directly with customers. In such structures, there are few rules and procedures for performing tasks and knowledge and control of tasks are located with employees rather than supervisors. However, while every intrapreneurial organisation must have processes and rules of procedure and behavior, Mokaya (2012), argued that those which do not apply due to changing business conditions, situations and opportunities should be discarded to create a way for establishing new precedents to respond to new opportunities.

Any changes in an intrapreneurial organization require new values, new attitudes and new ways of thinking and working together. This implies developing a culture that supports open
communication, equality, adaptability and employee participation (Daft, 2007). The most successful organisation of the future according to Mckay and Chung (2005), will be the learning ones which are adaptive and where employees are free to think for themselves, identify problems and opportunities and go after them. In addition, an intrapreneurial organisation should have a policy that allows employees free time for development and implementation of business ideas and for reflection (Christensen, 2005).

Hill (2003), observed that people who are learning are more open to improvement, change and risk taking. This implied that employees in an intrapreneurial organisation should change their perception and be receptive to learning and change. The organisation should encourage learning, innovation and development of new ideas resulting in a more entrepreneurial approach. Furthermore, the organisation should have an incentive system in order to encourage employees to take risks and to achieve better end results. Such a reward system should be based on performance (Zhao, 2005).

The performance reward relationship is desirable not only at the organizational level but also at the individual level. The underlying theory is that employees will be motivated when they believe that such motivation will lead to desired rewards. The assumption is that rewards based on performance whether financial or otherwise are more likely to make employees experience a feeling of accomplishment and satisfaction thereby increasing their intrapreneurial propensity (Mokaya, 2012). However, a general observation in the CE literature indicates that if an organisation is unable or unwilling to provide sufficient rewards or recognition to its intrapreneurs, then it should be prepared to lose such employees to other
organizations that can meet their desires for professional fulfillment. Such dissatisfied intrapreneurs could also opt to set up their own ventures (Hill, 2003). These views contradict suggestions in the componential theory that employees can be creative and innovative out of self interest without extrinsic motivators.

Intrapreneurs thrive on the freedom which fuels their innate desire to innovate. This means intrapreneurial organisations are expected to provide an environment where there is freedom and encouragement that the intrapreneurs require in developing their ideas. Mokaya (2012), identified four major steps to establishing such an environment which include: setting explicit goals agreed upon by workers and the management, creating a system of feedback and positive reinforcement, emphasizing on individual responsibility and giving rewards based on results.

In addition, Kuratko and Hodgetts (2007), suggested four factors that should be put into consideration in structuring for a CE environment in an organisation namely: the organization’s heavy investment in intrapreneurial activities that allow new ideas to flourish in an innovative environment; developing an environment that will help innovative minded people reach their full potential; the employee perception of an innovative environment is critical for stressing the importance of management’s commitment to the employee’s project and a CE training program to enable the employees to support intrapreneurial activities in their workplace. The idea of staff training was further supported by Anu (2012).

An organization’s external environment should also be taken into account in planning for intrapreneurial activities. This is because external environment has been perceived to have
some influence on intrapreneurial activities with certain environmental characteristics such as: dynamism, technological opportunities, organisational growth and demand for new products and services being favourable for corporate entrepreneurship (Antoncic & Hisrich, 2004).

While acknowledging the importance of CE in an organisation, developing an intrapreneur–friendly environment has its own challenges. Various studies including those of Daft, (2007); Anu, (2007) and Hill (2003), identified such challenges as: excessive focus on cost, failure to perceive CE benefits, lack of coordination and cooperation in an organisation, uncertainty avoidance, inadequate rewards for success, organizational hierarchies and fear of loss of power, status or jobs. In support of these claims, Kuratko and Hodgetts (2007), further emphasised that providing freedom and encouragement to intrapreneurs to develop their ideas is not always easy. This is because many top managers do not believe intrapreneurial ideas can be nurtured and developed in their environment. Top managers also find it difficult to implement policies that encourage freedom and unstructured activities. Non-profit organisations such as university libraries are also likely to face unique challenges in embracing CE particularly because they are mostly dependent on government funding and control (Daft, 2007).

However, once an organisation has attained an intrapreneurial posture, it is imperative to ensure its sustainability. Such sustainability is dependent upon the initiative of intrapreneurs’ continuity to undertake innovative activities as well as the support and commitment of the organisation’s executive management (Kuratko & Hodgetts, 2007).
2.4 Status of Intrapreneurial Activities in University Libraries in Kenya

Available literature indicated that intrapreneurial activities can take various dimensions in an organization and can be the result of new ideas conceived, tested and implemented as a result of deliberate organizational policy and procedures. Such activities can also occur as a result of bottom-up activity through the actions of intrapreneurial individuals acting outside their formal responsibilities (Belousowa et al., 2010; Gapp & Fisher, 2007).

As discussed earlier in this chapter, intrapreneurship refers to a process whereby an organization creates new business units or instigates renewal within it. To stimulate intrapreneurial activities within such an organization, it is necessary to build an adequate level of entrepreneurial orientation. This is related to an organization’s proactivity, initiative, risk assumption and competitive aggressiveness. Such orientation is related to innovativeness as shown by the organization’s processes, practices and activities (Mokaya, 2012; Steele & Murray, 2004). Training and empowerment of the workforce is also considered part of the orientation (Gomez-Haro et al., 2011).

The three most pronounced elements of intrapreneurial activities are: new venture, product/service innovation and process innovation. In the words of different scholars, intrapreneurship process includes: extensiveness and frequency of product innovation (Steel & Murray, 2004); new product development, product improvements, new production methods and procedures, products, services and techniques and technologies in production (Augusto et al., 2011); new administration techniques (Karimi et al., 2011; Belousova et al., 2010; Antoncic & Hisrich, 2004); new venture creation, new strategic direction, creation of
new organizational routines and procedures, frame breaking changes (Brunaker & Kurvinen, 2006). These studies suggested that the key element to combining entrepreneurial orientation and intrapreneurial activities is innovation. The main objective of intrapreneurial activities according to Wunderer (2001), is to safeguard and to increase the organizational value in the long term by optimizing the benefits for the central stakeholders (staff).

Studies based on university libraries in developed countries show that, these libraries have adopted a more intrapreneurial orientation which is market driven and businesslike (Schmidt & Peachey, 2003; Neal, 2001). Such successful examples from university libraries in developed countries could form the benchmark from which university libraries in developing countries like Kenya could learn from and adapt relevant intrapreneurial practices.

On the other hand, documented literature reveals limited adoption of intrapreneurial activities in university libraries of developing countries as discussed earlier in chapter one. It shows that the libraries are less innovative and vibrant (Mukuvi, 2013; Wawire & Messah, 2010; Okojie, 2010; Kavulya, 2006; Boadi, 2006; Mutula, 2001). This implies that university libraries in these countries have embraced limited change and have confined themselves to the traditional practices of service delivery and product development. Kavulya (2006) and Mutula (2001), attempted to identify factors that hindered university libraries in Kenya from aggressively engaging in diverse intrapreneurial activities. These factors included: lack of necessary staff skills, staff attitude, lack of time, lack of organizational support and resources. The relevance of such findings requires further investigation in both public and private university libraries. The current study therefore attempted not only to establish the
status of intrapreneurial activities in university libraries in Kenya, but also tried to create a better understanding of the underlying determinants that influence such activities.

2.5 Determinants of Intrapreneurial Activities in University Libraries

This study was based on the empirical review on three key variables which determine intrapreneurial activities in university libraries namely: individual staff factors, internal organizational factors and external environmental conditions. These variables were found consistently throughout the CE literature.

2.5.1 Individual Staff Factors

There is wide support in literature that people are the most important asset in today’s knowledge-based economy (Zhao, 2005; Steele & Murray, 2004). Employees are perceived as movers of organizations such as university libraries and thus determine to some extent their success or failure. It is the employees’ creative and innovative minds that enable organizations respond to the dynamic and turbulent changes in the market, thus making them remain competitive. Wunderer (2001), described workforce in an organization as a strategic determinant of success and as a potential source of added value and long term investment. In support of these views, Wawire and Messah (2010), described library staff as the engine that controls the running of all activities in the library. They are the pivot around whom the users, information materials, equipment, tools and all the other facilities revolve. These characteristics of workers were widely supported in the proposed research theories and models guiding this study.

Antoncic and Hisrich (2003), argued that intrapreneurial research has evolved into three focal
areas namely; the individual, new ventures and the organization. In support of these views, Rutherford and Holt (2007), stressed the importance for individual level focus as twofold: intrapreneurial activities are initiated and carried out by individuals in organizations. This implied that organizations such as university libraries would be innovative, proactive and take risks through the initiatives of individual employees. In addition, examining organizational or work group level, innovative skills and abilities require an analysis at the individual level. This is because organizational factors are more close to the individual employee and the essence of intrapreneurship revolves around the innovative activities of the individual. In this section, individual staff factors including: gender, age, level of education, level of staff training in entrepreneurship, level of entrepreneurship knowledge and working experience were discussed as critical determinants of intrapreneural activities in university libraries.

Gender has been reported in the available literature as having influence in intrapreneurial activities in organizations (Urbano et al., 2013; Metcafe & Afanassiera, 2009; OYelaran-OYeyinka & Adeya, 2004). The studies observed that generally due to socio-cultural constraints, men usually held managerial positions in various organizations including libraries. Although such positions are likely to have direct influence in intrapreneurial activities in an organization, the scholars did not explicitly show the linkage between the two constructs in a university library. Hisrich et al. (2009) and Urban (2004), were of the view that men tend to be highly task-oriented and therefore performance expectancies which focus on task accomplishment are likely to be especially salient to men. Differences stem from gender roles and socialization process. Gender roles have a strong psychological basis and
are relatively enduring, yet open to change over time. However, the scholars did not relate their views to intrapreneurial activities in university libraries.

Other studies likewise reported the significance of gender influence particularly in IT adoption which is crucial for intrapreneurial activities. For instance, Morris, Venkatesh, and Ackermann (2005); Venkatesh, Morris, Davis and Davis, (2003), found more intention to use technology for women than for men. Urbano et al. (2013), argued that women’s participation rates in entrepreneurship are significantly lower than men’s, implying that men are more likely to start a venture than women. Although the above studies analysed gender disparities in working places, they failed to show how gender is a determinant of intrapreneurial activities in a university library. Furthermore, some of these studies were based in developed countries which have a different gender perception from developing countries.

Employing an age diverse workforce is beginning to become a business imperative particularly in the developed western countries (Newton, 2006). This is as a result of shrinkage of the overall workforce and an increase in the relative number of workers in higher age groups (Veldhoven & Dorebosch, 2008). There has been a global stereotyped assumption from some employers and the society at large that older workers are slow or unable to grasp new ideas, cope with new technology, resistant to change, less creative and less trainable.

At the same time, it is claimed that older workers lack an orientation towards flexibility, innovativeness, are less energetic and motivated about their jobs (Veldhoven & Dorebosch, 2008; Newton, 2006; Beaver & Hutchings, 2005). Hisrich et al. (2009), further asserted that
the level of creativity generally decreased with age and education and hence the probability of becoming an intrapreneur also decreased with age (Urbano et al., 2013). Conversely, young people were perceived as more trainable, productive, energetic, innovative and proactive with modern technical skills particularly in IT (Beaver & Hutchings, 2005; Morris et al., 2005; Venkatesh et al., 2003).

A different school of thought (Holt, 2004; Kirby, 2003), posited that older workforce compares favorably to that of younger age groups in terms of their productivity. The older workforce was regarded as having a higher output due to their level of seniority, their greater organizational commitment and stability. In addition, it is assumed that their long working experience was an advantage in spotting new opportunities or identifying new ways of doing things better.

In the African context, OYelaran –OYeyinka and Adeya (2004), argued that age is a significant moderator of social influence in Nigeria and Kenya respectively. The scholars observed that the senior positions in libraries and other organizations tend to be filled up by older workers who are presumably wiser within the African cultural context. Such cultural bias limits the ability of the older workers to learn since they may doubt their own credibility (Newton, 2006).

Although the Commission for University Education (2013), standards and guidelines in Kenya has set the criteria for numbers and qualifications of the library staff, it has not given the guidelines on issues pertaining to gender or age. Such issues are usually determined by
the staff policies of the parent institutions. This study therefore sought to find out whether age and gender factors influenced staff performance in university libraries.

It is widely accepted in the available literature that the level of education of employees provide a knowledge base crucial to intrapreneural activities. Urbano et al. (2013) and Hisrich et al. (2009), were in agreement that education plays a major role in helping individual staff to make decisions, cope with challenges and communicate effectively. Additionally, employees are able to invest more time, energy and resources in sharpening their skills and that creativity generally decreased with level of education. Educated staff are better able to secure higher benefits for themselves and for the organization (Gomez-Haro et al., 2011; Alpkan et al., 2010). It is also assumed that educated workers are likely to be best equipped to respond to new product development, opportunities and services made possible through intrapreneurship. Education also plays a role in influencing intrapreneurial activities in the sense that it assists in the accumulation of knowledge that becomes a source of promoting internal entrepreneurship (Urbano et al., 2013). The importance of employee education in an organization was highly emphasized in the theories and the models that guided this study.

Apart from formal education, Awan and Mahmood (2010); Malhan (2006) and Li Xin (2006), conceded that staff training and development in entrepreneurship are key strategies which may be beneficial for utilizing library staff potential. Such training and development enable the library staff to cope with global competitive and rapid changes. Malhan (2006), further observed that continuous training in form of seminars, workshops or conferences is a
capacity building strategy that enhances staff performance and efficiency. It helps the staff to quickly adapt properly with new management tools and technologies. Training also helps the staff to make use of contemporary information systems and services.

Schmidt and Peachey (2003), affirmed that the University of Queensway cybrary in Australia, has an ongoing staff development programme that ensures that all library staff are as skilled and knowledgeable as possible in intrapreneurial activities. Such training, includes in house training and workshops. In contrast, Boadi (2006), was concerned that library staff in many African universities libraries lacked the requisite skills with which to undertake intrapreneurial activities aggressively and manage them professionally.

Dunaway (2012), supported the need to encourage academic librarians to focus on continuous learning, re-tooling and transformation of their existing skills and roles. The argument was that librarians require ongoing training and professional development in order to successfully respond to changes in the profession. Kuratko and Hodgetts (2007) and Anu (2012), also advocated for a corporate breakthrough training programme designed to train the workforce to support intrapreneurial activities within their workplace. This implied institutionalizing the staff training programmes in entrepreneurship to induce the changes needed in the workplace.

While acknowledging the positive influence of education and training in entrepreneurship in helping staff to be proactive in intrapreneurial activities, Hisrich et al. (2009) and Mattis (2000), on the other hand, doubted whether education and training determine if individual
employee would create a new business to exploit the discovered opportunities. Such divergent views on education and training may impact negatively on library employees and hence the need for further research. Although the Commission for University Education (2013), standards and guidelines recommends that both public and private university libraries in Kenya should have appropriate qualified staff in library and information science and other related fields, it is silent on the field of library staff training in entrepreneurship an issue that require further investigation.

The level of entrepreneurship knowledge is important because in order to be creative, the innovators who are usually the employees within an organisation must go beyond the established status quo. This means that the employees (intrapreneurs) need creative and independent thinking to bring in new and novel ideas and undertake risks. This is in line with Schumpeterian (1934), thinking which positioned entrepreneurs in an organization as agents of change whose creative behaviour in terms of innovation aspects was seen as creative disruption in the economic equilibrium of an organization. With this understanding, it is imperative that the employees as intrapreneurs have the requisite entrepreneurship knowledge to effect the necessary changes in an organization.

Shaw, O’Loughlin and McFadzean, (2005), however contended that building up the necessary entrepreneurship knowledge requires time and experience for the employees to develop meaningful creative contribution. On their part, Chen, Zhu and Anquan (2005), emphasized that staff possessing the requisite entrepreneurial knowledge form the foundation to cultivate CE in an organisation. Conversely, if staff are lacking such knowledge, any
innovation for the organization is limited. Intrapreneurial oriented organizations therefore require staff who display reasonable amount of entrepreneurial knowledge, skills and experience of the specific approaches in innovation and creativity (Chen et al., 2005). Hence the existence of institutional arrangements such as entrepreneurship education and training significantly influence the degree of intrapreneurship effort (Gomez-Haro et al., 2011).

There is a consensus in previous studies that lack of entrepreneurship knowledge is a significant barrier to influencing intrapreneurial activities in university libraries in Africa (Boadi, 2006; Kavulya, 2006; Mutula 2001). Lack of such knowledge and skills may cause library staff to remain reactive, rather than proactive in developing intrapreneurial talents. The current study attempted to uncover the factors contributing to this situation with a focus on both public and private university libraries in Kenya.

Studies carried out indicate that previous working experience can provide library staff with expertise in running an independent venture as well as benchmark for judging relevant library information. Urbano et al. (2013), posited that having previous entrepreneurial experience increased probability of becoming an intrapreneur and that such experience is considered to have a significant impact in an organization’s intrapreneurial activities in terms of creativity and innovativeness. Such experience can also lead to understanding the value of new entry opportunities, speed up the new venture creation process and enhance performance (Hisrich et al., 2009).

Alpkan et al. (2010), observed that people who are better educated, have more extensive
work experience and invest more time, energy and resources in developing their skills, are better able to secure higher benefits for themselves and for the organization. Furthermore, work experience is considered as the basis for entrepreneurial knowledge (Shaw et al., 2005), and can also provide business contents, skills and risk taking values (Brunaker & Kurvinen, 2006). These arguments implied that previous working experience provides individual staff with greater confidence in their ability to influence intrapreneurial activities in an organization such as a university library. Previous studies on university libraries in Kenya so far have not explicitly explained the linkage between previous work experience and intrapreneurial activities in these libraries, a gap that the current study attempted to address.

A review of literature on individual staff factors gave a deeper insight into the relationship between these variables and intrapreneurial activities in the workplace which is of relevance to this study. However, it was evident from the review that research on the influence of these individual staff attributes on intrapreneurial activities in university libraries has been largely inconclusive. There remained an interest in attempting to uncover such linkages, which was the intention of the current study.

2.5.2 Internal Organisation Factors

Previous studies by Antoncic, (2007); Antoncic and Hisrich, (2004); Hornsby et al. (2002), showed that internal organization factors can promote or impede the pursuance of intrapreneurial activities in an organization. The significance of such factors in an organisation was also emphasized in the proposed theorrie and the research models on which the study was anchored. However, there is no universal agreement on which factors matter
most in influencing such activities. Although different labels have been used in the literature to describe these factors, the most widely acknowledged appear to fall into five distinctive components as: management support, work discretion, rewards, time availability and organizational boundaries. This section focused on these components and analysed some of the measurements of internal organization factors.

Management support denotes the willingness of the top management to facilitate, encourage and promote intrapreneurial efforts in an existing organization (Alpkan et. al., 2010, Daft, 2007; Gapp & Fisher, 2007). Such support can take various forms including: championing innovative ideas; providing necessary resources or expertise; or institutionalizing intrapreneurial activities within the organization’s system and process. It also includes open and strong communication systems to ensure that intrapreneurs with new ideas are listened to. Management support in terms of training and trusting the employees within the organization to detect opportunities was also proposed to positively influence an organisation’s intrapreneurial behavior (Antoncic & Hisrich, 2001).

Work discretion refers to the autonomy with which and the extent to which employees are empowered to make decisions about performing their work in the way they believe is most effective. It entails top level managers’ commitment to tolerate failure, provide decision making latitude and freedom from excessive oversight and to delegate authority and responsibility to staff (Antoncic, 2007; Zhao, 2005; Hornsby et al., 2002). Intrapreneurs thrive on the freedom which fuels their innate desire to innovate. Organisations such as university libraries wishing to establish and enhance intrapreneurial efforts internally need to provide the freedom and encouragement intrapreneurs require in developing their ideas
Rewards and reinforcement develop the motivation of intrapreneurs to engage in innovative, proactive and moderate risk-taking behavior (Goosen, 2002). Innovative organizations are characterized by providing rewards based on performance. Theorists including Hisrich et al. (2009); Zhao, (2005); Antoncic and Hisrich, (2004), emphasized that an effective reward system that spurs intrapreneurial activities must consider goals, feedback, emphasize on individual responsibilities and result-based incentives. The underlying theory is that employees will be motivated when they believe such motivation will lead to desired rewards. Such rewards are likely to make employees experience a feeling of accomplishment and satisfaction thus increasing their intrapreneurial propensity (Mokaya, 2012; Hill, 2003). However, Alpkan et al. (2010), doubted that availability of performance based reward system had any influence on intrapreneurial behaviour in an organization. Furthermore the views of the proponents of performance based rewards also contradicted the suggestions in the proposed componential theory that did not support the use of rewards as an extrinsic motivator to creativity and innovation.

Availability of time is about evaluating workloads to ensure that individual employees as well as teams in an organization have adequate free time needed to pursue innovation and solve long term problems. Their jobs are structured in ways that support efforts to achieve short and long term organizational goals (Ireland et al., 2006; Kuratko, Ireland, Covin & Hornsby, 2005). This means providing the employees with sufficient time to work on developing novelties without any burden of routine workload. Additionally, availability of
adequate free time is known to encourage experimentation and risk taking behaviors (Alpkan et al., 2010; Gapp & Fisher, 2007; Christensen, 2005).

Organisational boundaries refer to the existence of a supportive organizational structure and fluid boundaries (Monnavarian & Ashena, 2009; Hornsby et al., 2002). A supportive organizational structure provides the administrative means by which ideas are appraised, selected and executed according to Goosen (2002). It also means rising above the narrow confines of day to day task completion to focus on producing novel solutions to broad, fundamental problems. However, a bureaucratic organizational structure leads to perceived boundaries, creating obstacles to influencing intrapreneurial activities. In such an organization, people tend to focus on their departmental problems and fail to see the bigger organizational picture. In a highly formalized system, there is less flexibility to determine who may decide or act (Anu, 2007).

Mokaya (2012), however, argued that as much as every organization must have processes and rules of procedure and behavior, those which do not apply due to changing organisational conditions, situations and opportunities should be discarded to create way for establishing new precedents to respond to new opportunities. Individually and in combination internal organization factors are believed to be important antecedents of intrapreneurial efforts because they affect the internal environment which determines interest and support of intrapreneurial initiatives within an established organization. Although there was wide coverage of internal organization factors in the CE literature, there was no linkage of these factors with university libraries, a gap that this study sought to fill.
2.5.2.1 Measurement of Internal Organisation Factors

Although there is little agreement on which internal organization factors are essential to influencing intrapreneurial activities in an organization, studies on CE have explored new approaches to measuring these factors. Given that the creation of measurement levels is a complex task, the study followed the advice of Gomez-Haro et al. (2011), who suggested using constructs already tested in previous empirical studies to ensure their content validity.

Hornsby et al. (2002), attempted to identify the key internal organization factors that influence intrapreneurial activities by analyzing available CE literature. The findings of the synthesized literature directed towards identifying the most widely acknowledged internal organisational factors that influence CE activities which converged into five categories namely: management support, work discretion, rewards, time availability, and organizational boundaries. Based on these five dimensions, Hornsby et al. (2002), developed the Corporate Entrepreneurial Assessment Instrument (CEAI), a survey instrument designed to help managers and leaders measure each of these internal organization factors. The focus on internal organisation factors as noted earlier is of particular interest because they are for the most part under management control (Antoncic, 2007; Kuratko et al., 2005; Antoncic & Hisrich, 2004, 2001). Thus, internal organization factors may have significant practical implications for an organisation such as a university library. Measurement of the organization’s antecedents is intended to help the managers and leaders focus their efforts to encourage intrapreneurial efforts within the organization.

According to Davis (2006), the CEAI has considerable promise for both researchers and practitioners. It was developed using sound psychometric techniques that had been
recommended for the organizational science by Hinkin (1998). The instrument also measures antecedents in a way that provides those that use it with a guide to improve intrapreneurial activities. It measures entrepreneurship at the individual level and it is relatively brief, which may encourage more managers and leaders to use it (Davis, 2006).

Hornsby et al. (2002), offered some initial evidence of the instruments’ reliability and validity in measuring the five discussed antecedents. An initial level of content validity for the CEAI was established by conducting a comprehensive review of the CE literature. In addition, the instrument was administered to two independent samples to test the factor structure and estimate the internal consistency. The results of confirmatory analysis suggested a five-factor solution: management support (17 items), work discretion (10 items), rewards/reinforcement (5 items), time availability (6 items) and organizational boundaries (5 items).

CEAI was modified and harmonized for purposes of this study inorder to identify the dimensional structure of internal organization factors in terms of their ability to influence intrapreneurial activities in a library setting. The instrument focused on factors which are essential in developing perceived entrepreneurial environment in university libraries. The instrument was considered suitable in this study since it had been widely used in other sectors and was comparatively applicable to different organizations (Davis, 2006; Mandouh, 2005). However, while the benefits of this measure were taken into account for purposes of this study, its limitations were also considered. One major limitation noted was that it focused on internal organization factors only, disregarding other possible factors. Another gap noted in this measure was that it was developed for business firms of western countries
only and had not been validated in a library setting.

2.5.3 External Environmental Conditions

An organisation’s environment are all elements that exist outside the boundary of the organization and have the potential to influence all or part of the organization (Daft, 2007). In their proposed congruence model, Tushman and Nadler (1997), suggested that there are certain political, economic, social and technological (PEST) forces that constrain and shape organizations. Ferreira (2002), too in his proposed integrating conceptual model of CE proposed that external environment is likely to have an impact on an organization and hence should be taken into account when planning for intrapreneurial activities. Various studies have also perceived external environmental conditions as important determinants influencing intrapreneurial activities at the organizational level (Antoncic, 2007; Mcfadzean et al., 2005; Antoncic & Hisrich, 2004). Behram and Ozdemirci (2014), identified four favorable (munificent) external environmental conditions that are likely to influence intrapreneurial activities in an organization namely: dynamism, technological opportunities, organizational growth and demand for new products and services.

Dynamism is associated with unpredictable changes that may occur as a result of social, political, technological and economic changes which bring about new developments that can enrich an organization’s niche. Increased dynamism may be seen as conducive to the pursuit of intrapreneurial activities because it tends to create opportunities in an organisation’s market (Antoncic, 2007; Davis, 2006; Ferreira, 2002). This implies that organisations often respond to challenging conditions found in dynamic competitive or high-tech environments by adopting an entrepreneurial posture.
Daft (2007); Mckay and Chung (2005), concurred that it is common for organizations such as university libraries to be situated in a rapidly changing environment. In such a situation, it is essential for such libraries to be flexible, adaptable and ready to change directions to avoid being left behind. Such turbulent environments can offer good opportunities for intrapreneurial activities. In a different school of thought, McFadzean et al. (2005), argued that constant and rapid changes in the business environment may lead to decision making and innovation uncertain and ambiguous thus limiting planning for intrapreneurial activities. However, if an organization such as a university library competes in a stable environment, there is less likelihood of motivation to engage in intrapreneurial activities and support for intrapreneurship may be minimal (Caruana et al., 2002). As discussed earlier in chapter one, Kenyan university libraries are operating in an extremely turbulent and ever changing situations which could form a good basis for pursuing intrapreneurial activities.

Technological opportunities tend to influence organizations towards an intrapreneurial posture and intensify intrapreneurial activities. Shaw et al. (2005), opined that new technology impacts innovation in an organization. Recognition and exploitation of the competitive significance of technological change is important as this can also change the rules and parameters within which organizations operate (Dooley & O’Sullivan, 2001). Many organizations including libraries have responded to rapidly changing technological conditions by adopting an entrepreneurial posture. Indeed, Schmidt and Peachy (2003), reported that the effectiveness of service delivery at University of Queensland Cybrary in Australia was influenced by the level of Information Technology (IT) adoption and
implementation. Large organizations such as university libraries can use technology to make themselves responsive and flexible just like the smaller firms (Hisrich et al., 2009; Antoncic & Hisrich, 2004). This means that in this age of technological turbulence and hyper-competition, organizations regardless of size need to be creative and innovative through adoption and implementation of information technology.

Opportunity recognition of such technologies is in essence, the development of the idea that the intrapreneur seeks to manage and exploit. It is also a way of empowering individual employees. Ferreira (2002), argued that opportunities for new products and services stem from development of new technologies and/or commercialization of technologies developed by others. In addition, innovation leads to both new markets and new technological knowledge which is fed-back to assist with new innovations, thus leading to a continual cycle (Shaw et al., 2005). However, Gituru and Macharia (2006), further argued that for technologies to improve productivity, they must be accepted and used by employees in organizations.

According to Womboh (2008) and Mutula (2001), most African university libraries have integrated limited technologies and have not adequately developed ways of using it. Additionally, little attention has been given to the factors that affect IT adoption in these institutions (Gituru & Macharia, 2006). In Kenya the Commission for University Education (2013), standards and guidelines directs that every university library should adopt and maintain new IT to assist in meeting their goals. Failure to adopt and implement IT for creativity and innovation may be a drawback to pursuing intrapreneurial activities in
university libraries in Kenya. This study attempted to find out if this situation applied to both public and private university libraries in Kenya.

Organisational growth can influence intrapreneurial activities in an organization. Such growth potentially offers intrapreneurial opportunities which can pull organizations into increased intrapreneurial activities such as new ventures, new product/service innovations or new markets (Antoncic, 2007; Antoncic & Hisrich 2004). Perceived decline in growth could also push an organization into increased renewal activities (Caruana et al., 2002).

Demand for new products and services has been perceived as favorable for intrapreneurial activities in an organisation. It encourages intrapreneurial activities by presenting an important demand – pull, thus forcing organizations to consider ways to provide new products and services to their clients. Some of the factors that may stimulate such demand include; opportunity for new products and services, an increase in user/customer demand for new products and services, variation in user/customer demand and behavior, users/customers invited and encouraged to get new ideas for products and services (Antoncic & Hisrich, 2004).

Smith (2012), in agreement with Makori (2010), observed that as markets for information become more competitive, consumers of information are experiencing a widening range of choice. Standard commodity products are losing their appeal. Increasingly, customers are expecting and demanding, responses to their personal requirements. Goods and services have to be tailored to take account of particular interests and preferences. Every
organization’s overriding competitive strategy including that of libraries is to introduce products and services that add value to the customers’ lives. This is what Jones (2010), refered to as “product life cycle” which reflects the changes in demand for a product or service that occur over time. Failure to keep up with such changes may lead to loss of market for the products/services and hence the destruction of the organization. Researches carried out show that modern university libraries are making efforts to monitor the quality of their products and services, trying to achieve the objectives of international standards to satisfy the needs of their customers (Mukuvi, 2013; Malhan, 2006; Toftoy, 2002; Maddern, 2002).

Studies by Ferreira (2002); Antoncic and Hisrich (2001), showed that there are two hostile environmental conditions that may positively stimulate intrapreneurial efforts in an organization. Unfavorability of change which refers to the extent which the environment is perceived as unfavorable to an organisation’s goals and mission. Competitive rivalry refers to the intensity of competition. These arguments were supported in previous studies by Behram and Ozdemirci (2014) and Felicio et al. (2012), which showed that firms operating in hostile environments are entrepreneurially inclined and tend to encourage intrapreneurial activities as opposed to those operating in benign environments.

However, from the foregoing literature review, there is consensus that external environmental conditions are significant antecedents of intrapreneurial activities in an organization. Leaders of organizations including those of university libraries, have little or no control over the environment, but should be flexible and adaptable to rapidly changing conditions to stay competitive. Despite this understanding, a gap remained in the sense that
previous studies focused on the impact of the external environment on business firms of western countries only. There was no linkage between these conditions and university libraries in Kenya which this study attempted to establish. External environmental conditions in this study were measured using modified items from the Corporate Entrepreneurship Scales (CES) developed by Zahra (1993).

2.6 Summary of the Literature Review and the Research Gaps

This chapter highlighted studies on factors that determine intrapreneurial activities in organizations. Studies on university libraries in Kenya (Mukuvi, 2013; Wawire & Messah, 2010; Makori, 2010), had argued that these libraries have remained less intrapreneurial and the status of their intrapreneurial activities was questionable. However, the studies did not show linkage with the determinants that influence intrapreneurial activities in university libraries in Kenya. Contrary to the arguments in the previous studies, this study established that university libraries in Kenya had engaged in diverse intrapreneurial activities although they were not institutionalized.

There is consensus in the intrapreneurship literature (Antoncic, 2007; Rutherford & Holt, 2007; Antoncic & Hisrich, 2004), that individual staff factors, internal organization factors, and external environmental conditions are important determinants of intrapreneurial activities in business firms of developed countries and other transitional economies in Europe. However, there was little empirical research on the patterns of such association between these factors and intrapreneurial activities in university libraries in Kenya which are service oriented, non profit making organizations. This study sought to establish the nature of this
relationship. The study established that all the three variables had a positive relationship with intrapreneurial activities in university library environment. It also emerged that individual staff factors had a stronger relationship with intrapreneurial activities than the other two determinants contrary to previous studies.

The proposed theories and the research models on intrapreneurship that formed the basis of this study were developed based on data collected from business firms of developed countries such as: United States of America and transitional economies of Central and Eastern Europe. No data from Africa was used in the development of the proposed theories and the models. However, the relationship proposed by the theories and the models needed to be tested in a service oriented non profit making environment such as that of a library. This study considered the theories proposed by Amabile (2012), Schumpeter (1934) and models proposed by Ferreira, (2002); Tushman and Nadler (1997), and all of them emphasized on the important role of individual staff factors, internal organization factors and external environmental conditions in determining intrapreneurial activities in an organization. The theories and the models proved their relevance and applicability in university libraries which are service oriented, non profit making organizations.

The intrapreneurship measurement scales developed by Hornsby et al. (2002), and Zahra, (1993) have been widely used in various studies (Davis, 2006; Mamdouh, 2005; Antoncic & Hisrich 2001). The measures were used to assess internal organizational constructs as well the external environmental conditions in diverse manufacturing, financial and non profit organizations in USA, Canada and Central Europe. Their cross cultural use was supported in
these studies, although no data from African countries was included. Antoncic and Hisrich (2001), argued that for a scale to be generalisable, it should be applicable to different cultures. In this study, the CEAI discussed earlier in this chapter was modified and used to measure the internal organization constructs, while the Corporate Entrepreneurship Scales (CES) was used to measure the external environmental constructs. The universal applicability of these scales was thus proved in assessing the constructs of the determinants influencing intrapreneurial activities in university libraries in Kenya which are service oriented and non profit making. However reviewed literature did not show valid scales suitable for measuring individual staff constructs a gap that requires further investigation.

Despite the emphasis on the importance of intrapreneurship in value addition to an organization’s performance and competitiveness, the reviewed literature showed more scholarly attention on determinants of intrapreneurial activities in business firms of developed countries with less focus on service oriented organizations of developing countries. Subsequently, various related studies on intrapreneurship recommended the urge for further research on determinants influencing intrapreneurial activities in diverse organizations in different parts of the world. In particular, Karimi et al. (2011), recommended further research to be conducted to ascertain the extent to which these determinants influence intrapreneurial activities in other emerging economies. Wunderer (2001), also emphasised that if knowledge of the determinants influencing intrapreneurial activities can boost an organization’s overall performance and competitiveness, then their influence and significance should be explored and highlighted.
Most of the reviewed literature used a theoretical approach. This study applied an empirical explanatory and descriptive approach using questionnaires and interview guides to collect primary data from the library staff, university librarians and university management staff across four university libraries. Recognition of the importance of intrapreneurial activities in improving university libraries competitiveness and survival, coupled with the recommendations made for further research, as well as paucity of local empirical literature on determinants of these activities in a Kenyan context, justified the need for a detailed study on the subject matter to fill these gaps.

2.7 Conceptual Framework of Determinants of Intrapreneurial Activities.

An integrated conceptual framework to facilitate understanding of determinants that influence intrapreneurial activities in university libraries in Kenya was developed in a schematic framework (Figure 2.1) to guide this study. The individual staff factors including: gender, age, level of education, level of entrepreneurship training, level of entrepreneurial knowledge and working experience have been shown to have direct relationship with intrapreneurial activities in an organization. Individual employees are the people who directly impact the level of intrapreneurial activities in an organization and without them, innovation remains an unrealized potential.

Internal organizational factors directly affects intrapreneurial activities in an organization because it is the enthusiastic support and commitment of senior management that determine the success of intrapreneurial effort in an organization in terms of: management support, work discretion, use of rewards, availability of time and organizational boundaries. External
environmental conditions provide conditions that encourage or inhibit intrapreneurial activities in an organization. Such conditions comprise of factors that are outside the control of the library but that are taken into consideration when decisions are made. The conditions include; dynamism, technological opportunities, organisational growth, demand for new products and services.
Figure 2.1: Conceptual Framework

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research methodology used to generate and analyze data in line with the research problem, objectives and questions of the study on determinants that influence intrapreneurial activities in university libraries in Kenya. The sections under discussion in this chapter are structured in the following order: research philosophy, research design, operationalisation of study variables, study area and profile, target population, sampling techniques and sample size, instrumentation, data collection procedure, data analysis and presentation, ethical and logistical considerations.

3.2 Research Philosophy

According to Saunders, Lewis and Thornhill (2012), research philosophy is the development of research background, research knowledge and its nature. Matt, Mark and Nick (2006), further emphasized that research philosophy is a paradigm which means approach, pattern or way of thinking about conducting research. In undertaking research, it is advisable to take into account the different research paradigms since the parameters describe perceptions, beliefs, nature of reality, truth, worldviews and individual values of the researcher. These aspects can influence how the research will be conducted including the final results and conclusions. Consideration of research philosophy also helps to expose, understand and minimize research biases (Matt et al., 2006).

Postivism philosophy was considered appropriate for this study because it is commonly used
in natural sciences and it is an objective based method. According to Saunders et al. (2012), the positivist researcher plays the role of an objective analyst in the evaluation of the collected data. Because this study relied on objective data collection and analysis in order to achieve useful and accurate results, it adopted the positivist philosophy as recommended by Saunders et al. (2012). The central element of positivism paradigm is that social phenomena can be explained by observing cause and effect. This approach aims at testing an existing theory and this study adopted this method. In addition Mugenda (2008), argued that positivist philosophy posits that reality is stable and therefore can be observed, described, predicted, controlled and explained from an objective point of view without interfering with the phenomenon being studied.

Guided by the positivism paradigm, this study aimed at generating both qualitative and quantitative data that helped to address the research questions. In addition, the study used quantitative measuring instrument in form of a questionnaire which the positivist approach favors. Data analysis was also carried out objectively as advocated in the positivist philosophy.

3.3 Research Design
In order to define and explain the relationship between the independent and dependent variables, this study applied both explanatory and cross-sectional descriptive research design. Saunders et al. (2012), explained that studies that establish causal relationships between variables may be termed explanatory. Veldhoven and Dorenbosch (2008), carrying out a study on age, proactivity and career development based on business firms of the west
used a cross-sectional explanatory research design. Gituru and Macharia (2006), on their study on factors affecting user acceptance of information technology in Kenya also employed a cross-sectional explanatory research design. The mixed approach in this study applied both quantitative and qualitative data to examine relationships between individual staff factors, internal organization factors, external environmental conditions and intrapreneurial activities in selected university libraries in Kenya. Quantitative approach emphasise measurement and analysis of the causal relationship between variables as opposed to process (Sekaran, 2006). In addition, Zikmund, Babin, Carr and Griffin (2013) and Glasow (2005), further emphasised that survey approach is appropriate in examining relationships between phenomena and is also ideal for collecting primary data from a large population sample.

### 3.4 Operationalisation of Study Variables

From Table 3.1, the dependent variable for this study was intrapreneurial activities in university libraries under study. The variable was measured by the number and frequency of new products developed or improved, new services developed or improved, new organizational routines and procedures, new ventures and new strategies. The three independent variables were; individual staff factors, internal organization factors, and external environmental conditions widely discussed in CE literature.

Individual staff factors were measured by age of the employees in years, stating highest level of education attained, stating level of entrepreneurship training, total number of short courses and seminars attended, stating level of entrepreneurship knowledge and number of years worked. Internal organization factors were measured by willingness to support staff creative
ideas, stating library staff latitude and freedom to make decisions concerning their work, type and frequency of rewards given to staff based on performance, amount of free time given to staff for creativity and reflection, and stating whether the libraries had supportive fluid/flexible boundaries capable of influencing intrapreneurial activities.

External environmental conditions were measured by stating the unexpected changes that had occurred, type and number of technologies developed, growth was measured in terms of type and size of user population. Rates of demand was measured by the rate of demand for new products and services.
Table 3.1: Operationalisation of Study Variables

<table>
<thead>
<tr>
<th>Category</th>
<th>Variable</th>
<th>Operationalisation</th>
<th>Measures/Indicators</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variable</td>
<td>Intrapreneurial activities</td>
<td>Efforts made by university libraries indicating a change from conventional activities.</td>
<td>Number and frequency of new products, new services, orga. routines, new ventures, strategies</td>
<td>Interval</td>
</tr>
<tr>
<td>Independent variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual staff factors</td>
<td>Gender</td>
<td>Male or female</td>
<td>Scale: 0-Male, 1- Female</td>
<td>Nominal</td>
</tr>
<tr>
<td></td>
<td>Age of the employee</td>
<td>Age in years</td>
<td>Years</td>
<td>Ordinal</td>
</tr>
<tr>
<td></td>
<td>Level of Education</td>
<td>Highest Level of education attained</td>
<td>Years of schooling</td>
<td>Ordinal</td>
</tr>
<tr>
<td></td>
<td>Level of entrepreneurship training</td>
<td>Number of trainings, short courses, seminars, workshops</td>
<td>Level of training</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Level of entrepreneurial knowledge</td>
<td>Entrepreneurial know how</td>
<td>Library staff judgement on a Likert scale 1-4</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Experience</td>
<td>Working experience in libraries.</td>
<td>Number of years worked in a library environment</td>
<td>Interval</td>
</tr>
<tr>
<td>Internal Organizational factors</td>
<td>Management support</td>
<td>Willingness of managers to support creative efforts</td>
<td>Library staff judgement on a Likert scale 1-5</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Work discretion</td>
<td>Staff latitude and freedom to make decisions</td>
<td>Library staff judgement on a Likert scale 1-5</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Use of rewards</td>
<td>Rewards based on performance</td>
<td>Library staff judgement on a Likert scale 1-5</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Availability of time</td>
<td>Time available for staff creativity and reflection</td>
<td>Library staff judgement on a Likert scale 1-5</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Organisational boundaries</td>
<td>Supportive fluid/flexible boundaries that facilitate Intrapreneurial activities</td>
<td>Library staff judgement on a Likert scale 1-5</td>
<td>Interval</td>
</tr>
<tr>
<td>External environmental conditions</td>
<td>Dynamism</td>
<td>Unpredictable changes that influence Intrapreneurial activities</td>
<td>Library staff judgement on a Likert scale 1-5</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Technological opportunities</td>
<td>Type and number of new technologies developed</td>
<td>Library staff judgement on a Likert scale 1-5</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Organizational growth</td>
<td>Type and size of user population</td>
<td>Library staff judgement on a Likert scale 1-5</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Demand for new products and services</td>
<td>Rate of demand for new products and services</td>
<td>Library staff judgement on a Likert scale 1-5</td>
<td>Interval</td>
</tr>
</tbody>
</table>

Source: The Researcher (2014)
3.5 The Study Locale

The study was carried out in main libraries of two public universities namely Kenyatta University (KU) and Egerton University; as well as two private universities namely United States International University (USIU) and Catholic University of East Africa (CUEA). A small purposive sample of the libraries was selected to provide information rich cases as recommended by Zhao (2005). These are cases from which one can learn a great deal about issues of central importance regarding determinants of intrapreneurial activities in selected university libraries in Kenya.

Kenyatta University (KU) which is located 20 kilometers from the city of Nairobi along the Thika-Nairobi super highway is one of the oldest and largest public universities in terms of student population. KU which achieved its’ full university status in 1985 has embarked on a rapid expansion strategy aimed at becoming a world class university. It was the first public university in Kenya to be ISO certified in 2008. It offers a diverse range of academic programmes. The university’s main library plays a key role in supporting the university’s objectives by offering high level quality service. Bearing in mind its long history, a large user population of over 30,000, a large number of staff totalling fifty seven (57), a post modern library building with new technological facilities capable of supporting intrapreneurial activities justified its choice as a rich ground for the study (Kenyatta University, 2011).

Egerton University main campus –Njoro is located one hundred kilometers north west of Nairobi and about thirty kilometers from Nakuru town. Since its’ inauguration in 1987, Egerton University has continued to expand. It has three campuses, thirty two departments,
and eight faculties. The university’s main library has grown in line with the diversification of the university programmes and had four branch libraries. The main library had a total of fifty eight (58) members of staff and a large user population over nineteen thousands (19,000). The mission of this library was to support teaching, learning and research needs of Egerton university community, by providing both print and electronic information resources as well as quality user centred services (Egerton University Calendar, 2010-2012). It is on account of its age, large user population and a large number of staff that this library was found suitable for this study.

United States International University (USIU), is an independent private chartered institution located 12 kilometers from Nairobi city on the Thika-Nairobi super highway in Kasarani area. The university is among the oldest private universities in Kenya having been founded in 1969 and chartered in 1999. USIU library is as old as the university itself and operates within the vision of making USIU the premier institution of academic excellence with a global perspective in East Africa (Kaane, 2006).

USIU library was therefore chosen as a study area on account of its large user population of about five thousand (5,000), a staff team of twenty three (23), its long history, and an ultra modern library building with new technological facilities capable of supporting intrapreneurial activities. These considerations superseded those of most other chartered private universities in Kenya.

Catholic University of East Africa (CUEA) is located along Bogani East road off Lang’ata
road towards Karen. This is approximately 20 kilometers from the city of Nairobi. Since its inception in 1992, CUEA has grown tremendously thereby bringing about concomitant growth of other sectors such as the library which is considered the ‘heart’ of the university because it had been addressing the academic needs of the parent institution. The library had a user population of over six thousands (6,100) and a team of twenty four (24) members of staff. The library catered for a wide range of courses being offered in the university. It was hosted in an ultra modern building with new technological facilities. Taking all these factors into consideration, it was assumed that this library was best placed as a study area in comparison with most other private university libraries in Kenya (Catholic University, 2009).

3.6 Target Population

Four university libraries were targeted from the two categories of public and private universities listed by the Commission for University Education (2013). The targeted libraries were those exhibiting some degree of intrapreneurship. These libraries varied in size, age in years since establishment, status, as well as in their areas of specialization. The libraries were structured into various sections/departments, engaged in different activities/services from which intrapreneurial activities were likely to emanate. These libraries had different categories of staff totalling one hundred and sixty two (162), who facilitated different activities and services. In addition, four(4) university librarians and four (4) university management staff were targeted, giving a total of one hundred and seventy (170) target population. The unit of analysis was the university library which was studied to analyse the determinants influencing intrapreneurial activities across the selected libraries.
3.7 Sampling Techniques and Sample Size

The four university librarians from the targeted libraries were purposively chosen (non-probability sampling) as key respondents in this study. This is because as the chief university librarians, they possessed special knowledge related to the study area. They were professionally trained people with ample working experience in a library environment. They were therefore expected to provide the direction in initiating and implementing changes within their respective libraries. The university librarians as part of the university management were involved in making policy decisions concerning the operations of their respective libraries. Arguably, they were therefore in a better position to provide professional and objective views concerning determinants influencing intrapreneurial activities in their respective libraries more than any other members of staff.

Similarly, four identified members of university management staff, one from each university were purposively selected as key informants in this study. These were the people to whom the university librarians directly reported, who know the functions and the needs of the library well and were members of the respective library committees. These were considered to be key informants since they were the most knowledgeable persons about the overall situation, activities and intrapreneurial orientations of their universities. Such informants were among the top university management teams in the organizational structure, where most important organizational decisions and policies were made concerning different sectors of the universities including the libraries.

Table 3.2 reflects the sampling distribution of the library staff, the university librarians and
the university management staff. Proportionate stratified random sampling design (probability sampling) was found to be appropriate for this study because the four university libraries under study had varied staff population sizes. The study applied the sample size Table A11 (Appendix IX) developed by Saunders et al. (2012), with sample sizes of different populations at 95 percent confidence level. When a population of 162 library staff was applied in the table, a proportionate sample size of 116 was drawn while that of 4 university librarians was 2.8 and four university management staff was 2.8 respectively giving a total of 122 respondents. The adjusted sample size was 114 library staff, 4 university librarians and 4 university management staff respectively giving a total of 122 respondents with a margin error of 5 percent according to Table A11. The sampling distribution is shown in Table 3.2.

Table 3.2: Sampling Distribution

<table>
<thead>
<tr>
<th>Strata</th>
<th>Population</th>
<th>Proportionate sample</th>
<th>Adjusted sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library staff</td>
<td>162</td>
<td>116</td>
<td>114</td>
</tr>
<tr>
<td>University librarians</td>
<td>4</td>
<td>2.8</td>
<td>4</td>
</tr>
<tr>
<td>University management staff</td>
<td>4</td>
<td>2.8</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>170</strong></td>
<td><strong>122</strong></td>
<td><strong>122</strong></td>
</tr>
</tbody>
</table>

Source: Data From Selected Universities (June, 2014)

Table 3.3 further shows the selection of the respondents according to the selected universities.
Table 3.3: Selection of Respondents According to Universities

<table>
<thead>
<tr>
<th>University</th>
<th>Category</th>
<th>Numbers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenyatta</td>
<td>Library staff</td>
<td>40</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>University librarian</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>University management staff</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Egerton</td>
<td>Library staff</td>
<td>41</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>University librarian</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>University management staff</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>United States International University</td>
<td>Library staff</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>University librarian</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>University management staff</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Catholic University of East Africa</td>
<td>Library staff</td>
<td>17</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>University librarian</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>University management staff</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>122</strong></td>
<td><strong>122</strong></td>
</tr>
</tbody>
</table>

Source: Data From Selected Universities (June, 2014)

Table 3.3 reflects the sample size for the library staff, university librarians and university management staff calculated from each respective university. The results for the library staff were as follows: KU 40, Egerton 41, USIU 16, CUEA 17. A list of permanent library staff as of the time the research was carried out was used as a sampling frame in each respective library from which the sample size was drawn using simple random sampling. This sampling design was considered appropriate because it ensured that each member of library staff got an equal chance of being selected thus reducing bias. Furthermore, it was easy to generalize the findings using this technique. In addition, one university librarian and one university management staff were purposefully selected from each of the four selected universities giving a total sample size of 122 respondents as shown in Table 3.3.
The members of library staff sampled worked in different sections/departments of each respective library from where intrapreneurial activities were likely to emanate. The staff were trained at various levels in library and information science or any other relevant areas. Such staff were likely to yield useful and objective information on determinants influencing intrapreneurial activities in their respective libraries. In addition, their skills, working experience and exposure gave them an added advantage over those members of staff who were not trained or were working on temporary basis.

3.8 Data Collection Instruments

Three instruments were utilized (Appendix II, III, IV) to facilitate data collection. These included: a structured questionnaire targeting the sampled university library staff, and two interview guides targeting the university librarians and relevant university management staff respectively. The instruments facilitated collection of both quantitative and qualitative data.

The survey questions on internal organization factors were benchmarked on Corporate Entrepreneurial Assessment Instrument (CEAI) measures developed by Hornsby et al. (2002). Questions on external environmental conditions were measured using modified items from the Corporate Entrepreneurship Scales (CES) developed by Zahra (1993). The questionnaire (Appendix II) was structured into definite concrete and pre-determined set of questions. The questions focused on the information based on the research questions and the conceptual framework. The questions were similar to ensure that all the targeted library staff responded to the same set of questions. This ensured provision of data in the same format. The questionnaire had both closed and open ended questions thus allowing for flexibility and
free responses from the respondents. Other questions were in a Likert scale format with fixed alternative questions in which the responses of the respondents were limited to the stated alternatives.

Some open ended questions stating “others” were included at the end of some sections in the questionnaire to invite the respondents to give additional comments. The survey questionnaire proved to be an efficient way of collecting responses from the large number of respondents. It was also cost effective in administration and savings on time.

An interview guide (Appendix III) was developed based on a pre-determined and standardized set of questions that were used to gather data from university librarians. The questions in the interview guide were defined precisely to be consistent with the research questions. The questions had categories with responses which assisted the interviewer to simply check the informant’s response. Open ended questions were also included to help the informants give additional comments, ideas and opinions or express themselves. The importance of the interview guide in this study was that it had a defined schedule of questions from which the interviewer was not likely to deviate. This made it possible to maintain consistency in the interview for all the four university librarians. In this study, it was expected that the interview guide would help to collect, portray and describe accurate profiles and situations on determinants influencing intrapreneurial activities in university libraries as a means of identifying general themes, patterns and categories.
A second interview guide (Appendix IV) was developed for relevant university management staff. However, the questions differed to some extent from those of the university librarians because this instrument focused more on issues pertaining to university top management policies, commitment and support for intrapreneurial activities in the respective university libraries.

The quality of a research study depends to a large extent on the relevance and accuracy of data collection tools. The instruments used to collect data in this study were expected to yield the type of information that is not only relevant to the research questions but also accurate. Validity, reliability and practicality therefore were the major criterion for evaluating the measurement tools. These are discussed in the following sections.

3.8.1 Validity of Research Instruments

Validity is being reasonably certain that one is indeed measuring the concept one set out to measure and not something else (Sekaran, 2006). To ensure accuracy of the research instruments, the researcher checked the questionnaire coverage of all the areas of each variable based on the research objectives. The questionnaire was structured in a clear, easy manner, using appropriate language to make the interpretation possible by the respondents. Rymarchyk (2002), suggested that validity in social science has several components which should ideally all be included in a research project in order to enhance the overall validity of the study. The study therefore examined content validity and construct validity.

To achieve content validity, the research questionnaire (Appendix II) was designed according
to the research variables in the study objectives. The domain of the indicators was clearly specified to make them relevant to the concept being measured. All possible items used in the concept were included in the measure. In addition, validity was verified through expert opinions of other professionals in the area of study on the representativeness and suitability of the questions. These are people who had the basic understanding and knowledge of the task and the constructs being evaluated. The experts confirmed the validity and the relevance of the questionnaire to the field of intrapreneurship. Most of the questions used had been benchmarked with the CEAI and the Corporate Entrepreneurship Scale explained earlier as well as consideration of the suggestions made by Hinkin (1998), on writing good questionnaires.

To establish the adequacy/goodness of the instrument, the questions were restricted to the way the constructs had been operationally defined. This ensured that the indicators of each variable fitted with the same construct. The purpose of this investigation was to ensure that each measure adequately assessed the construct it was meant to assess.

3.8.2 Factor Analysis

Factor analysis is a technique of statistically identifying a reduced number of factors from a large number of measured variables with the help of SPSS. Babbie (2013), considered factor analysis as an efficient method of discovering predominant patterns among a large number of variables. It is important in the sense that the researcher can easily discover the variable loadings in a given factor. This study adopted factor analysis in order to reduce the number of indicators or factors under each research variable and retain the indicators capable of
explaining the determinants influencing intrapreneurial activities in university libraries in Kenya. Factors with factor loading values less than 0.4 were dropped, while those with values of 0.4 and above were retained. This was in line with recommendations made by Field (2009). This also supported suggestions by Henn, Weinstein and Foad (2009).

3.8.3 Reliability

Reliability of a measure is an indication of the stability and consistency with which the instrument measures the concept and helps to assess the “goodness” of a measure (Saunders et al., 2012; Sekaran, 2006). To measure the reliability of the gathered data Cronbach’s alpha was applied. Chronbach’s alpha is a coefficient of reliability that gives an unbiased estimate of data generalizability. According to Zikmund et al. (2013), scales with a coefficient alpha between 0.80 and 0.95 are considered to have very good reliability; those with a coefficient alpha between 0.70 and 0.80 have good reliability while those between 0.60 to 0.70 indicates fair reliability. Those below 0.60 have poor reliability. An alpha of 0.70 or higher therefore indicates that the gathered data is reliable as it has a relatively high internal consistency and can be generalized to reflect opinions of all respondents in target population. The statistical package for social science (SPSS) was used to compute the coefficient alpha.

3.8.4 Practicality of Research Instruments

For the research instruments to have practical value in this study, it was necessary to ensure that the number of questions were limited to the most relevant ones to save on cost and time. The questionnaire had a set of detailed and clear instructions to guide the respondents and to make its administration easy. The design and layout of the questionnaire was neat and clear for the respondents to complete conveniently. The questions were written and structured in a
straight forward and easy language with key pieces of information to make interpretation possible by the respondents. The structuring of the questionnaire was however guided by the specifications suggested by Hinkin (1998), on writing good questionnaires and recommended by Kothari (2004).

3.9 Data Collection Procedure

3.9.1 Pilot Testing

A pilot test was undertaken to pretest the research instruments. The piloting was carried out at Africa Nazarene University library main campus which had a similar environment as the four libraries under the study. Fourteen (14) respondents were randomly selected from the list of permanent library staff. Saunders et al. (2012), recommended a minimum of ten (10) responses for small scale surveys. The questionnaires were distributed and collected by a research assistant. All the 14 questionnaires were fully completed and returned resulting in a response rate of 100 percent. The main purpose of piloting was to help obtain some assessment of the instruments’ validity and the likely reliability of the data that would be collected. Pretesting helped to refine the instruments after identifying any biases, omissions or inconsistencies to ensure ease in answering questions for the main study.

3.9.2 Data Collection

The selected library staff involved in the research were given a brief on the purpose of the research. This gave them a chance to ask any questions on issues pertaining to the research on the spot. The brief helped to build a rapport and boost the respondent’s confidence in offering frank answers to the questions asked. After this, the questionnaires, accompanied by an introduction letter (Appendix I), were hand delivered to and later collected from the
identified library staff after completion within the respective libraries by the researcher and the research assistants. Four research assistants were given prior training by the researcher on the content, administration of the questionnaire, data collection and maintenance of good public relations. They worked under close supervision of the researcher throughout.

The respondents were given enough time to complete the questionnaire. However, a date for collecting the questionnaire after completion was set. The respondents were notified in advance through telephone or e mail before collecting the questionnaire. After the period of completion had expired, there was a follow up through telephone or e mail to remind the non-respondents about the questionnaire.

The interview was conducted face to face by the researcher with the four (4) university librarians and the four (4) relevant university management staff within their respective offices with prior notification. This approach helped to establish a rapport and motivate the informants. The researcher was able to adapt the questions as required and clarify issues to the informants by repeating or rephrasing the questions. The researcher directed the respondents who responded to the questions asked. As the informants expressed their views, ideas and opinions, the researcher recorded the responses exactly as expressed on a standardized schedule.

3.10 Data Analysis and Presentation

This section describes the various techniques used in statistical data analysis and why they were used. Before the data was analysed, responses from the questionnaires were organized and edited to detect errors and omissions. Corrections were made where necessary. The data
was then coded by assigning numerical codes to facilitate entry and computation. The choice of the statistical analysis method was guided by the research objectives and the type of data collected. The study yielded both quantitative and qualitative data. Quantitative data collected regarding all the three objectives was analysed using both descriptive and inferential statistical tools (correlation and regression). Qualitative data was analysed using thematic analysis.

3.10.1 Descriptive statistics

Descriptive statistics enables the description and comparison of variables numerically (Mugenda & Mugenda, 2003). The main objective of the descriptive statistics is to describe a situation by summarizing information in a way that it highlights the important numerical features of the data. Data was analysed and presented following the pattern of the study questions. Data was summarized and presented in percentages and frequencies to show how many times a score occurs and also the probability of occurrence. Thus frequency distribution tables were used. Means and standard deviations were computed to show the average response of the variable items and to indicate the extent to which the scores deviated from the mean.

Statistical Package for Social Sciences (SPSS) software version 21 was used to generate graphs, piecharts and tables for data presentation. SPSS was considered appropriate because it allows the researcher to follow clear set of quantitative data analysis procedures that leads to increased validity and reliability (Kothari, 2004). Henn et al. (2009), opined that this initial stage in data analysis is important because it helps in understanding the data and may also reveal other relationships that the researcher had not envisaged.
3.10.2 Qualitative Data Analysis

Thematic analysis is the most common form of analysis in qualitative data. It emphasizes pinpointing, examining and recording patterns or themes within data sets that are considered important to the description of a phenomena (Zikmund et al., 2013). The themes are usually associated to a specific research question. Qualitative data was used to support the text not to replace it in this study. The qualitative data was collected through interviews with university librarians and university management staff. The data was summarized and categorized according to themes/patterns in order to give it sense. The categories were linked up in ways that provided structure to help answer the research questions. Thematic analysis was applied and conclusions were drawn and verified.

3.10.3 Correlation Analysis

The study conducted correlation analysis to test the strength of association between the research variables using Pearson’s Product Moment Correlation Coefficient (r) statistical tool to help arrive at conclusions. Correlation is a measure of the relationship or association between two continuous numeric variables. Correlation indicates both direction and degree to which the variables covary with each other from case to case without implying that one is causing the other. A correlation analysis results gives a correlation coefficient which measures the linear association between two variables. Values of correlation coefficient range between -1 and +1 denoting a negative and positive linear relationship respectively. A correlation coefficient of 0 indicates that there is no linear relationship between the variables. A significance level of 0.05 was considered the standard in this study since this is the
acceptable level in social sciences research according to Saunders et al. (2012). Pearson correlation coefficient is a most commonly used statistical measure of degree of relationship according to Cooper and Schindler (2003). To clearly show the correlation analysis results, this study used a correlation matrix.

3.10.4 Regression Analysis

Multiple regression analysis was run to determine the statistical significance relationship between the independent variables on the dependent variable. According to Zikmund et al. (2013) and Field (2009), regression analysis is a statistical process of estimating the relationship between the variables. Regression analysis also helps in generating equation that describes the statistical relationship between one or more predictor variables and the predicted variable. This statistical method was first applied to test the relationship between the sub variables of each independent variable on the dependent variable (intrapreneurial activities). In addition an overall regression analysis was applied to test the simultaneous effect of the three predictor variables together (individual staff factors, internal organization factors, and external environmental conditions) on the predicted variable (intrapreneurial activities). Regression analysis was used to explain the proportion of variability in DV (Y) that was accounted for by the IVs (Xs) in the equation together. The three study objectives were addressed after subjecting the collected data to correlation and multiple regression analysis. The following empirical regression model was estimated to determine the determinants influencing intrapreneurial activities.
\[ Y = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + \epsilon \]

Where:
- \( Y \) = Vector of intrapreneurial activities
- \( X_1 \) = Individual staff composite factors
- \( X_2 \) = Internal organizational composite factors
- \( X_3 \) = External environmental composite conditions

\( B_1, B_2, B_3 \) are the coefficients
\( \epsilon \) = Random/ error term.

Since the data was collected using a 5 point Likert scale for each variable having several statements, the study required to generate a composite value for each variable which was used for the regression analysis.

### 3.10.5 Variable Composite Index

A composite index is an efficient data-reduction device that summarises and rank-orders several specific observations and represents some more general dimensions. Before the regression analysis was carried out, a composite index was computed by calculating the aggregate mean value from the responses related to the various variables as recommended by Babbie (2013). The following formulae was used to compute the composites of each of the three independent variables namely: individual staff factors, internal organization factors, external environmental conditions factors and the dependent variable which was intrapreneurial activities.
\[
\bar{X} = \frac{\sum_{i=1}^{n} S_i X}{\sum_{i=1}^{n} S_i}
\]

Where,

- \( S_i \) the frequency of the responses
- \( X \) assigned likert scale value
- \( n \) number of respondents
- \( \bar{X}_i \) aggregate mean for variable \( i \)

The variables for which the indices were computed were: individual staff factors, internal organization factors, external environmental conditions and intrapreneurial activities. None of the variables exceeded the maximum of 5 on the Likert scale as shown in Table A 1 (Appendix V).

### 3.10.6 Diagnostic Test

A pre-analysis of data was done to detect any discrepancies. Cooper and Schindler (2003), posited that high levels of multicollinearity can have damaging effects on multiple regression. Multicollinearity refers to a situation in which two or more explanatory variables in a multiple regression model are highly linearly correlated and hence it becomes difficult to determine which one of them has more effect on the dependent variable than the other. In such a situation the collected data may not be trusted since it may be biased. Zikmund et al. (2013) recommended that careful consideration be made before including variables with a correlation coefficient of 0.5 or more. Saunders et al. (2012) and Field (2009), also argued that a correlation coefficient of 0.9 or more would be regarded as very high. In this study the
collected data was checked by running diagnostic tests before the actual data analysis was done. The multicollinearity test results are further discussed in chapter four.

3.11 Ethical and Logistical Considerations

Permission to carry out the research was sought from the National Commission for Science, Technology and Innovation (NACOSTI) as well as the relevant university authorities. The researcher’s identity was disclosed and the purpose of the study was well explained in the introduction letter attached to the questionnaire. The respondents were expected to provide data voluntarily without any inducement or coercion and their consent was sought before the commencement of data collection. Respondents were assured of confidentiality of the information they gave. The research findings and interpretations were presented objectively. Data was collected and reviewed for inconsistencies, comprehensiveness, reliability and proper methods of coding. Analysis and report writing were applied in accordance with the accepted rules of research. The collected data was used only for the purpose intended.
CHAPTER FOUR
RESULTS AND DISCUSSION

4.1 Introduction
In this chapter, the collected data on determinants influencing intrapreneurial activities in university libraries in Kenya is presented, interpreted and discussed under specific sections in line with research objectives and responses from the respondents. The chapter is organized as follows: the study response rate, factor analysis and reliability results, the status of Intrapreneurial activities in university libraries, descriptive, correlation analysis, multicollinearity test results and regression analysis.

4.2 Response Rate
As explained in chapter three, the study had a sample of 114 respondents drawn from a total population of 162 library staff in the four university libraries as shown in Table 4.1

Table 4.1: Response Rate from the University Libraries

<table>
<thead>
<tr>
<th>University library</th>
<th>Target Sample Size</th>
<th>Actual Response</th>
<th>Response rate(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenyatta</td>
<td>40</td>
<td>32</td>
<td>28.1</td>
</tr>
<tr>
<td>Egerton</td>
<td>41</td>
<td>33</td>
<td>28.9</td>
</tr>
<tr>
<td>United States International University</td>
<td>16</td>
<td>13</td>
<td>11.4</td>
</tr>
<tr>
<td>Catholic University of East Africa</td>
<td>17</td>
<td>9</td>
<td>7.9</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>87</td>
<td>76.3</td>
</tr>
</tbody>
</table>

Source: Survey Data (2014)
Out of the 114 questionnaires distributed, 87 were filled and returned, giving a response rate of 76.3 percent which was considered acceptable. According to Zikmund et al. (2013) and Saunders et al. (2012), such a response rate is considered a suitable basis for drawing conclusions and making generalisations.

In addition the targeted four university librarians were successfully reached for interviews thereby according 100 percent response rate. Also, three university management staff out of the targeted four were interviewed from the respective universities giving 75 percent. The library staff questionnaire captured additional information about the respondents' designations across the four university libraries as follows: 37 (46.3 percent) library assistants, 28 (35 percent) senior library assistants, five (6.3 percent) assistant librarians, four (5.0 percent) librarians, three (3.8 percent) senior assistant librarians, two (2.5 percent) senior librarians and one (1.3 percent) deputy librarian. Seven members of staff did not disclose their designations.

4.3 Factor Analysis and Reliability Results

The following sections show the factor analysis and reliability results for each of the variables in the study.

4.3.1 Individual Staff Factors Factor Analysis and Reliability Results

Table 4.2 shows the Cronbach’s alpha values of all the individual staff factors after the extraction of indicators with factor loadings value of less than 0.4.
Table 4.2: Individual Staff Factors (ISF) Factor Analysis and Reliability Results

<table>
<thead>
<tr>
<th>Factor Name</th>
<th>Indicators</th>
<th>Factors Loadings</th>
<th>Cronbach’s Alpha (After)</th>
<th>Overall Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>(6 items)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISF 1</td>
<td>Gender not affecting performance</td>
<td>.665</td>
<td>.692</td>
<td>.715</td>
</tr>
<tr>
<td>ISF 2</td>
<td>No difference in creativity &amp; innovativeness on account of age</td>
<td>.466</td>
<td>.689</td>
<td></td>
</tr>
<tr>
<td>ISF 3</td>
<td>Level of education</td>
<td>.513</td>
<td>.758</td>
<td></td>
</tr>
<tr>
<td>ISF 4</td>
<td>Level entrepreneurship training</td>
<td>.627</td>
<td>.706</td>
<td></td>
</tr>
<tr>
<td>ISF 5</td>
<td>Level of entrepreneurship knowledge</td>
<td>.562</td>
<td>.708</td>
<td></td>
</tr>
<tr>
<td>ISF 6</td>
<td>Work experience</td>
<td>.732</td>
<td>.736</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.2 shows that the Cronbach’s alpha values for individual items ranged between 0.689 and 0.758 with level of education having the highest and age factor having the least values. The factor loadings results were between 0.466 and 0.732. This implies that all the factors were retained for further analysis since according to Field (2009), factors with factor loadings of 0.4 and above should be retained for further analysis. Using all the retained individual staff factors, the value of Cronbach’s alpha was computed and generated an alpha value of 0.715. This indicated that data collected using the six individual staff factors was reliable since the Cronbach’s alpha values was above the threshold of 0.70 as recommended by Zikmund et al. (2013). The gathered data was considered reliable with a relatively high internal consistency and could be generalized to reflect opinions of all respondents in the target population about the study problem. The study hence deduced that the six individual staff factors were reliable in determining intrapreneurial activities in the university libraries.

4.3.2 Internal Organization Factors Factor Analysis and Reliability Results

Table 4.3 shows Cronbach’s alpha values of internal organization factors after the
extraction of indicators with factor loadings value of less than 0.4.

Table 4.3: Internal Organisation Factors (IOF) Factor Analysis and Reliability Results

<table>
<thead>
<tr>
<th>Factor Name</th>
<th>Indicators</th>
<th>Factors Loadings</th>
<th>Cronbach’s Alpha (After)</th>
<th>Overall Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management support (4 items)</td>
<td>IOF 1 Money available to get new project ideas</td>
<td>.471</td>
<td>.904</td>
<td>.900</td>
</tr>
<tr>
<td></td>
<td>IOF 2 Employees with new innovative ideas receiving recognitions</td>
<td>.727</td>
<td>.903</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IOF 3 University accept my ideas</td>
<td>.750</td>
<td>.897</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IOF 4 Library quick to use improved work methods</td>
<td>.581</td>
<td>.898</td>
<td></td>
</tr>
<tr>
<td>Work discretion (3 items)</td>
<td>IOF 5 Have much freedom on my job</td>
<td>.402</td>
<td>.900</td>
<td>.898</td>
</tr>
<tr>
<td></td>
<td>IOF 6 Library provides chance to be creative</td>
<td>.620</td>
<td>.894</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IOF 7 Library provides chance to make use of my ability</td>
<td>.752</td>
<td>.899</td>
<td></td>
</tr>
<tr>
<td>Rewards (3 items)</td>
<td>IOF 8 Individual risk takers often recognized</td>
<td>.663</td>
<td>.897</td>
<td>.909</td>
</tr>
<tr>
<td></td>
<td>IOF 9 Librarian give special recognition on My work performance</td>
<td>.778</td>
<td>.913</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IOF10 Rewards I receive dependent upon my performance</td>
<td>.675</td>
<td>.917</td>
<td></td>
</tr>
<tr>
<td>Time availability (3 items)</td>
<td>IOF 11 Believe have plenty of time to complete my daily work</td>
<td>.773</td>
<td>.905</td>
<td>.908</td>
</tr>
<tr>
<td></td>
<td>IOF 12 My job structured so I have little time to think</td>
<td>.455</td>
<td>.911</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IOF 13 Past three months my work load has been too heavy</td>
<td>.669</td>
<td>.909</td>
<td></td>
</tr>
<tr>
<td>Organisational boundaries (3 items)</td>
<td>IOF 14 There are many written rules and Procedures</td>
<td>.638</td>
<td>.909</td>
<td>.906</td>
</tr>
<tr>
<td></td>
<td>IOF 15 My job description clearly specifies standard of performance</td>
<td>.552</td>
<td>.906</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IOF 16 I seldom have to follow the same work method</td>
<td>.882</td>
<td>.902</td>
<td></td>
</tr>
</tbody>
</table>
As can be observed in Table 4.3, the Cronbach’s Alpha values for individual items in internal organization factors ranged from 0.894 to 0.917. The overall Alpha values ranged between 0.898 and 0.909, with rewards having the highest alpha values, while work discretion had the least. Factor loadings values were between 0.402 and 0.882. The study therefore retained all the internal organization factors since according to Field (2009), factors with factor loadings of 0.4 and above should be accepted while those with less than 0.4 should be rejected. A Cronbach’s alpha above the threshold of 0.70 as recommended by Zikmund et al. (2013), meant that the gathered data was reliable as it had a relatively high internal consistency and could be generalized to reflect opinions of all the respondents in the target population about the study problem. The study therefore concluded that internal organization factors were reliable in determining the intrapreneurial activities in university libraries in Kenya.

4.3.3 External Environmental Conditions Factor Analysis and Reliability Results

Table 4.4 shows Cronbach’s alpha values of external environmental conditions after the extraction of indicators with factor loadings value of less than 0.4.
<table>
<thead>
<tr>
<th>Factor Name</th>
<th>Indicators</th>
<th>Factors Loadings</th>
<th>Cronbach’s Alpha (After)</th>
<th>Overall Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamism (5 items)</td>
<td>EEC 1 Change in technology</td>
<td>.680</td>
<td>.868</td>
<td>.885</td>
</tr>
<tr>
<td></td>
<td>EEC 2 Change in user demographics</td>
<td>.594</td>
<td>.895</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EEC 3 Change in government regulations</td>
<td>.761</td>
<td>.879</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EEC 4 Change in number of competitors</td>
<td>.407</td>
<td>.871</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EEC 5 Change in number of partnership</td>
<td>.449</td>
<td>.911</td>
<td></td>
</tr>
<tr>
<td>Technological opportunities (7 items)</td>
<td>EEC 6 Library offers many opportunities</td>
<td>.689</td>
<td>.931</td>
<td>.918</td>
</tr>
<tr>
<td></td>
<td>EEC 7 Demand for new technology growing</td>
<td>.641</td>
<td>.912</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EEC 8 New technology needed for growth</td>
<td>.804</td>
<td>.949</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EEC 9 Large number of new products/serviceideas made possible</td>
<td>.709</td>
<td>.925</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EEC 10 Technological changes provide opportunities</td>
<td>.505</td>
<td>.903</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EEC 11 Library continually pursuing new technological opportunities</td>
<td>.742</td>
<td>.907</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EEC 12 Technology changes rapidly in library environment</td>
<td>.614</td>
<td>.902</td>
<td></td>
</tr>
<tr>
<td>Organisational growth (4 items)</td>
<td>EEC 13 Library offers attractive opportunities</td>
<td>.662</td>
<td>.775</td>
<td>.823</td>
</tr>
<tr>
<td></td>
<td>EEC 14 Growth opportunities abundant</td>
<td>.574</td>
<td>.839</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EEC 15 Management continually examine potential</td>
<td>.620</td>
<td>.823</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EEC 16 Management takes calculated risk</td>
<td>.673</td>
<td>.854</td>
<td></td>
</tr>
<tr>
<td>Demand for new products And services (4 items)</td>
<td>EEC 17 Many opportunities for new products</td>
<td>.688</td>
<td>.919</td>
<td>.910</td>
</tr>
<tr>
<td></td>
<td>EEC 18 User demand for new products growing</td>
<td>.582</td>
<td>.909</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EEC 19 Users served vary greatly</td>
<td>.518</td>
<td>.915</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EEC 20 Users invited and encouraged</td>
<td>.464</td>
<td>.895</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.4 presents external environmental conditions which had Cronbach’s alpha values of between 0.775 and 0.949. The overall Alpha values ranged between 0.823 and 0.918 with technological opportunities having the highest values while organizational growth had the least. The factor loadings ranged between 0.407 and 0.804. This therefore ruled out elimination of any external environmental conditions since none had a factor loading of less than 0.4. Henn et al. (2009), recommended the use of factors with factor loadings of 0.4 and above. A Cronbach’s alpha of above 0.70 indicated that the gathered data was reliable and could be generalized to reflect the opinions of all respondents in the target population regarding the study problem. The study therefore retained all the factors which were considered to be the most reliable in determining intrapreneurial activities in university libraries in Kenya.

### 4.3.4 Intrapreneurial Activities Factor Analysis and Reliability Results

Table 4.5 presents Cronbach’s alpha values of intrapreneurial activities after the extraction of indicators with factor loadings value of less than 0.4

#### Table 4.5: Intrapreneurial Activities (IA) Factor Analysis and Reliability Results

<table>
<thead>
<tr>
<th>Factor Name</th>
<th>Indicators</th>
<th>Factors Loadings</th>
<th>Cronbach’s Alpha (After)</th>
<th>Overall Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>(5 items)</td>
<td>IA 1 New product development and improvement</td>
<td>.745</td>
<td>.841</td>
<td>.823</td>
</tr>
<tr>
<td></td>
<td>IA 2 New service development and improvement</td>
<td>.646</td>
<td>.812</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IA 3 New organizational routines and procedures</td>
<td>.532</td>
<td>.789</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IA 4 New venture creation</td>
<td>.746</td>
<td>.809</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IA 5 New strategies</td>
<td>.652</td>
<td>.862</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.5 indicates that individual items of intrapreneurial activities had a Cronbach’s alpha value ranging between 0.789 and 0.862. New strategies had the highest values while new organizational routines and procedures had the least. The overall Alpha value was 0.823. Factor loadings values ranged between 0.532 and 0.746. This therefore ruled out elimination of any intrapreneurial activity since none had a factor loading of less than 0.4. Field (2009), stated that an Alpha coefficient of 0.70 or higher indicates that the gathered data is reliable as it has a relatively high internal consistency and could be generalized to reflect opinions of all respondents in the target population about the study problem. The study hence deduced that all the five intrapreneurial activities were reliable and hence were later used for further analysis.

### 4.4 Status of Intrapreneurial Activities in University Libraries

Before embarking on finding out the factors influencing intrapreneurial activities in university libraries under study, it was considered necessary to find out the specific intrapreneurial activities that took place in these libraries. This information was considered necessary inorder to create a better understanding of these activities. The information would also help the libraries to learn from each other. It is with this understanding that members of the library staff were asked to indicate specifically any intrapreneurial activities that had taken place in their respective libraries two years prior to the study under the following categories: new products development and improvements, new services development and improvements, new organizational routines and procedures, new venture creation, and new strategies. A wide range of such intrapreneurial activities were identified as shown in Table 4.6 according to the respective libraries.
Table 4.6: Intrapreneurial Activities in Public and Private University Libraries

<table>
<thead>
<tr>
<th>Intrapreneurial activities</th>
<th>Public</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>K.U</td>
<td>Egerton</td>
</tr>
<tr>
<td>New product development and improvement.</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>New services development and improvement</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>New organizational routines and procedures</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>New venture creation</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>New strategies</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35</strong></td>
<td><strong>26</strong></td>
</tr>
</tbody>
</table>

Source: Field Data (2014)

Table 4.6 shows that all the four libraries under study had engaged in diverse intrapreneurial activities comprising of new product development and improvement, new services development and improvement, new organizational routines and procedures, new venture creation and new strategies. The results further showed that the libraries under study had engaged in a lot of similar intrapreneurial activities. For instance under the category “New product development and improvement”: e resources, KOHA (a free open source integrated library system), new security machines were common in all the libraries. “New services development and improvement”: free internet services, online CAS and SDI services, OPAC (Online Public Access Catalogue), use of twitter and facebook to offer library services, printing, photocopying and scanning, automated circulation, automated security services were also common. “New organisational routines and procedures”: open access to Institutional Repositories (IR), extending opening hours, user surveys, customer care,
literature search, online acquisitions, enhanced information literacy were found in all libraries. “New venture creation”: Institutional Repositories (IR), library websites, digitization of information material, resource centres, special collections were also common. “New strategies”: diverse promotional methods of library services, use of Wi-Fi connectivity were used in all libraries.

The results however showed certain divergencies in these intrapreneurial activities based on individual libraries. For instance, under the category “new product development and improvement”, KU and CUEA libraries had a new software JAWS (Job Access With Speech) to cater for the visually impaired users. The same libraries had installed Turnitin software for detecting plagiarism of information. KU had developed a software to ensure security of users’ laptops, while CUEA and USIU had Radio Frequency Identification Device (RFID) for security purposes. At USIU library, products such as Libhub, Bookmyre, Biometric fingerprint reader, Libchart (word coined to mean library chatting), AMLIB (word coined to mean an integrated parameter driven library system) were outstandingly unique.

Under the category “new services development and improvement”, KU, Egerton and CUEA had disability desk services. Payment of library services through smart card was unique at CUEA. Under “new organizational routines and procedures”, carrels equipped with computers were found at KU. Self check machines to control bona fide users were operating at USIU. Modern library buildings in all the universities except Egerton were considered as key players in facilitating intrapreneurial activities. “New venture creations” included: e-libraries for postgraduate students and lecturers at KU and Egerton. University archives and data mining were other venture creations found at KU library. “New strategies”
included: use of CCTV (Closed Circuit Television) to ensure security at KU library. Strategies for tracking user complaints were also put in place at Egerton library.

There were variations and similarities in levels of intrapreneurial activities at different categories in the four libraries. For instance, under “new product development and improvement”, private university libraries had a level of 15 percent while public ones had 13 percent. Under “new services development and improvement” public university libraries had 16 percent and private university libraries had 10 percent. Under “new venture creation” public university libraries had a level of 12 percent, while private university libraries had 5 percent. The two types of libraries tallied in “new organizational routines and procedures” at 10 percent and had a very slight difference under “new strategies” at 6 and 4 percent for public university libraries and for private ones respectively.

The study findings proved that diverse intrapreneurial activities were taking place in the respective university libraries over the two years prior to the current study although they had not been institutionalised. The findings were validated by the university librarians’ response to a similar question posed to them during the interviews. The librarians further emphasized on the contributory role of the library staff towards the diverse intrapreneurial activities. The study concluded that all the libraries under study had engaged in some form of intrapreneurial activities. This could be interpreted to mean that the libraries had embraced change as a way of meeting the changing demands and needs of their users and gaining a competitive posture. The study findings however contradicted previously held views by some scholars (Mukuvi, 2013: Wawire & Messah, 2010), that university libraries in Kenya were
not embracing change according to expectations and in line with global trends.

In addition, the study further considered it important to find out the level at which intrapreneurial activities had increased over the last two years prior to the study in the respective libraries. Establishing the level of intrapreneurial activities in the libraries was considered necessary because the information was vital in finding out what determined them. The information also helped to unravel some of the stereotypes concerning university libraries being reactive and complacent to change. Library staff were asked to indicate the levels of intrapreneurial activities in their respective libraries on a 5 point Likert scale with 1 being very low and 5 being very high. The results are presented on Table 4.7.

Table 4.7: Level of Intrapreneurial Activities in Public and Private University Libraries

<table>
<thead>
<tr>
<th>Intrapreneurial Activity</th>
<th>Vlow</th>
<th>Low</th>
<th>UN 3</th>
<th>H (4)</th>
<th>VH 5</th>
<th>Total</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>New product development and improvement</td>
<td>2</td>
<td>2.6</td>
<td>12</td>
<td>15.6</td>
<td>17</td>
<td>22.1</td>
<td>34</td>
<td>44.2</td>
</tr>
<tr>
<td>New service development and improvement</td>
<td>0</td>
<td>0.0</td>
<td>6</td>
<td>7.7</td>
<td>2</td>
<td>2.6</td>
<td>48</td>
<td>61.5</td>
</tr>
<tr>
<td>New organisational routines and procedures</td>
<td>6</td>
<td>7.6</td>
<td>2</td>
<td>2.5</td>
<td>3</td>
<td>3.8</td>
<td>42</td>
<td>53.2</td>
</tr>
<tr>
<td>New venture creation</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>4</td>
<td>5.1</td>
<td>41</td>
<td>52.6</td>
</tr>
<tr>
<td>New strategies</td>
<td>0</td>
<td>0.0</td>
<td>7</td>
<td>8.9</td>
<td>1</td>
<td>1.3</td>
<td>39</td>
<td>49.4</td>
</tr>
<tr>
<td><strong>Aggregate</strong></td>
<td><strong>4.06</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Survey Data (2014)
The study results in Table 4.7 showed that New venture creation was the most popular intrapreneurial activity in the libraries under study with a mean score of 4.4, followed by New strategies with a mean score of 4.2. New service development and improvement and new organizational routines and procedures had mean scores of 4.1 and 4.0 respectively implying they were also popular. New product development and improvement scored a mean of 3.6 which was well above average. Most mean scores were above 4 on the scale which could mean that the libraries under study had embraced changes by engaging in diverse intrapreneurial activities. The results were contrary to previous studies by Mukuvi (2013); Wawire and Messah (2010) that had portrayed these libraries as being complacent to change and thus less intrapreneurial.

The standard deviation of 1.08 and 1.02 respectively indicated more levels of response scatterdness compared to those of 0.857, 0.783 and 0.584 which showed only slight dispersion from the mean. This implied that among the five attributes of intrapreneurial activities, the library staff had more divergent views concerning new organizational routines and procedures as well as new product development and improvement.

4.5 Descriptive Analysis Results for Individual Staff Factors

According to the proposed theories and the models guiding this study, individual employees are considered as one of the determinants of intrapreneurial activities in an organization. The first objective of the study sought to examine individual staff factors that determined intrapreneurial activities in university libraries. Data analysis recorded six categories of factors which are: gender, age, level of library staff education, level of staff training in
entrepreneurship, level of staff entrepreneurship knowledge and working experience. The factors are discussed in the following sections in line with items in the questionnaire.

4.5.1 Gender

University libraries in Kenya engage both male and female employees. This study sought to establish the gender distribution of the library staff in the libraries under study. This section also intended to establish the extent to which gender factor influenced work performance in the libraries. This would help to demystify the gender stereotypes made by Urbano et al. (2013), that male workers are better than female workers.

The study results showed that 52.3 percent of the library staff were male while 47.7 percent were female. This indicated that there were more male than female workers in university libraries under study with a marginal difference of only 4.6 percent. The study further sought to establish the extent to which gender factor influenced work performance in the libraries under study. Library staff were asked whether gender determined work performance in their places of work. The responses showed that most library staff accounting for 83 percent were of the opinion that gender does not influence work performance. To validate these findings, the respective university librarians were asked to rate the performance of their staff according to gender. The four university librarians concurred that gender factor had no influence on job performance in the respective libraries. These findings could be interpreted to mean that gender as a staff factor does not have any influence on intrapreneurial activities in the libraries under study. The findings contradicted documented literature which reported that gender factor had an influence on intrapreneurial efforts in organizations (Urbano et al., 2013; Metcafe & Afanassiera, 2009; Oyelaran – Oyeyinka & Adeya, 2004).
4.5.2 Age

Employing an age diverse workforce has become a business imperative in both private and public sectors. The study sought to establish the age of the staff working in the libraries under study. Establishing the age was intended to show whether this variable was a contributory factor to staff creativity and innovation in the university libraries. The results are summarized in Figure 4.1.

![Figure 4.1: Respondent’s Age Categories](source: Survey Data (2014))

Results in Figure 4.1, show that a number of library employees accounting for 49 percent fall within the age bracket of 21-40 years and can be considered to be reasonably young while 51 percent of the employees fall within 41 – 60 years age category. This showed that the libraries retained old workforce for a long time.

Library staff were further asked if there was any difference in creativity and innovativeness
on account of age in their workplace. Most respondents accounting for 70 percent felt that age difference did not influence creativity and innovation in their workplace. However, the qualitative data obtained through the interviews with the university librarians indicated that younger members of library staff were more enterprising, creative and willing to try new things while mature employees tend to fear venturing into the unknown. All the four university librarians had this to say:

….“whenever I come across new ideas, I always throw them to young members of staff because I know they will come up with something new”…. “yes, young people are more enterprising”,….“ young people are more creative”.

The findings imply that, if well motivated, younger members of library staff would easily adapt to intrapreneurial practices in their workplace. The findings were not surprising considering that younger people are more exposed particularly to the use of ICT because of their availability and affordability. The findings from the librarians’ perceptions concur with those of Morris et al. (2005), that in a country where the workforce is relatively young and homogeneous, especially in the 31-40 age range, across both the public and private sector, ICT is likely to be adopted. The findings were further supported in the literature by various scholars (Beaver & Hutchings, 2005: Venkatesh et al., 2003). However, the findings differed with the arguments made by Veldhoven and Dorebosch (2008) and Kirby (2003), that older workforce had an advantage of long working experience which enabled them to spot new opportunities.
4.5.3 Library Staff Education

Gomez-Haro et al. (2011) and Alpkan et al. (2010), argued that the level of employee education provides a knowledge base crucial to influencing intrapreneurial activities in an organization. In line with this argument and as shown in Figure 4.2, the study sought to establish the educational level of the library staff from the four university libraries under study. The educational level had to be in library and information science or related areas.

![Figure 4.2: Respondents’ Educational Level](image)

**Source: Survey Data (2014)**

Figure 4.2 showed that majority of the library staff across all the four libraries had attained a bachelors degree accounting for 41.4 percent, while 35.6 percent had attained college diploma, and 17.2 percent had masters degree. Only 5.7 percent had a college certificate in
library science or related area. The findings further showed that three of the university librarians had doctoral qualifications and one had a masters degree.

Library staff were further asked to rate the extent to which they agreed with statements regarding the influence of library staff education on intrapreneurial activities in the respective libraries. A scale of 1 to 5 was used in which 1 meant strongly disagree and 5 strongly agree. The results are presented in Table 4.8.

**Table 4.8: Ratings on Library Staff Education**

<table>
<thead>
<tr>
<th>Education factor</th>
<th>Fre</th>
<th>%</th>
<th>Fre</th>
<th>%</th>
<th>Fre</th>
<th>%</th>
<th>Fre</th>
<th>%</th>
<th>Fre</th>
<th>%</th>
<th>Total</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education central tool to increase intrapreneurial activities</td>
<td>3</td>
<td>3.5</td>
<td>4</td>
<td>4.7</td>
<td>2</td>
<td>2.4</td>
<td>40</td>
<td>47.1</td>
<td>36</td>
<td>42.4</td>
<td>85</td>
<td>100</td>
<td>4.20</td>
</tr>
<tr>
<td>Education promotes innovativeness</td>
<td>5</td>
<td>5.8</td>
<td>3</td>
<td>3.5</td>
<td>2</td>
<td>2.3</td>
<td>37</td>
<td>43.0</td>
<td>39</td>
<td>45.3</td>
<td>86</td>
<td>100</td>
<td>4.19</td>
</tr>
<tr>
<td>Education makes staff proactive</td>
<td>1</td>
<td>1.2</td>
<td>4</td>
<td>4.7</td>
<td>8</td>
<td>9.4</td>
<td>39</td>
<td>45.9</td>
<td>33</td>
<td>38.8</td>
<td>85</td>
<td>100</td>
<td>4.16</td>
</tr>
<tr>
<td><strong>Aggregate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.18</td>
<td>0.963</td>
</tr>
</tbody>
</table>

**Source: Survey Data (2014)**

From the results in Table 4.8, respondents confirmed that education is a central tool in influencing intrapreneurial activities as supported by a mean score of 4.20. They also felt that education promotes innovativeness with a mean score of 4.19. It is clear that education makes staff proactive, confident and highly motivated with a mean score of 4.16. The standard deviation for the three attributes were 0.961, 1.057 and 0.871 respectively. A standard deviation of 1.057 indicate a slightly higher variance in responses as compared to
that of 0.871. This meant that the library staff had varied opinions regarding the influence of staff education on intrapreneurial activities. The high mean scores was a confirmation that library staff education had an influence on intrapreneurial activities in the libraries. The findings are consistent with popular views of different scholars including: Urbano et al. (2013); Awan and Mahmood (2010); Malhan (2006); Li Xin (2006) and Watson (2002), that staff education is a key strategy for enhancing creativity, innovation, proactiveness and assists in accumulation of knowledge.

4.5.4 Library Staff Training in Entrepreneurship

In addition to library staff educational qualifications, the study sought to establish whether university libraries had training and development programmes on entrepreneurship for their staff. This was necessary because in order to be creative, the innovators who are the employees of these libraries need to go beyond the established routine work and procedures by gaining new skills and knowledge on entrepreneurship through training. Library staff were therefore asked to indicate if their respective libraries had a training and development programme on entrepreneurship for staff. The results according to the respective libraries are summarised in Figure 4.3.
Figure 4.3 showed that all the libraries under study had a certain level of entrepreneurship training. However, the results show some variations. For instance, majority of library staff who said they had a training programme in entrepreneurship were from CUEA accounting for 62.5 percent, while majority of those who reported non existence of such a programme were from KU with 78.6 percent. While these findings could be interpreted to mean that such a programme exists to some extent in these libraries, it could also probably mean that some respondents were not sure whether such a programme exists or not in their respective libraries. To validate these findings, university librarians were asked to confirm if their
libraries had a structured staff training and development programme on entrepreneurship. All the four university librarians contradicted the responses of their staff by refuting the existence of such a training programme in their respective libraries. However, the university librarians added that occasionally they organize or send their staff for short courses, workshops, conferences and seminars on library related issues and procedures but not necessarily on entrepreneurship.

As a follow up to the findings from the university librarians, the study sought to establish any short courses, seminars, workshops or conferences that the library staff may have attended in the last two years prior to the study. This was considered necessary because the information would reveal the kind of exposure the library staff had, that may have contributed to their entrepreneurial knowledge. The library staff across all the four libraries under study had attended a wide range of such courses including: AMLIB (an integrated parameter-driven library system), e resources, environmental awareness, customer care, performance management, decision making, digital roundtable, world digital library forum, IEEE (Institute of Electrical and Electronic Engineers) seminar, disaster management, IT, computer literacy, drug abuse, job evaluation, library management, newspaper hosting, information literacy and work ethics.

The findings showed that library staff had been exposed to a wide range of new knowledge and skills which they could apply in their workplace. Such a move was supported by Dunaway (2012), that academic librarians should be encouraged to focus on continuous learning, retooling and transformation of their existing skills and roles. Such training and
professional development is essential for the employees in order to successfully respond to changes in their libraries.

In addition, the study further sought to establish how the short courses, seminars, workshops and conferences had benefitted the library staff in decision making and coping with challenges in their work places. Such information was considered important in determining the linkage between training and intrapreneurial activities in the respective libraries. The results across the four libraries showed a wide range of responses including: ability to relate better with other employees, effective service delivery, being independent, innovative ideas, improved attitude, making work easy, and tracking books, information storage retrieval, gaining new knowledge, ability to plan, acquiring new skills, marketing library services, managing customers, offering course texts online and understanding one’s responsibilities.

Apparently, the younger members of staff 21-50 years seemed to have benefited more from the short courses than those above 50 years. The findings were in agreement with the university librarians’ views discussed earlier in this chapter that the younger members of library staff were more receptive to change than the older ones. At the same time, more male employees accounting for 36.5 percent, had benefitted from the trainings as opposed to their female counterparts at 27 percent. The findings could be interpreted to mean that library staff exposure to diverse kinds of trainings could lead to acquisition of new knowledge and skills that might benefit the library and the staff intrapreneurially.

Library staff were further asked to rate the extent to which they agreed with statements
regarding the influence of library staff training in entrepreneurship on intrapreneurial activities in the respective libraries. A scale of 1 to 5 was used in which 1 meant strongly disagree and 5 strongly agree. Table 4.9 presents the responses of each attribute of training.

Table 4.9: Ratings on Library Staff Training in Entrepreneurship

<table>
<thead>
<tr>
<th>Training factor</th>
<th>SD(1) Fr</th>
<th>D(2) Fr</th>
<th>NS(3) Fr</th>
<th>A(4) Fr</th>
<th>SA(5) Fr</th>
<th>Total Fr</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training stimulates innovative &amp; entrepreneurial mindset</td>
<td>2 2.3</td>
<td>3 3.5</td>
<td>4 4.7</td>
<td>46 53.5</td>
<td>31 36.0</td>
<td>86 100</td>
<td>4.17</td>
<td>0.961</td>
</tr>
<tr>
<td>Training empowers staff to be better communicators</td>
<td>2 2.3</td>
<td>2 2.3</td>
<td>10 11.6</td>
<td>41 47.7</td>
<td>31 36.0</td>
<td>86 100</td>
<td>4.13</td>
<td>1.057</td>
</tr>
<tr>
<td>Training makes staff less dependent</td>
<td>8 9.4</td>
<td>5 5.9</td>
<td>9 10.6</td>
<td>39 45.9</td>
<td>24 28.2</td>
<td>85 100</td>
<td>3.78</td>
<td>0.871</td>
</tr>
<tr>
<td>Staff inclined to take risks</td>
<td>4 4.7</td>
<td>5 5.9</td>
<td>10 11.8</td>
<td>49 57.6</td>
<td>17 20.0</td>
<td>85 100</td>
<td>3.82</td>
<td>0.963</td>
</tr>
<tr>
<td>Aggregate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.98</td>
<td>0.978</td>
</tr>
</tbody>
</table>

Source: Survey Data (2014)

Results in Table 4.9, show that training in entrepreneurship stimulates innovative and entrepreneurial mindset among library staff with a mean score of 4.17 and it also empowers staff to be better communicators with a mean score of 4.13. This meant that staff become better decision makers, problem solvers and systematic thinkers. Training also enables library staff to take an inclination towards risk taking with a mean score of 3.82 implying they are able to develop new products, services and methods of delivery. Through training, staff become less dependent in decision making with a mean score of 3.78 meaning they are
less risk averse and they are able to face uncertainty. The standard deviation of 0.871 show
that there was a slight dispersion from the mean as compared to those of 0.961, 0.963, and
1.057 which indicate more levels of response scatterdness. This implied that among the four
attributes of staff training, the library staff had more divergent views concerning training
empowers staff to be better communicators.

The high mean scores was a confirmation that library staff were aware of the importance of
training in entrepreneurship as a way of enhancing intrapreneurial activities in the libraries.
The findings were consistent with views of scholars including Awan and Mahmood (2010); 
Malhan (2006) and Li Xin (2006), that staff training is a key strategy for enhancing
creativity, innovation and risk taking which are key dimensions of intrapreneurial undertakings.

4.5.5 Library Staff Entrepreneurship Knowledge

The study further attempted to establish the level of library staff entrepreneurship knowledge
so as to find out if such knowledge was a contributory factor to intrapreneurial activities.
Library staff from the respective libraries were asked to rate their level of entrepreneurship
knowledge on a scale of 1 to 4, where 1 was very low and 4 was very high as shown in
Table 4.10.
Results in Table 4.10, indicate that both public and private university libraries display low levels of staff entrepreneurship knowledge particularly the public ones that accounted for 30 percent while private ones accounted for 58 percent high on average. The results therefore showed that library staff in both categories of libraries lacked adequate entrepreneurship knowledge to influence significantly intrapreneurial activities in their respective libraries.

The findings were in line with the earlier ones in this chapter that showed lack of a well established library staff training programme in entrepreneurship. However, the findings did not conform with Chen et al. (2005), contention that staff possessing the requisite entrepreneurship knowledge form the foundation to cultivate CE in an organization. Lack of such knowledge would therefore mean limited innovation in an organization.

The study further attempted to establish how the library staff used their entrepreneurship knowledge to effect changes in their respective libraries. This was necessary in order to establish the link between library staff entrepreneurship knowledge and intrapreneurial
activities in the respective libraries. Library staff were therefore asked to choose from a list of eight items that was provided as presented in Table 4.11.

**Table 4.11: Use of Entrepreneurship Knowledge by Library Staff**

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting goals and timelines</td>
<td>46</td>
<td>10.3</td>
</tr>
<tr>
<td>Ability to use library resources</td>
<td>65</td>
<td>14.5</td>
</tr>
<tr>
<td>Using new methods to offer services</td>
<td>55</td>
<td>12.3</td>
</tr>
<tr>
<td>Ability to use new technologies</td>
<td>64</td>
<td>14.3</td>
</tr>
<tr>
<td>Organising electronic databases</td>
<td>43</td>
<td>9.6</td>
</tr>
<tr>
<td>Marketing of library information services &amp; resources</td>
<td>61</td>
<td>13.6</td>
</tr>
<tr>
<td>Providing information literacy skills to users</td>
<td>60</td>
<td>13.4</td>
</tr>
<tr>
<td>New methods of providing CAS &amp; SDI</td>
<td>53</td>
<td>11.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>447</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Source: Survey Data (2014)*

Study results in Table 4.11 showed that there were diverse ways in which library staff used their entrepreneurship knowledge to effect changes in their respective libraries. For instance 10.3 percent were able to set goals and timelines, while majority 14.5 percent had the ability to use library resources. 12.3 percent of library staff could use new methods to offer services and a large number 14.3 percent were able to use new technologies. Only 9.6 percent of the staff could organize electronic databases implying that few members of staff had sufficient knowledge and skills in this area. Marketing of library information services with 13.6 percent meant quite a number of library staff could apply their entrepreneurial knowledge in this area. Providing information literacy skills to users was another area library staff were well conversant with 13.4 percent, while new methods of providing current awareness and selective dissemination of information was popular with 11.9 percent. The results imply that given a conducive and supportive environment, library staff could use their entrepreneurial
knowledge in diverse ways to effect positive changes in terms of influencing intrapreneurial activities in the respective libraries.

University management staff opinion was sought on whether entrepreneurial knowledge was essential for library staff and if so why. Their opinion was considered important because the management makes policies and decisions concerning staff training. The three university management staff interviewed replied in the affirmative that entrepreneurship knowledge for library staff was essential. They had this to say:

… “the role of library services has changed and requires diversity”, … “
…yes”,… “yes, for libraries to remain sustainable”.

However, a follow up question on whether university management had policies for training employees on entrepreneurship, had common answers that though such a policy existed, it was meant for students but not for staff. It was ironical that even with a clear understanding and consent of the importance of entrepreneurship knowledge for library staff, the university management was skeptical about having a policy on training the same staff in entrepreneurship. The findings could mean that university management had not applied library staff training in entrepreneurship as a strategy for enhancing intrapreneurial activities in their libraries.

4.5.6 Work Experience

Further investigation was done to show how previous working experience in terms of years that the library staff had worked in the libraries influenced intrapreneurial activities in the
workplace. Experience is considered essential in reaching a decision with regard to creativity, innovativeness or solving a problem in a work place. Library staff were asked to indicate the total number of years they had worked in their present as well as other libraries. The results are presented in Figure 4.4.

![Pie chart showing library staff working experience](image)

**Figure 4.4: Library Staff Working Experience in Years**  
*Source: Survey Data (2014)*

Figure 4.4 showed that most of the library staff across the four university libraries accounting for 60 percent had working experience in a library for more than five years compared to 40 percent who had worked for less than five years. The most experienced employee was a male from KU who had worked between 36-40 years. This showed that most of the library staff had substantial experience and there is also a considerable measure of staff retention in these libraries. Such long serving and
experienced staff could be sources of knowledge, skills, insight and capabilities that if well harnessed and managed could give the university libraries a competitive edge in intrapreneurial activities.

The findings were supported in the literature by Shaw et al. (2005), who contended that work experience is considered the basis of intrapreneurial knowledge and can also provide business context, skills and risk taking values (Urbano et al., 2013; Brunaker & Kurvinen, 2006). About 40.3 percent, of the library staff had previous working experience in other colleges or university libraries, while close to 60 percent had not. Such previous working experience in similar environments could be considered an added advantage due to wide exposure.

Information on staff responsibilities was considered necessary in order to determine how these responsibilities influenced intrapreneurial activities in their workplace. The task of library staff was to identify new opportunities and show new skills and ways of doing things in sections/departments where they worked. Library staff were therefore asked to indicate their main responsibilities in their work places from a list of seven items that was provided. Table 4.12 shows the various staff responsibilities according to the respective libraries.
Table 4.12: Staff Responsibilities in the Libraries

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>KU</th>
<th>EGERTON</th>
<th>USIU</th>
<th>CUEA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fre</td>
<td>%</td>
<td>Fre</td>
<td>%</td>
</tr>
<tr>
<td>Acquisitions</td>
<td>6</td>
<td>8.0</td>
<td>8</td>
<td>16.3</td>
</tr>
<tr>
<td>Processing</td>
<td>12</td>
<td>16.0</td>
<td>12</td>
<td>24.5</td>
</tr>
<tr>
<td>Reference</td>
<td>21</td>
<td>28.0</td>
<td>10</td>
<td>20.4</td>
</tr>
<tr>
<td>Information Technology</td>
<td>11</td>
<td>14.7</td>
<td>6</td>
<td>12.2</td>
</tr>
<tr>
<td>Africana/Special Collection</td>
<td>11</td>
<td>14.7</td>
<td>7</td>
<td>14.3</td>
</tr>
<tr>
<td>Bindery/Photocopying</td>
<td>3</td>
<td>4.0</td>
<td>3</td>
<td>6.1</td>
</tr>
<tr>
<td>Indexing and abstracting</td>
<td>11</td>
<td>14.7</td>
<td>3</td>
<td>6.1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>75</td>
<td>100</td>
<td>49</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Survey Data (2014)

Table 4.12 showed a wide range of staff responsibilities across both public and private university libraries. The results implied that in both categories of libraries, the staff were expected to have certain individual responsibilities and experiences that would provide them with expertise in running their independent ventures as well as benchmarking for judging relevant library information. Other revelations from this question showed that the staff also engaged in other tasks such as: administration, circulation, current awareness services, cataloging, classification, e-resources, information literacy training, digitizing, information dissemination, income generating management, interlibrary lending and shelving. The responsibilities cut across the entire gender and age range. Empirical studies (Antoncic & Hisrich, 2003; Morris, 2001; Wunderer, 2001), showed that engaging staff in diverse
responsibilities in an organization was a way of giving them more exposure as well as making them responsible and accountable which are crucial traits for intrapreneurs.

The study further sought to establish any challenges that library staff may have encountered in their efforts to develop and implement new ideas and projects in their work places. An understanding of such challenges was considered crucial because they could act as impediments to pursuing intrapreneurial efforts in the libraries. Awareness of such challenges could also help the management to know how best to deal with them. A question was therefore posed to that effect, where the library staff were required to indicate the challenges they encountered from a list of six items that was provided. The responses showed that delays in implementation of new ideas was considered the biggest challenge accounting for 24 percent, followed by lack of adequate resources 21.5 percent, lack of management support 17.1 percent, technological obsolescence, attitude of the bosses towards new changes, lack of relevant skills, 16 percent, 12 percent and 10.1 percent respectively.

Other challenges faced by staff included: delays in procurements, lack of funds, lack of promotion, lack of relevant material, lack of space, lack of teamwork, lack of staff motivation and lack of adequate time. These revelations seemed to indicate that probably lack of adequate management support in the development and implementation of staff new ideas and projects may have contributed to these challenges. This implied that the willingness of the university managements to support intrapreneurial efforts in these libraries is crucial. Documented literature (Antoncic & Hisrich. 2001), shows that such support can be in form of championing new ideas, providing necessary resources or expertise, institutionalizing
intrapreneurial activities and having open and strong communication systems to ensure that employees with new ideas are listened to.

4.6 Multicollinearity Test Results

This study adopted the suggestion by Field (2009), to detect multicollinearity by examining the correlation coefficients between two explanatory variables as shown in Table 4.13.

Table 4.13: Correlation Between the Study Variables

<table>
<thead>
<tr>
<th>Correlations</th>
<th>INTERNAL ORGANIZATION FACTORS</th>
<th>INDIVIDUAL STAFF FACTORS</th>
<th>EXTERNAL ENVIRONMENTAL CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTERNAL ORGANIZATION</td>
<td>Pearson Correlation Sig. (2-tailed) N 87</td>
<td>Pearson Correlation .410** Sig. (2-tailed) .000 N 87</td>
<td>Pearson Correlation .351** Sig. (2-tailed) .001 N 87</td>
</tr>
<tr>
<td>INDIVIDUAL STAFF FACTORS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXTERNAL ENVIRONMENTAL</td>
<td>Pearson Correlation Sig. (2-tailed) N 87</td>
<td>Pearson Correlation .493** Sig. (2-tailed) .000 N 87</td>
<td>Pearson Correlation .351** Sig. (2-tailed) .001 N 87</td>
</tr>
<tr>
<td>CONDITIONS</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

The correlation coefficients among the study variables, individual staff factors, internal organization factors and external environmental conditions ranged between 0.351 and 0.493. There were no correlation less than 0.3 or more than 0.9 as recommended by Field (2009). The results did not show high levels of multicollinearity as shown in Table 4.13. The table
clearly shows that all the correlations of the independent variables had bivariate correlations of less than 0.5 as recommended by Zikmund et al. (2013).

In addition, Variance Inflation Factor (VIF) was done using SPSS to detect which independent variable had a strong linear correlation with another. A tolerance of less than 0.1 indicates existence of multicollinearity according to Field (2009). The VIF measures the impact of collinearity among the variables in a regression model. The VIF is always greater than or equal to 1.

**4.7 Correlation Analysis Results for Individual Staff Factors**

The study set to examine the associations between the individual staff factors which included: gender, age, education and training entrepreneurship knowledge and work experience. The correlation tests were conducted using a correlation matrix shown in Table 4.14 to investigate the possible associations between the variables.
Table 4.14: Correlation Matrix of Individual Staff Factors

<table>
<thead>
<tr>
<th>Variable</th>
<th>Gender</th>
<th>Age</th>
<th>Education</th>
<th>Entrepreneurship knowledge</th>
<th>Work experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.072</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education and training</td>
<td>0.111</td>
<td>0.053</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entrepreneurship knowledge</td>
<td>-0.118</td>
<td>-0.077</td>
<td>0.131</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Work experience</td>
<td>0.096</td>
<td>0.817**</td>
<td>0.156</td>
<td>-0.135</td>
<td>1</td>
</tr>
</tbody>
</table>

N=87
** Correlation is significant at the 0.01 level (2-tailed)

From the symmetric matrix Table 4.14, the value in each cell is the correlation coefficient. The correlation between work experience and age was 0.817. This coefficient showed that there was a significant positive association between work experience and age of the library staff (r= .817). This implied that the two variables were precisely related and as values of one variable increased, values of the other variables also increased.

However, there was no significant association between age and gender, education and age, education and gender at 1 percent level of significance. It was noted that there was a negative correlation between entrepreneurship knowledge and gender r= -0.118 and entrepreneurship knowledge and age r= - 0.077. Work experience was also negatively correlated with entrepreneurship knowledge r= -0.135. This meant that although the variables were related, as the values of one variable increased those of the other decreased.
4.8 Regression Analysis Results for Individual Staff Factors on Intrapreneurial Activities

The study conducted a multiple regression analysis to determine the extent to which each of the individual staff factors explained the variance in the intrapreneurial activities. The results are presented in Table 4.15

**Table 4.15: Regression Analysis Results for Each Individual Staff Factor on Intrapreneurial Activities**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Coefficient</th>
<th>t statistic</th>
<th>P Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.151***</td>
<td>5.108</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>(0.617)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>0.243**</td>
<td>2.326</td>
<td>0.022</td>
</tr>
<tr>
<td></td>
<td>(0.104)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.235***</td>
<td>-2.678</td>
<td>0.009</td>
</tr>
<tr>
<td></td>
<td>(0.088)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of Education and training</td>
<td>-0.075</td>
<td>-0.911</td>
<td>0.365</td>
</tr>
<tr>
<td></td>
<td>(0.082)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of entrepreneurship Knowledge</td>
<td>-0.005</td>
<td>-0.028</td>
<td>0.978</td>
</tr>
<tr>
<td></td>
<td>(0.174)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working experience</td>
<td>0.111</td>
<td>0.893</td>
<td>0.374</td>
</tr>
<tr>
<td></td>
<td>(0.124)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Squared</td>
<td>0.112</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F statistic</td>
<td>2.042</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P value</td>
<td>0.081</td>
<td></td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>5, 81</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

***and ** means that the coefficient is significant at 1 % and 5 % percent respectively

Standard errors are in parenthesis

( Other regression results for all individual staff factors combined together on intrapreneurial activities are presented in: Table A1, The Model Summary; Table A2, ANOVA; Table A3, Regression Coefficients in Appendix V).

The positive and significant coefficient of gender of 0.243 was statistically significant at 5
percent level of significance. This implied that gender as a staff factor influenced intrapreneurial activities. The coefficient was significantly greater than zero and indicated clearly that there was a positive relationship between gender and intrapreneurial activities. This also meant that a single unit change in gender increased intrapreneurial activities by 0.243 units. This denoted that gender had a positive influence on intrapreneurial activities in university libraries. The t statistic which at 2.326 was also greater than 1.96 implying a positive influence of gender on intrapreneurial activities. This contradicted the earlier results from library staff and university librarians which indicated that gender does not influence intrapreneurial activities in the libraries. However the findings were consistent with previous studies by Urbano et al. (2013), Metcafe and Afanassiera (2009), that gender factor influenced intrapreneurial efforts in an organization.

The coefficient of age of library staff was negative at -0.235 although it was statistically significant at 1 percent level. This demonstrated that age had an influence on intrapreneurial activities. It meant that a single unit change in age decreased intrapreneurial activities by -0.235 units. The t statistic was also negative at -2.678 which was less than -1.96 further implying a negative influence of age on intrapreneurial activities. This implied that older members of library staff are skeptical to creativity and innovation and hence resistant to change. The findings were in agreement with the university librarians’ observations that younger members of library staff were more enterprising and willing to try new things while mature employees tended to be risk averse. The findings are further supported in previous studies by Urbano et al. (2013) and Hisrich et al. (2009), that the level of employee creativity decreased with age. The findings however were inconsistent with those of Beaver and
Hutchings (2005) and Holt (2004), that older workforce had a higher output due to their level of seniority, experience, greater organizational commitment and stability.

The coefficient of level of education and training was found to be negative at -0.075 which was statistically insignificant implying that it did not influence intrapreneurial activities in a library. This meant that a single unit change in education and training decreased intrapreneurial activities insignificantly. The t statistic which was more than -1.96 also implied that education and training had no influence on intrapreneurial activities. The results were in conformity with the arguments by Hisrich et al. (2009) and Mattis (2000), who doubted whether level of education and training determined creation of new business to exploit the discovered opportunity by an employee. At the same time the results differed from observations made by Gomez-Haro et al. (2011) and Alpkan et al. (2010), that education and training assists in the accumulation of knowledge of an employee that become a source of promoting internal entrepreneurship.

The coefficient of level of entrepreneurship knowledge was found to be negative at -0.005 and was statistically insignificant implying that, it had no influence on intrapreneurial activities in a library. This meant that a single unit change in level of entrepreneurship knowledge decreased intrapreneurial activities insignificantly. The t statistic which was more than -1.96 implied that level of entrepreneurship knowledge had no influence on intrapreneurial activities. The results were supported in a previous study by Shaw et al. (2005), that level of entrepreneurship knowledge alone was not enough. It also required time and experience for an employees to develop meaningful creative contribution. However, the
findings differed from views by Chen et al. (2005), that staff possessing the requisite entrepreneurship knowledge form the foundation to cultivate CE in an organization.

The coefficient of work experience was positive at 0.111 which was greater than zero though not statistically significant. This meant that although work experience was associated with intrapreneurial activities, the relationship was not significant. This showed that a single unit change in work experience increased intrapreneurial activities by 0.111 units but insignificantly. This showed that work experience had no influence on intrapreneurial activities in university libraries. The t statistic which at 0.893 was greater than 1.96 implying a positive influence of work experience on intrapreneurial activities. The results however did not support prior studies by Brunaker and Kurvinen (2006); Shaw et al. (2005) and Urbano et al. (2013), who found that individuals with prior working experience were more likely to develop intrapreneurial activities than those without.

From Table 4.1, it is shown that the R-squared is at 0.112, implying that only 11 percent of intrapreneurial activities were explained by the variables of individual staff factors. The rest 89 percent could be explained by other factors. The ANOVA test was conducted to determine whether the model worked in explaining the relationship among the variables as postulated in the conceptual model. The results in Table 4.15 showed an F-ratio F(5, 81) = 2.042 with a significant level of p< 0.1 (at 10 percent). This implied that the model significantly predicts the outcome of the relationship between the variables of individual staff factors and intrapreneurial activities.
4.9 Descriptive Analysis Results for Internal Organisation Factors

Objective two of the study sought to determine the internal organizational factors that determined intrapreneurial activities in university libraries. These factors were grouped into five categories namely: management support, work discretion, rewards, time availability and organizational boundaries in line with the conceptual framework. The results are presented and discussed in the following sections.

4.9.1 Management Support

The extent to which an organisation’s management is willing to facilitate, encourage and promote intrapreneurial efforts through members of staff in an existing organization, such as a university library is of great interest to scholars. Without such support, any intrapreneurial efforts would be stifled. The study sought to establish the extent to which the university management teams supported intrapreneurial activities in university libraries. A set of four items namely: availability of money, recognition of employees with innovative ideas, accepting of new staff ideas by university management and library’s utilization of the improved work methods were used. The findings based on a 1 to 5 likert scale rating, where 1 was strongly disagree and 5 was strongly agree were summarized in Table 4.16.
Table 4.16: Ratings on Internal Organisation Factors

<table>
<thead>
<tr>
<th>Factors</th>
<th>SD (1)</th>
<th>D (2)</th>
<th>NS (3)</th>
<th>A (4)</th>
<th>SA (5)</th>
<th>TOTAL</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Money available to get new project ideas off ground</td>
<td>15 17.9</td>
<td>35 41.7</td>
<td>16 19.0</td>
<td>13 15.5</td>
<td>5 6.0</td>
<td>84 100</td>
<td>2.5</td>
<td>1.135</td>
</tr>
<tr>
<td>Employees with new innovative ideas encouraged recognitions</td>
<td>7 8.2</td>
<td>13 15.3</td>
<td>25 29.4</td>
<td>32 37.6</td>
<td>8 9.4</td>
<td>85 100</td>
<td>3.3</td>
<td>1.09</td>
</tr>
<tr>
<td>University accept staff ideas</td>
<td>4 4.7</td>
<td>13 15.3</td>
<td>25 29.4</td>
<td>37 43.5</td>
<td>6 7.1</td>
<td>85 100</td>
<td>3.3</td>
<td>0.981</td>
</tr>
<tr>
<td>Library quick to use improved work methods</td>
<td>4 4.8</td>
<td>8 9.5</td>
<td>12 14.3</td>
<td>47 56.0</td>
<td>13 15.5</td>
<td>84 100</td>
<td>3.7</td>
<td>1.008</td>
</tr>
<tr>
<td>Work discretion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have much freedom on job job</td>
<td>9 10.5</td>
<td>18 20.9</td>
<td>5 5.8</td>
<td>39 45.3</td>
<td>15 17.4</td>
<td>86 100</td>
<td>3.4</td>
<td>1.285</td>
</tr>
<tr>
<td>Library provides chance to be creative</td>
<td>4 4.9</td>
<td>21 25.6</td>
<td>11 13.4</td>
<td>34 41.5</td>
<td>12 14.6</td>
<td>82 100</td>
<td>3.4</td>
<td>1.159</td>
</tr>
<tr>
<td>Library provides chance to make use of staff ability</td>
<td>5 6.0</td>
<td>10 11.9</td>
<td>15 17.9</td>
<td>45 53.6</td>
<td>9 10.7</td>
<td>84 100</td>
<td>3.5</td>
<td>1.035</td>
</tr>
<tr>
<td>Rewards</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual risk takers recognised</td>
<td>7 8.4</td>
<td>26 31.3</td>
<td>18 21.7</td>
<td>21 25.3</td>
<td>11 13.3</td>
<td>83 100</td>
<td>3.0</td>
<td>1.204</td>
</tr>
<tr>
<td>Librarian give special recognition on work performance</td>
<td>8 9.4</td>
<td>16 18.8</td>
<td>21 24.7</td>
<td>29 34.1</td>
<td>11 12.9</td>
<td>85 100</td>
<td>3.2</td>
<td>1.179</td>
</tr>
<tr>
<td>Rewards are performance based</td>
<td>9 11.0</td>
<td>13 15.9</td>
<td>20 24.4</td>
<td>34 41.5</td>
<td>6 7.3</td>
<td>82 100</td>
<td>3.2</td>
<td>1.135</td>
</tr>
<tr>
<td>Time availability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have plenty of time for daily</td>
<td>1 1.2</td>
<td>18 21.4</td>
<td>8 9.5</td>
<td>46 54.8</td>
<td>11 13.1</td>
<td>84 100</td>
<td>3.6</td>
<td>1.009</td>
</tr>
<tr>
<td>Job structure gives little time to think</td>
<td>9 10.7</td>
<td>17 20.2</td>
<td>18 21.4</td>
<td>30 35.7</td>
<td>10 11.9</td>
<td>84 100</td>
<td>3.2</td>
<td>1.204</td>
</tr>
<tr>
<td>Past three months work load has been too heavy</td>
<td>9 11.0</td>
<td>25 30.5</td>
<td>11 13.4</td>
<td>29 35.4</td>
<td>8 9.8</td>
<td>82 100</td>
<td>3.0</td>
<td>1.227</td>
</tr>
<tr>
<td>Organisation boundaries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There are many written rules and procedures</td>
<td>3 3.6</td>
<td>19 22.9</td>
<td>6 7.2</td>
<td>34 41.0</td>
<td>21 25.3</td>
<td>83 100</td>
<td>3.6</td>
<td>1.198</td>
</tr>
<tr>
<td>Job description specifies standard of performance</td>
<td>5 5.9</td>
<td>3 3.5</td>
<td>8 9.4</td>
<td>51 60.0</td>
<td>18 21.2</td>
<td>85 100</td>
<td>3.9</td>
<td>0.985</td>
</tr>
<tr>
<td>Staff seldom have to follow the same work method</td>
<td>5 6.0</td>
<td>22 26.5</td>
<td>11 13.3</td>
<td>34 41.0</td>
<td>11 13.3</td>
<td>83 100</td>
<td>3.3</td>
<td>1.174</td>
</tr>
</tbody>
</table>

Aggregate

<p>| | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.32</td>
<td>1.126</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Survey Data (2014)
The results in Table 4.16 show that under management support, university libraries were quick to utilise improved work methods by the employees as indicated by a mean score of 3.7 which was the highest. The respondents also confirmed that employees with new innovative ideas received recognition and that university management teams accepted employees’ ideas and suggestions as revealed by an equal mean score of 3.3. A mean score of 2.5 which was below average on the measurement scale implied that university management did not avail money to get new projects off the ground. The sub variable of university accept staff ideas had the least variability with a standard deviation of 0.981 while money availability to get new projects off the ground had the highest variability with a standard deviation of 1.135. Employees with new ideas encouraged had a standard deviation of 1.09 while library quick to use improved work methods had a standard deviation of 1.008.

The findings were supported by the qualitative data obtained through interviews with the respective university librarians and university management staff who gave the impression that university management was willing to utilise improved work methods, recognize and support new staff ideas but with conditions. They argued that:

…”some staff ideas were accepted depending on the availability of resources”. … “staff ideas were accepted in consultation with university librarians and the top university management”.

Apart from funds, the university management from the respective universities confirmed that they had put in place other non financial resources to support intrapreneurial activities in
the libraries. For instance ICT resources, modern library buildings (except Egerton), qualified human resource and time off for staff to attend short courses. In addition, at USIU there was Centre for Excellence in Entrepreneurship Development (CEED) from where all university staff could develop their creative ideas. However, it was noted with concern that at KU the Chandaria Business Innovation and Incubation Centre was meant for students use only. Members of library staff could also benefit in developing their innovative ideas from such a facility if proper arrangements are made.

The management staff from the three universities felt that with the current increase in library user population, the current resources, both financial and non financial were considered inadequate. It was only at USIU where the management considered their resources adequate because they had invested heavily in the library. Provision of non financial resources however was an indicator that university management supported intrapreneurial efforts in the libraries to some extent.

4.9.2 Work Discretion

When employees have the discretion or freedom to make decisions about performing their own work in the way they believe most effective, it is assumed that they become better motivated to implement innovative ideas because they are in control. The purpose of this section was to establish the amount of autonomy that the library staff had in their work place. The finding was important in determining whether the amount of freedom the library staff had influenced intrapreneurial activities in the libraries. To measure the level of discretion/autonomy that library employees enjoyed, the study used a set of three items namely: much
freedom on the job; provision of chance to be creative and provision of chance to make use of staff abilities. A 5 point likert scale was used to measure the amount of library staff work discretion and the findings are revealed in Table 4.16. The results show a marginal difference in mean scores of 3.4 and 3.5 which were slightly above average. The results suggest that library staff are given some limited amount of autonomy to make use of their abilities 3.5, to be creative and to make decisions concerning their jobs with an equal mean score of 3.4 respectively. Such a situation is likely to yield a limited level of innovativeness. The standard deviation of 1.285, 1.159 and 1.035 respectively indicate slightly high variability in responses from the mean.

The findings on work discretion were validated through the qualitative data obtained through interviews conducted with the university librarians and university management staff who gave diverse responses for instance:

…..“yes, they have freedom to try on their own, but report later to the librarian”, “there is a committee for innovativeness to actualize the ideas”, “staff write directly to the VC”, “staff have to go through the library management committee”, “the staff must conform to ISO specifications.”

From the responses of university librarians, university management staff and library staff, it appeared that staff freedom to be creative and make decisions on their own concerning their work was curtailed to a large extent. This was revealed by the fact that, either, library staff
had to ask for permission, follow ISO or CUE guidelines or go through certain committees. Furthermore, availability of funds and other resources was another consideration before staff could be allowed to develop and implement their ideas. Such bureaucracies were likely to discourage the staff from their creative and innovative efforts. The likely conclusion was that freedom to implement library staff creative ideas/projects without obstructions was not applied as a strategy to encourage creativity and innovation in the libraries.

The findings in university libraries concerning staff work discretion did not match with the views of scholars including Alpkan et al. (2010) and Chen et al. (2005), who concurred that, the greater the autonomy in an organization the higher the innovative performance. This meant that autonomous employees were believed to be better motivated and were able to implement innovative ideas when they were in control.

4.9.3 Rewards

Rewards enhance staff motivation to engage in innovative behavior. This means that rewards based on performance are more likely to make library staff experience a feeling of accomplishment and satisfaction. The study sought to establish the kind of reward system and reinforcement methods used to motivate library staff to engage in intrapreneurial activities. The findings would help to establish if the reward and reinforcement systems used contributed to the intrapreneurial efforts of the library staff.

To measure the level of rewarding practices in the libraries under study, three items namely: individual risk takers are recognized, university librarian recognize outstanding performance and rewards are performance based were used on a 5 point Likert scale rating as presented in
Table 4.16. The results showed that university librarians gave special recognition to the staff with good performance and rewards were performance based as indicated with a mean score of 3.2 each. The low rating score of 3.0 could be interpreted to mean that members of library staff were not sure whether individual risk takers were recognized or not. It could also mean that university management was not keen on using appropriate reward system based on performance as a strategy to motivate library staff in their intrapreneurial efforts as evidenced in an earlier finding in this chapter. The standard deviation ranged from 1.135 to 1.204 with individual risk takers are recognized having the highest variability of 1.204 and rewards are performance based having the least variability of 1.135. Librarians give special recognition on work performance had a standard deviation of 1.179 which was slightly high variability from the mean.

To validate library staff responses, qualitative data obtained through interviews with the university librarians and university management staff showed diverse methods that were used to reward and reinforce library staff who came up with innovative ideas or had exemplary performance in their work. Recognition in form of certificates, letters, verbal, email, library staff of the year was a common practice in all the four libraries; salary increment, financial rewards and promotion were also common. At KU for instance, there was the end of the year Vice Chancellor’s commendation for all best performers. In USIU, there was an annual recognition bonus in form of money as well as “Merit pay salary increase” which was different from the annual salary increase. The findings supported various studies including (Mokaya, 2012; Alpkan et al., 2010; Hill, 2003; Hornsby et al., 2002), which conceded that use of appropriate rewards could enhance staff willingness to be
proactive and assume risks associated with intrapreneurial efforts. The findings however differed from suggestions in the proposed componential theory that employees could do without extrinsic motivators and yet remain creative and innovative out of self interest.

### 4.9.4 Time Availability

Development and implementation of innovative ideas and projects requires that individual members of library staff or teams have adequate free time to incubate their ideas and pursue innovation. Furthermore, free time encourages employees to take risks for putting their novel ideas into practice. The study hence sought to find out if library staff were given adequate free time for creativity and innovation. The finding was crucial in establishing how library staff free time influenced intrapreneurial activities.

To measure the extent to which time availability for employees in university libraries determined intrapreneurial efforts, the study used three items namely: staff have plenty of time to get their daily work done, job structure leaves staff with little time to think about wider organizational problems and heavy workload in the last three months left library staff with little time for developing new ideas. A 5 Likert scale rating was used as indicated in Table 4.16. The results showed that library staff had just enough time to complete their daily work as indicated by a mean score of 3.6; job structure in the libraries left staff with little time to think about wider organizational problems had a mean score of 3.2, while the library staff had no extra time to develop new ideas because the workload was too heavy got a mean score of 3.0 which meant the staff were not sure. The standard deviation of 1.009, 1.204 and 1.227 for the three sub variables respectively showed slightly high variability with staff responses slightly scattered around the mean. The results showed that library staff had just
enough time to do their routine work leaving them with very little time for creativity and innovation which could negate their spirit of intrapreneurial efforts.

To validate the findings, the opinions of university librarians and the university management staff were sought through interviews to establish how much free time was given to library staff for creativity and innovation. Both groups of informants concurred that indeed library staff were not given any free time for creativity and reflection as evidenced from the following comments:

… “upon request”, … “yes, in consultation with the librarian”, … “no, Unless they ask”, … “no, due to staff shortage” .... “no, too busy”.

Consideration of the responses from library staff, university librarians and university management staff implied that library staff are so busy with routine work that they have no free quality time to think about other problems that may be affecting their libraries. Such a situation could discourage experimentation and risk-taking behaviors, thus negatively affecting pursuance of intrapreneurial activities in these libraries. The finding showed that availability of free time was poorly applied as a strategy to encourage library staff creativity and innovation. Availability of adequate free time for individual employees and groups in an organization to pursue and develop intrapreneurial ideas and activities was considered a crucial attribute of organizational factors that was widely supported in the literature (Kuratko et al., 2005; Ireland et al., 2006; Hornsby et al., 2002). These views were further supported by a study carried out by Hill (2003), which showed that the 3M company, developed a
standard policy that allows employees free time to develop their own business ideas.

4.9.5 Organizational Boundaries

Organisational boundaries whether real or imagined prevent employees from looking at the organization from a broad perspective. Organisations with bureaucratic structures lead to perceived boundaries with standard operating procedures and dependence on narrow job descriptions and rigid performance standards. Such situations could easily create obstacles to pursuance of intrapreneurial activities because the employees tend to focus on their departments’ problems and fail to see the bigger organizational picture. The study therefore sought to find out whether university libraries under study had supportive structures with fluid/flexible boundaries that were likely to facilitate intrapreneurial activities.

In measuring the extent to which organizational boundaries influence intrapreneurial activities in the libraries under study, three items were used namely: there are many written rules and procedures in the library, job description specifies the standard of performance and staff seldom follow same work methods for daily work. These were measured using a 1 to 5 Likert scale rating as indicated in Table 4.16. The results showed that job description specifies the standard of performance on which the job is evaluated with a mean score of 3.9. A mean score of 3.6 meant that the libraries had many written rules and procedures that the library staff were expected to adhere to. This implied a rigid and inflexible system which could stifle creativity and innovativeness. The results also showed that library staff used varied methods in their daily work as indicated by a mean score of 3.3. The sub variable of job description specifies standard of performance had the least variability with standard
deviation of 0.985 while many written rules and procedures had the highest variability of 1.198. Staff seldom follow same work method had a slightly high variability of 1.174.

Interviews conducted with university librarians and university management staff supported existence of written rules and standard operating procedures in all the libraries under study. These included internal rules and procedures for specific detailed tasks. In addition, the libraries followed respective library and institutional policies, ISO standards and CUE standards and guidelines. The libraries also had standards for evaluating staff performance in form of appraisal forms used as monitoring and evaluation tools.

University librarians and their deputies took time to discuss staff performance. This took place in form of formal meetings in order to set up targets and discuss work plans. Occasional informal meetings were organized in groups or committees to discuss issues on performance, problems, progress, way forward or develop quality objectives. Individual members of staff were summoned by the university librarians or the deputy when need arose to discuss their performance. In line with these findings, Hill (2003), argued that employees in an organization should feel valued and that they were making a meaningful contribution to the organization as a whole. Documented literature (Mokaya, 2012; Karimi et al., 2011; Goosen, 2002), further supported the fact that as an aspect of CE practice, organizational boundaries has been proved to have an effect on intrapreneurial activities in an organization.

The study further sought to establish the extent to which each of the five key internal organization factors influenced intrapreneurial activities in the libraries under study. These
key factors were: management support, work discretion, rewards, time availability and organizational boundaries. This was important in order to establish which of the five key internal organization factors influenced intrapreneurial activities more than the others. The findings would help the university libraries in planning their strategies for pursuing intrapreneurial activities. Library staff were asked to indicate the extent to which each of the key internal organization factors influenced intrapreneurial activities on a scale of 1 to 5 where 1 was very low influence and 5 very high influence. The results are summarised in Table 4.17.

Table 4.17: Ratings on the Key Internal Organisation Factors

<table>
<thead>
<tr>
<th>Organisational Factors</th>
<th>VLow (1)</th>
<th>Low (2)</th>
<th>UN(3)</th>
<th>H (4)</th>
<th>VH (5)</th>
<th>Total</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management support</td>
<td>Fr</td>
<td>%</td>
<td>Fr</td>
<td>%</td>
<td>Fr</td>
<td>%</td>
<td>Fr</td>
<td>%</td>
</tr>
<tr>
<td>Work discretion</td>
<td>4</td>
<td>4.8</td>
<td>15</td>
<td>18.1</td>
<td>10</td>
<td>12.0</td>
<td>32</td>
<td>38.6</td>
</tr>
<tr>
<td>Reward</td>
<td>10</td>
<td>12.0</td>
<td>13</td>
<td>15.7</td>
<td>17</td>
<td>20.5</td>
<td>25</td>
<td>30.1</td>
</tr>
<tr>
<td>Time availability</td>
<td>2</td>
<td>2.4</td>
<td>19</td>
<td>23.2</td>
<td>12</td>
<td>14.6</td>
<td>42</td>
<td>51.2</td>
</tr>
<tr>
<td>Organizational boundaries</td>
<td>1</td>
<td>1.2</td>
<td>14</td>
<td>17.1</td>
<td>23</td>
<td>28.0</td>
<td>31</td>
<td>37.8</td>
</tr>
<tr>
<td>Aggregate</td>
<td>3.4</td>
<td>1.098</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Survey Data (2014)

According to the results in Table 4.17, management support had the greatest influence in
intrapreneurial activities in the libraries compared to other factors as indicated by a mean score of 3.6, followed by organizational boundaries with a mean score of 3.5. Time availability and work discretion were rated equally with a mean score of 3.4. However, it was noted that rewards had the least mean score of 3.3, implying that it was considered to have less influence on intrapreneurial activities compared with the other factors. The finding was consistent with the earlier ones in this chapter, which showed poor rating for rewarding practices in university libraries. This meant that rewards based on performance was not applied effectively as a strategy for influencing intrapreneurial activities in university libraries. There was a slightly high variability with regard to the rewarding system as shown by the standard deviation of 1.309 (highest). A standard deviation of 0.97 (lowest) indicated that the responses were slightly scattered around the mean (3.4). This meant that among the five attributes of internal organization factors, library staff had more divergent views concerning the rewarding systems.

The study also sought to establish the measures that university management used to support library staff to become more creative and innovative. A list of six items was provided for the respondents to choose from. Teamwork as a measure had the highest responses rate accounting for 26.2 percent, implying that it was the most popular strategy for promoting and stimulating creativity and innovation. Training had 23.8 percent, adequate ICT facilities 23.1 percent. Partnership with other information providers had 15.8 percent while rewarding system got the least response 11.2 percent. The findings once more showed that library staff considered the rewarding practice in university libraries as having insignificant consequence as a measure in supporting creativity and innovation. The respondents recognized the
importance of training and ICT facilities as crucial measures in supporting library staff to become more creative and innovative.

The theories and models discussed in chapter two of the study had emphasized on internal organization factors as being key defining factors in influencing intrapreneurial activities (Amabile, 2012; Schumpeter, 1934; Ferreira, 2002; Tushman & Nadler, 1997). The argument behind this was that internal organizational factors can be directly influenced by organization management more than any other factors beyond their control. However, the findings showed that while all the five internal organization factors had some influence on intrapreneurial activities in the libraries, some were more influential than others.

4.10 Correlation Analysis Results for Internal Organization Factors

The study set to examine the associations between internal organisation factors which included: management support, work discretion, rewards, time availability, and organizational boundaries. Correlation tests were conducted using a correlation matrix as shown in Table 4.18 to investigate the possible associations between the factors.
Table 4.18: Correlation Matrix of Internal Organization Factors

<table>
<thead>
<tr>
<th>Variable</th>
<th>Management support</th>
<th>Work discretion</th>
<th>Rewards</th>
<th>Time availability</th>
<th>Organisational boundaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management support</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work discretion</td>
<td>0.627**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rewards</td>
<td>0.726**</td>
<td>0.518**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time availability</td>
<td>0.422**</td>
<td>0.550**</td>
<td>0.350**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Organizational boundaries</td>
<td>0.524**</td>
<td>0.439**</td>
<td>0.285**</td>
<td>0.481**</td>
<td>1</td>
</tr>
</tbody>
</table>

N= 87

** Correlation is significant at the 0.01 level (2-tailed)

The values in each cell of the symmetric matrix in Table 4.18 is the correlation coefficient. The correlation between work discretion and management support was 0.627. This denoted a statistically significant association between the two variables (r= .627). This implied that the two variables were related and as values of one variable increased those of the other variable also increased. Other variables that had statistically significant correlations were rewards and management support 0.726, rewards and work discretion 0.518, time availability and management support 0.422, time availability and work discretion 0.550, time availability and rewards 0.350, organizational boundaries and management support 0.524, organizational boundaries and time availability 0.481. It was noted that all the variables of internal organization factors had positive correlations with no negative correlations.

4.11 Regression Analysis Results for Internal Organisation Factors

The study conducted a multiple regression analysis to determine the extent to which each of
the internal organization factors explained the variance in the intrapreneurial activities. The results are presented in Table 4.19

**Table 4.19: Regression Analysis Results for Each Internal Organization Factor on Intrapreneurial activities**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Co efficient</th>
<th>t statistic</th>
<th>P values</th>
</tr>
</thead>
<tbody>
<tr>
<td>constant</td>
<td>0.816</td>
<td>1.592</td>
<td>0.115</td>
</tr>
<tr>
<td>Management support</td>
<td>0.284**</td>
<td>2.451</td>
<td>0.016</td>
</tr>
<tr>
<td>Work discretion</td>
<td>0.089</td>
<td>0.881</td>
<td>0.381</td>
</tr>
<tr>
<td>Rewards</td>
<td>0.057</td>
<td>0.494</td>
<td>0.622</td>
</tr>
<tr>
<td>Time availability</td>
<td>0.165</td>
<td>1.487</td>
<td>0.141</td>
</tr>
<tr>
<td>Organizational boundaries</td>
<td>0.199</td>
<td>1.580</td>
<td>0.118</td>
</tr>
<tr>
<td>Observations</td>
<td>87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R squared</td>
<td>0.282</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F statistic</td>
<td>6.374</td>
<td></td>
<td>0.05</td>
</tr>
<tr>
<td>df</td>
<td>5, 81</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** the coefficient is significant at 5%

Standard errors in parenthesis

(Other regression results for all the internal organisation sub variables combined together on intrapreneurial activities are presented in: Table A4, Model Summary; Table A5, ANOVA; Table A6, Regression Coefficients in Appendix VI)

The positive and statistically significant beta coefficient of management support of 0.284 at 5 percent level of significance implied that the more management support a library got, the more it was likely to engage in intrapreneurial activities. The coefficient was significantly
greater than zero clearly indicating a positive relationship between management support and intrapreneurial activities. This meant that a single unit change in management support increased intrapreneurial activities by 0.284 units implying that management support had a positive influence on intrapreneurial activities in university libraries. The t statistic at 2.451 was greater than zero showing a positive influence of management support on intrapreneurial activities. The findings supported prior studies by Alpkan et al. (2010), Gapp and Fisher (2007) and Zhao (2005), which demonstrated that the willingness of top management to facilitate, encourage and promote intrapreneurial efforts in existing organization was crucial.

The coefficient of work discretion was found to be positive at 0.089 which was significantly insignificant. This implied that work discretion had no influence on intrapreneurial activities in university libraries. The results contradicted those of Alpkan et al. (2010) and Chen et al. (2005), that the greater the staff autonomy in an organization, the higher the innovative performance.

The positive but not significant coefficient of rewards at 0.057 was statistically insignificant. This meant that a single unit change in rewards increased intrapreneurial activities by 0.057 units. However the rewards had no influence on intrapreneurial activities. The findings do not concur with those of Hill (2003) and Hornsby et al. (2002), who found out that an effective reward system based on performance enhance staff willingness to be proactive and assume risks in their intrapreneurial efforts.
The coefficient of time availability was found to be positive at 0.165 but not significantly different from zero. This implied that a single unit change in time availability increased intrapreneurial activities by 0.165 units denoting that time availability did not influence intrapreneurial activities in university libraries. Availability of adequate free time for employees in an organization to develop creative ideas and projects was considered crucial in intrapreneurial activities and was widely supported in prior studies by Kuratko et al. (2005); Ireland et al. (2006) and Hornsby et al. (2002), but not the present one.

The positive but not significant coefficient of organisational boundaries at 0.199 was not significantly different from zero. This meant that although a single unit change in organizational boundaries increased intrapreneurial activities by 0.199 units, it had no influence on intrapreneurial activities. The findings did not support prior studies by Mokaya (2012), Karimi et al. (2011) and Goosen (2002), that as an aspect of CE practice, organizational boundaries had been proved to have an influence on intrapreneurial activities in an organization.

From the findings shown in Table 4.19, the R-squared for regression variables of internal organization factors on intrapreneurial activities was 0.282, implying that only 28 percent of intrapreneurial activities were explained by internal organization factors. The rest 72 percent could be explained by other factors. The ANOVA test was conducted to determine whether the model worked in explaining the relationship among the variables as postulated in the conceptual model. The results in Table 4.19 showed an F-ratio $F(5, 81) = 6.374$ with a significant level of $p< 0.05$ (5 percent). This implied that the model significantly predicts the
outcome of the relationship between the variables of internal organization factors and intrapreneurial activities.

4.12 Descriptive Analysis Results for External Environmental Conditions

Objective three of the study sought to establish the external environmental conditions that determined intrapreneurial activities in university libraries. The conditions established included: dynamism, technological opportunities, organizational growth and demand for new products and services. These conditions are discussed in the following sections.

4.12.1 Dynamism

Dynamism in an environment is manifested by the amount of unpredictable changes that are likely to occur in areas such as: technologies, user demographics, government regulations, number of competitors and type and number of partnerships. The study sought to find out the ways in which such changes had influenced intrapreneurial activities in university libraries. Library staff were asked to rate the changes on a 1 to 5 Likert scale rating where 1 was no change and 5 was major change. The results are presented in Table 4.20.
Table 4.20: Ratings on Changes That Determined Intrapreneurial Activities in University Libraries

<table>
<thead>
<tr>
<th>Change</th>
<th>NC (1)</th>
<th>MC (2)</th>
<th>UN (3)</th>
<th>MOC (4)</th>
<th>MAC (5)</th>
<th>Total</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fre %</td>
<td>Fre %</td>
<td>Fre %</td>
<td>Fre %</td>
<td>Fre %</td>
<td>Fre %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Changes in technology</td>
<td>1</td>
<td>1.3</td>
<td>7</td>
<td>8.8</td>
<td>3</td>
<td>21</td>
<td>26.3</td>
<td>48</td>
</tr>
<tr>
<td>Changes in user demographics</td>
<td>1</td>
<td>1.3</td>
<td>4</td>
<td>5.2</td>
<td>14</td>
<td>37</td>
<td>48.1</td>
<td>21</td>
</tr>
<tr>
<td>Changes in government regulations</td>
<td>5</td>
<td>6.3</td>
<td>9</td>
<td>11.4</td>
<td>34</td>
<td>21</td>
<td>26.6</td>
<td>10</td>
</tr>
<tr>
<td>Changes in number of competitors</td>
<td>6</td>
<td>7.6</td>
<td>7</td>
<td>8.9</td>
<td>15</td>
<td>31</td>
<td>39.2</td>
<td>20</td>
</tr>
<tr>
<td>Changes in number of partnerships</td>
<td>2</td>
<td>2.6</td>
<td>8</td>
<td>10.3</td>
<td>31</td>
<td>28</td>
<td>35.9</td>
<td>9</td>
</tr>
<tr>
<td>Aggregate</td>
<td>3.8</td>
<td>1.003</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Survey Data (2014)

The results in Table 4.20 indicated that there were major technological changes that influenced intrapreneurial activities in the libraries under study as shown by a mean score of 4.4. This concurred with earlier findings in this chapter that had revealed a wide range of technological innovations in the university libraries under study. A mean score of 4.0 indicated moderate changes in user demographics in the libraries which were likely to influence intrapreneurial activities. University librarians supported the findings that there was indeed rapid user population increase with diverse needs and demands particularly in the area of IT. The results further showed that there had been changes in the number and type of competitors in the area of information provision with a mean score of 3.7. For instance:
Cyber cafes and mobile technology enterprises, social media and wireless internet connections such as Wi-Fi. This proved the need for university libraries to gain a more aggressive competitive posture in the information provision sector.

A mean score of 3.4 showed that there had been certain changes in the number and types of partnerships that could influence intrapreneurial activities in the libraries under study. The study results also showed there had been changes in government regulations with a mean score of 3.3 which influenced directly or indirectly the way university libraries operate and hence influenced intrapreneurial activities. The standard deviation ranged from 0.887 (lowest) to 1.175 (highest). A standard deviation of 0.887 indicated that the responses were not widely dispersed from the mean while that of 1.175 showed that the responses were slightly scattered around the mean. This implied that there was a slight variability among the library staff responses regarding changes in number of competitors.

The above findings were consistent with those of university librarians and university management staff through interviews, that indeed there were several competitors in information provision though the informants did not perceive them as a threat. The study results showed that university libraries had taken certain precautions to mitigate threats from such competitors which included: Digitizing information resources, embracing new technology, free internet services, acquiring modern facilities and adopting new promotional measures. Competitive rivalry according to Antoncic and Hisrich (2004), though it tends to create threats for an organization, can also stimulate the pursuit of entrepreneurship, leading to adoption of intrapreneurial posture.
Examples of partnerships within university libraries in Kenya included working closely with the International Network for the Availability of Scientific Publication (INASP) towards improving information literacy (IL) in Kenyan universities. Also, in partnership is the Kenyan Libraries and Information Services Consortium (KLISC) which aims at improving access and management of electronic resources as well as enhancing information literacy (IL) skills for librarians and users in academic libraries in Kenya. The findings were supported in a previous study by Neal (2001), that broad operations locally, nationally, regionally and internationally through partnerships is essential for a successful intrapreneurial agenda.

4.12.2 Technological Opportunities

Large organizations such as university libraries can use technology to make themselves responsive and flexible just like the smaller ones. This is because technological opportunities not only add value to library operations, but is also a way of empowering the staff as they manage and exploit it. The study sought to establish the status of technological opportunities and how they influenced intrapreneurial activities in the libraries. Library staff were asked to indicate the extent to which they agreed or disagreed with seven statements concerning technological opportunities in their respective libraries on a 1 to 5 Likert scale rating where 1 was strongly disagree and 5 was strongly agree. The results are summarised in Table 4.21.
Table 4.21: Ratings on Technological Opportunities that Determined Intrapreneurial Activities in University Libraries

<table>
<thead>
<tr>
<th>Technological opportunities</th>
<th>SD(1) Fre</th>
<th>D(2) Fre</th>
<th>NS(3) Fre</th>
<th>A(4) Fre</th>
<th>SA(5) Fre</th>
<th>Total Fre</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library offers many opportunities for technology innovation.</td>
<td>2 2.4</td>
<td>14 17.1</td>
<td>13 15.9</td>
<td>34 41.5</td>
<td>19 23.2</td>
<td>82 100</td>
<td>3.7</td>
<td>1.091</td>
</tr>
<tr>
<td>Demand for new technology growing.</td>
<td>1 1.2</td>
<td>0 0.0</td>
<td>2 2.4</td>
<td>45 54.2</td>
<td>35 42.2</td>
<td>83 100</td>
<td>4.4</td>
<td>0.655</td>
</tr>
<tr>
<td>New technology needed for growth.</td>
<td>1 1.2</td>
<td>1 1.2</td>
<td>2 2.4</td>
<td>41 49.4</td>
<td>38 45.8</td>
<td>83 100</td>
<td>4.4</td>
<td>0.711</td>
</tr>
<tr>
<td>New products/service ideas made possible.</td>
<td>2 2.4</td>
<td>3 3.7</td>
<td>7 8.5</td>
<td>41 50.0</td>
<td>29 35.4</td>
<td>82 100</td>
<td>4.1</td>
<td>0.894</td>
</tr>
<tr>
<td>Technological changes provide opportunities.</td>
<td>1 1.2</td>
<td>0 0.0</td>
<td>6 7.3</td>
<td>43 52.4</td>
<td>32 39.0</td>
<td>82 100</td>
<td>4.3</td>
<td>0.708</td>
</tr>
<tr>
<td>Library pursuing new technological opportunities.</td>
<td>2 2.4</td>
<td>0 0.0</td>
<td>6 7.1</td>
<td>52 61.9</td>
<td>24 28.6</td>
<td>84 100</td>
<td>4.1</td>
<td>0.747</td>
</tr>
<tr>
<td>Technology changing rapidly.</td>
<td>3 3.7</td>
<td>3 3.7</td>
<td>4 4.9</td>
<td>46 56.1</td>
<td>26 31.7</td>
<td>82 100</td>
<td>4.1</td>
<td>0.919</td>
</tr>
<tr>
<td>Aggregate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.1</td>
<td>0.817</td>
</tr>
</tbody>
</table>

Source: Survey Data (2014)

Results in Table 4.21 showed that demand for new technology was growing and new technology was needed for growth which were rated highest with an equal mean score of 4.4. This was not surprising considering the great emphasis for technological opportunities in the libraries in the earlier discussion in this chapter. Technological changes are also providing many opportunities for innovation in the respective libraries with a mean score of 4.3. The libraries are continually pursuing new technological opportunities, a large number of new products and service ideas are made possible and technology in the library environment is changing rapidly as indicated by an equal mean score of 4.1 which was considered high. Libraries offering many opportunities for technological innovation had the least mean score of 3.7 which was however, above average. There was a slightly higher variability with regard
to library offering many opportunities for technological innovation as indicated by the 
standard deviation of 1.091 (highest). A standard deviation of 0.655 (lowest) indicated that 
the responses on demand for new technology growing were only slightly scattered from the 
mean (4.4).

The results indicated that university libraries applied strong focus on continuous 
 improvement and breakthrough innovations as strategies in pursuing intrapreneurial 
activities. The findings were in line with CUE (2013) standards and guidelines which 
emphasise that university libraries should embrace opportunities created by information and 
communication technology (ICT). The results were also widely supported in the literature by 
Hisrich et al. (2009); Antoncic, (2007); Antoncic and Hisrich, (2004), which indicated that 
technological opportunities lead organizations to adopt an intrapreneurial posture and thus 
intensify intrapreneurial activities.

The study further considered it necessary to find out the level of opportunity for 
technological innovation in each of the four university libraries under study for purposes of 
better understanding of these libraries. A scale of 1 to 5 where 1 was very low and 5 was very 
high was used as shown in Table 4.22.
The results in Table 4.22 show a range of responses on the level of opportunity for technological innovation based on the four libraries under study. A consideration of high and very high ranks showed that USIU had the highest opportunity level for technological innovation accounting for 85 percent, followed by KU with 84 percent, CUEA 78 percent and Egerton 53 percent. The results showed that both public and private university libraries had made efforts in terms of creating opportunities for technological innovation. This is further evidenced by the fact that only a total of 2.4 percent responses indicated very low technological opportunities in all the four libraries. From the findings, it is evident that opportunity level for technological innovation was generally high in all the libraries except for Egerton library.
Library staff were asked to indicate from a list of six items the range of technological facilities available in their respective libraries. Computers were ranked first with 36 percent, internet 35 percent, DVD’s (Digital Versatile Disks) 18 percent and mobile technology 8 percent. Other technological facilities identified by the respondents were: automated systems, CCTV (closed circuit television), projectors, Radio Frequency Identification Device (RFID), scanners and virtual library. To validate the findings on technological opportunities, interviews conducted with the university librarians and university management staff showed that, indeed demand for technological facilities in these libraries was growing tremendously.

Commenting on the extent of demand for technological facilities, qualitative data obtained through interviews with the university management staff showed that there was high demand for technological facilities in all the four university libraries. Some of the new technologies in great demand according to the informants were: wireless activities, social media, e-resources, internet, twitter, face book, Radio Frequency Identification Devise (RFID)- a self service circulation and security system, and e-lib for post graduate students. The demands were in line with user interests. KU library for instance had a computer laboratory on every floor to meet the demands of the users. Internet services were provided to all users free of charge in all the libraries.

New products and services developments were also made possible through technological breakthroughs according to university librarians. For instance: access to e-resources, access to information resources through websites, online payments systems, introduction of virtual accounts, repackaging of information and sending it electronically to users, online marketing of
new services and resources, new electronic databases, access to e-books and e-journals, information literacy training, checking plagiarism, digitization of information resources and creating institutional repository (IR). USIU library had started a LIBCHART (library chatting) a social library through OPAC linked to face book which assist users to access the most popular newspapers electronically. These developments indicated a change from the customary, showing that the libraries were gaining an intrapreneurial posture through technological opportunities.

4.12.3 Organizational Growth

Organizational growth offers opportunities that lead to increased intrapreneurial activities such as the ones already discussed in this chapter. To establish the level of growth in the libraries under study, library staff were asked to rate the growth on a scale of 1 to 5 where 1 was strongly disagree and 5 was strongly agree as presented in Table 4.23.
Table 4.23: Ratings on Organisational Growth Factors that Determined Intrapreneurial Activities in University Libraries

<table>
<thead>
<tr>
<th>Growth</th>
<th>SD(1)</th>
<th>D(2)</th>
<th>NS(3)</th>
<th>A(4)</th>
<th>SA(5)</th>
<th>Total</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library offers attractive opportunities</td>
<td>2</td>
<td>2.4</td>
<td>8</td>
<td>9</td>
<td>10.6</td>
<td>50</td>
<td>16</td>
<td>18.8</td>
</tr>
<tr>
<td>Growth opportunities abundant</td>
<td>2</td>
<td>2.4</td>
<td>9</td>
<td>10.7</td>
<td>17.9</td>
<td>44</td>
<td>14</td>
<td>16.7</td>
</tr>
<tr>
<td>Management continually examine</td>
<td>3</td>
<td>3.6</td>
<td>6</td>
<td>7.1</td>
<td>22.6</td>
<td>38</td>
<td>18</td>
<td>21.4</td>
</tr>
<tr>
<td>potential new markets</td>
<td>3</td>
<td>3.6</td>
<td>9</td>
<td>10.7</td>
<td>25</td>
<td>29.8</td>
<td>36</td>
<td>42.9</td>
</tr>
<tr>
<td>Management takes calculated risk</td>
<td>3</td>
<td>3.6</td>
<td>9</td>
<td>10.7</td>
<td>25</td>
<td>29.8</td>
<td>36</td>
<td>42.9</td>
</tr>
<tr>
<td>Aggregate</td>
<td>3.7</td>
<td>0.963</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Survey Data (2014)

Results in Table 4.23 showed a narrow range of mean scores from 3.5 to 3.8 all of which are favorable and above average. All the five ratings gave an impression that there was potential for growth in both public and private libraries. However, libraries offering many attractive opportunities for future growth was rated highest with a mean score of 3.8. Other factors with a good rating were growth opportunities in the respective libraries being abundant and that library management continually examines potential new market opportunities with an equal mean score of 3.7. Library management taking calculated risks with regard to exploring and seizing growth opportunities was rated least with 3.5 mean score though above average. This meant that risk taking was not held in high regard in exploring and seizing growth opportunities. The standard deviation ranged from 0.928 to 0.995 showing that the responses were only slightly dispersed from the mean.
The results were supported in the literature by scholars who argued that the rate of intrapreneurial activities is proportionate to the rate of the organizational growth (Antoncic & Hisrich, 2004). On the other hand perceived decline in growth could also push an organization into increased renewal activities (Antoncic, 2007).

The study further sought to find out the level of potential growth that would influence intrapreneurial activities in both public and private university libraries. Figure 4.5 shows the mean percentages of potential growth in the two categories of libraries.

![Figure 4.5: Potential Growth by Categories of Libraries](source: Field Data (2014)).

Figure 4.5 demonstrates that there was potential for growth in both public and private libraries with private libraries having slightly higher potential 72.7 percent than public ones with 62.5 percent. Such a rate of growth was likely to influence intrapreneurial activities as discussed in the previous section. These findings were validated by the university librarians and university management staff across the four libraries that there was indeed potential for growth in the respective libraries. The informants emphasized that with the current increase
in user population, more application and use of technology, and partnerships with university departments and other libraries, growth was imminent.

Asked what strategies they had put in place to ensure potential growth for their libraries, all the university librarians gave a wide range of these including: staff training (long and short term), staff motivation through rewards and recognition, expanding library facilities, development of web portals, training users in information skills, acquiring more e-resources, extending opening hours, increasing library budget, implementing institutional repository (IR), collaboration and partnerships with teaching departments and other organizations, and use of posters, brochures, mass media and websites to market themselves. The findings therefore showed that appropriate use of such strategies would lead to an increase in the potential for future growth in these libraries and hence prospects for pursuing more intrapreneurial activities.

The study further sought to establish the growth factors that had influenced creativity and innovation in the respective libraries. Library staff were provided with a list of five items to choose from. Increased demand for information and adoption of new technology were regarded as the most important growth factors and received the highest responses accounting for 23.3 percent each. Increased user population had 22.6 percent, and diversification of information products and services with 18.4 percent. However, the physical library building was not given a high regard accounting for 12.5 percent as an influencing factor on creativity and innovativeness. This contradicted findings by Mukuvi (2013), which showed that physical facilities in any service organization are an important determinant of creativity and
innovation. Other growth factors that influenced creativity and innovation as identified by the library staff included: archiving information, digitizing, diverse modes of study, performance indicators, diversified information needs, frequent changes in the curriculum, changes in IT and information literacy training (IL).

4.12.4 Demand for New Products and Services

Demand for new products and services in a library can be stimulated by various factors such as: opportunities for new products and services, user demand for new products and services growing, variations in user demands and behavior, and users invited and encouraged to get new ideas for products and services. The study sought to establish the extent of demand for new products and services in the libraries under study because the nature and extent of demand determine the extent of influence on intrapreneurial activities. The extent of demand for new products and services was measured on a 1 to 5 Likert scale where 1 was strongly disagree and 5 was strongly agree as presented in Table 4.24.
Table 4.24: Ratings on Demand for New Products and Services - Factors that Determined Intrapreneurial Activities

<table>
<thead>
<tr>
<th>Demand</th>
<th>SD(1)</th>
<th>D(2)</th>
<th>NS(3)</th>
<th>A(4)</th>
<th>SA(5)</th>
<th>Total</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunities for new products</td>
<td>0.0</td>
<td>5.0</td>
<td>6.0</td>
<td>7.4</td>
<td>54.0</td>
<td>65.1</td>
<td>17.0</td>
<td>20.5</td>
</tr>
<tr>
<td>User demand growing</td>
<td>0.0</td>
<td>4.0</td>
<td>4.8</td>
<td>4.8</td>
<td>49.0</td>
<td>59.0</td>
<td>26.0</td>
<td>31.3</td>
</tr>
<tr>
<td>Users served vary greatly</td>
<td>0.0</td>
<td>3.0</td>
<td>3.7</td>
<td>5.6</td>
<td>50.0</td>
<td>61.0</td>
<td>24.0</td>
<td>29.3</td>
</tr>
<tr>
<td>Users invited &amp; encouraged</td>
<td>3.0</td>
<td>3.6</td>
<td>4.8</td>
<td>10.0</td>
<td>45.0</td>
<td>54.2</td>
<td>21.0</td>
<td>25.3</td>
</tr>
<tr>
<td>Aggregate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.0</td>
<td>0.693</td>
</tr>
</tbody>
</table>

Source: Survey Data (2014)

Results from Table 4.24 showed that user demand for new products and services in the libraries was growing and there was great variation in terms of user preferences and expected service levels as indicated by an equal mean score of 4.2. There were many opportunities available for new products and services in these libraries with a mean score of 4.0. Users were also being invited and encouraged to get new ideas for products and services received as shown by a mean scores of 3.9. The standard deviation ranged from 0.73 to 0.82. A standard deviation of 0.73 indicated that the library staff responses were only slightly scattered from the mean while that of 0.82 shows more response scatteredness from the mean.

The findings were consistent with observations made by various scholars (Mukuvi, 2013; Malhan, 2006; Makori, 2010), that as markets for information products and services become more competitive, consumers are experiencing a widening range of choice. Standard
commodity products and services are losing appeal. Customers (users) expect goods and services that are tailored to meet their personal interests and preferences. The finding tended to indicate that demand for new products and services may present an important demand-pull that encourages intrapreneurial efforts.

The study further sought to establish the level of demand for new products and services in the different university libraries for purposes of better understanding of these libraries. The results by categories of libraries are displayed in Figure 4.6

![Figure 4.6: Level of Demand for New Products and Services by Libraries](image)

Results in Figure 4.6 showed that all the four libraries had high demand for new products and services. The university librarians emphasized that demand for new products and services that were technologically based especially, e-resources, electronic databases, remote access, cloud computing was higher compared to other information resources and services.
The study further sought to establish the challenges university libraries faced in meeting the demands for new products and services. Such findings were important for purposes of identifying the most serious challenges. Library staff were provided with a list of nine items to choose from. Increased user population was considered the biggest challenge with a response rate of 17 percent, closely followed by lack of adequate funds at 16 percent, limited resources and diverse university programmes with 13 percent each. Lack of adequate time with 4 percent was considered the least challenge. This finding was surprising considering that an earlier finding in this chapter had indicated that library staff lacked adequate free time for creativity and innovativeness. Other challenges identified by the respondents were: lack of motivation, poor internet services, vast amounts of information, and staff rotation from one section of the library to another.

Interviews with university librarians and university management staff supported responses from library staff that there were various challenges faced in meeting the demands for new products and services in the libraries. These were almost similar to those reported by library staff: limited skilled and professionally trained full time staff, which meant a heavy reliance on casual staff, a constrained budget, inadequate space, power fluctuations, insecurity of IT accessories, theft and mutilation of information material, limited IT skilled staff, lack of adequate management support, insufficient time for creativity and innovation, bureaucracy in implementing new ideas and projects, unreliable internet connectivity, poor information literacy skills among the users, unwillingness by users to exploit fully the library information resources, library staff lacking motivation to develop new ideas and an increase in user population. Such challenges require urgent attention otherwise they may negate the spirit of
creativity and innovation in the university libraries.

To ascertain whether university libraries had put in place any strategies in response to user demands for new products and services, library staff were provided with a list of seven items to choose from. Provision of e-resources was considered the most popular strategy with a response rate of 17.5 percent, followed closely by adopting new technologies 17.2 percent. The findings are consistent with earlier ones in this chapter that emphasized the importance of technological opportunities in the libraries. Enhancing information literacy skills accounted for 16 percent, while analysis of user demands and timely response to user demands were rated equally at 14.4 percent. Extension of opening hours recorded 11.8 percent and introduction of virtual reference at 8.7 percent were rated lowest implying that they were not considered important strategies. Other strategies identified by the respondents were: creating awareness of available products, dealing with specific demands, faster response rate, increasing library staff capacity, and staff public relations training.

In addition, university management through interviews suggested other strategies such as: interlibrary cooperation, increased budget, increase in internet bandwidth and planning an ultra modern library building (Egerton). The findings were supported in a study by Smith (2012), who observed that the successful library of the near future will be the one that does a number of choice things well in response to user demands for quality products and services.

4.13 Correlation Analysis Results for External Environmental Conditions

The study set to examine the associations between the external environmental conditions
which included: dynamism, technological opportunities, organizational growth, and demand. Correlation tests were conducted using a correlation matrix as shown in Table 4.25 to investigate the possible associations between the conditions.

### Table 4.25: Correlation Matrix of External Environmental Conditions

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Dynamism</th>
<th>Technological opportunities</th>
<th>Organisational growth</th>
<th>Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamism</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technological opportunities</td>
<td>-0.061</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational growth</td>
<td>-0.201</td>
<td>0.428**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Demand</td>
<td>0.150</td>
<td>0.248*</td>
<td>0.353**</td>
<td>1</td>
</tr>
</tbody>
</table>

N= 87

* Correlation is significant at the 0.05 level (2 tailed)
** Correlation is significant at the 0.01 level (2 tailed)

The value in each cell of the symmetric matrix in Table 4.25 is the correlation coefficient. There was a significant positive correlation between organization growth and technological opportunities, demand and organizational growth, demand and technological opportunities at $r=0.428$; $r=0.353$; $r=0.248$ respectively. This meant that the pairs of the variables were associated and as values of one variable increased, those of the other variable also increased.

However, though there was a positive correlation between demand and dynamism, it was not significant. Negative correlations were noted between technological opportunities and dynamism, organizational growth and dynamism. This implied that although the pairs of
variables were associated, as the values of one variable increased, those of the other one decreased.

4.14 Regression Analysis Results for External Environmental Conditions

The study conducted a multiple regression analysis to determine the extent to which each of the external environmental conditions explained the variance in the intrapreneurial activities. The results are presented in Table 4.26

Table 4.26: Regression Analysis Results for Each of External Environmental Conditions on Intrapreneurial Activities

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Coefficient</th>
<th>t statistic</th>
<th>P values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.826 (0.664)</td>
<td>1.243</td>
<td>0.217</td>
</tr>
<tr>
<td>Dynamism</td>
<td>0.257** (0.121)</td>
<td>2.130</td>
<td>0.036</td>
</tr>
<tr>
<td>Technological opportunities</td>
<td>0.167 (0.140)</td>
<td>1.189</td>
<td>0.238</td>
</tr>
<tr>
<td>Organizational growth</td>
<td>0.459*** (0.122)</td>
<td>3.773</td>
<td>0.000</td>
</tr>
<tr>
<td>Demand for new product/services</td>
<td>-0.176 (0.144)</td>
<td>-1.220</td>
<td>0.226</td>
</tr>
<tr>
<td>Observations</td>
<td>87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R square</td>
<td>0.315</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F statistic</td>
<td>9.421</td>
<td></td>
<td>0.05</td>
</tr>
<tr>
<td>df</td>
<td>4.82</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** and ** the coefficient is significant at 1% and 5% respectively.

Standard error in parenthesis

( Other regression results for all the external environmental conditions combined together on intrapreneurial activities are presented in: Table A7, Model Summary: Table A8, ANOVA: and Table A9, Regression Coefficients in Appendix VII)
The positive and significant coefficient of dynamism at 0.257 was above zero and 5 percent significant. This showed a positive significant relationship between dynamism and intrapreneurial activities. This meant that a single unit change in dynamism increased intrapreneurial activities by 0.257 units implying that dynamism had a positive influence on intrapreneurial activities. This implied that any unpredictable changes that might occur from outside the library setting were likely to influence intrapreneurial activities. The findings concurred with previous studies by Behram and Ozdemira (2014) and Felicio et al. (2012) that turbulent environments stimulate the pursuit of entrepreneurship in an organization, leading to adoption of intrapreneurial posture.

The coefficient of technological opportunities was found to be positive at 0.167 which was above zero, but was not statistically significant. This meant that although there was a relationship between technological opportunities and intrapreneurial activities, it was not significant. However, a single unit change in technological opportunities increased intrapreneurial activities by 0.167 units. This implied that changes in technological opportunities were likely to influence intrapreneurial activities. The results were supported in previous studies by Antoncic (2007) and Antoncic and Hisrich (2004), which showed that technological opportunities lead organizations to adopt an intrapreneurial posture.

The positive and statistically significant coefficient of organisational growth at 0.459 which was above zero and at 5 percent level of significant, implied organizational growth had a positive contribution on intrapreneurial activities. It meant that a single unit change in organizational growth increased intrapreneurial activities by 0.459 units. The findings
supported a previous study by Antoncic and Hisrich (2004), that the rate of growth of intrapreneurial activities is proportionate to the rate of organizational growth.

The coefficient of demand for new products/services was found to be statistically insignificant. This demonstrated that demand for new products/services had no influence on intrapreneurial activities. The findings contradicted observations by Antoncic and Hisrich (2004), that demand for new products/services present an important demand-pull that encourages intrapreneurial efforts.

From the findings shown in Table 4.26, the \( R^2 \) for the regression of variables of external environmental conditions on intrapreneurial activities was 0.315 implying that only 31.5 percent of intrapreneurial activities were explained by the variables of external environmental conditions. The rest 68.5 percent might be explained by other factors. The ANOVA test was conducted to determine whether the model worked in explaining the relationship among the variables as postulated in the conceptual model. The results in Table 4.26 showed an F-ratio \( F(4, 82) = 9.421 \) with a significant level of \( p<0.05 \) (5 percent). This implied that the model significantly predicts the outcome of the relationship between the variables of external environmental conditions and intrapreneurial activities.

**4.15 The Overall Correlation Analysis Results**

The study conducted an overall correlation analysis to test the strength of association between individual staff factors, internal organization factors and external environmental conditions with intrapreneurial activities. To clearly show the correlation analysis results, the study used a correlation matrix shown in Table 4.27.
Correlation analysis was conducted to establish the association between the individual staff factors combined and intrapreneurial activities. Table 4.27 showed that individual staff factors were found to have a significant positive correlation with intrapreneurial activities with a correlation coefficient of \( r = 0.639 \) which was significant at \( P < 0.000 \). The relationship was significant at 95% level of significance. This demonstrated that the relationship between all the individual staff factors combined and intrapreneurial activities was significant at 63.9 percent significance level with a \( P \)-value < 0.000. The findings supported previous studies by Wawire and Messah (2010), Rutherford and Holt (2007) and Zhao, (2005), who observed

<table>
<thead>
<tr>
<th></th>
<th>INTRAPRENEURAL ACTIVITIES</th>
<th>INDIVIDUAL STAFF FACTORS</th>
<th>INTERNAL ORGANIZATION FACTORS</th>
<th>EXTERNAL ENVIRONMENTAL CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRAPRENEURAL ACTIVITIES</td>
<td>Pearson Correlation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INDIVIDUAL STAFF FACTORS</td>
<td>Pearson Correlation</td>
<td>.639**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>87</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>INTERNAL ORGANIZATION FACTORS</td>
<td>Pearson Correlation</td>
<td>.283**</td>
<td>.410**</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.008</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>87</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>EXTERNAL ENVIRONMENTAL CONDITIONS</td>
<td>Pearson Correlation</td>
<td>.417**</td>
<td>.351**</td>
<td>.493**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.001</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>87</td>
<td>87</td>
<td></td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
that the essence of intrapreneurial efforts in an organization revolves around the innovative activities of the individual employees.

Table 4.27 further showed the correlation results for the association between the internal organization factors combined and intrapreneurial activities. The results showed a positive relationship with intrapreneurial activities that was not significant at 95 percent level of significance and a correlation coefficient of $r = 0.283$ which was significant at $P < 0.008$. This demonstrated that the association between all the internal organization factors combined and intrapreneurial activities was positive though weak at 28.3% significance level with a $P$-value of $= 0.008$. The positive relationship between internal organization factors and intrapreneurial activities was widely supported in prior studies by Monnavarian and Ashena (2009); Antoncic and Hisrich (2003) and Hornsby et al. (2002).

From Table 4.27, it is clear that all the external environmental conditions combined had a positive correlation with intrapreneurial activities with a correlation coefficient of $r = 0.417$, which was significant at $P < 0.000$. This demonstrated that the association between all the external environmental conditions combined and intrapreneurial activities was found to be significant at 41.7% with a significance level $p$-value $< 0.000$. The findings supported those of previous studies by Behram and Ozdemirci (2014); Caruana et al. (2002) and Antoncic and Hisrich (2001), that emphasized the positive association between external environmental conditions and intrapreneurial activities. The overall correlation analysis thus showed that individual staff factors had the highest correlation with intrapreneurial activities compared with the other two independent variables.
4.16 The Overall Multiple Regression Results

The study carried out an overall multiple regression analysis to determine the extent to which the three independent variables simultaneously explained the variance in the dependent variable. The results are presented in Table 4.28

Table 4.28: Overall Regression Analysis Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>T statistic</th>
<th>P values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.621</td>
<td>1.701</td>
<td>.093</td>
</tr>
<tr>
<td></td>
<td>(.953)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual Staff Factors</td>
<td>.323***</td>
<td>6.459</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>(.050)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal Organisation Factors</td>
<td>-.036</td>
<td>-.830</td>
<td>.409</td>
</tr>
<tr>
<td></td>
<td>(.043)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External Environmental Conditions</td>
<td>.126***</td>
<td>.251</td>
<td>.010</td>
</tr>
<tr>
<td></td>
<td>(.048)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R square</td>
<td>0.418</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F statistic</td>
<td>14.717</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P value</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>3.83</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** and ** means that the coefficient is significant at 1% and 5% respectively
a. Dependent variable: Intrapreneural Activities

Standard error in parentheses

The study carried out an overall regression analysis to determine the significance of each of the three independent variables on the dependent variable. Table 4.28 thus presented the
coefficients of the three independent variables versus intrapreneurial activities which was the dependent variable. The beta weight is the average amount the dependent variable increases or decreases when the independent variable increases or decreases by one standard deviation (when all other variables are held constant). As can be observed from the table, all the individual staff factors combined had a coefficient of 0.323 and was statistically significant at 1% level of significance. The coefficient was significantly greater than zero and indicates clearly that there was a positive significant relationship between individual staff factors and intrapreneurial activities. This also meant that a single unit change in all the individual staff factors combined increased intrapreneurial activities by 0.323 units. This denoted that individual staff factors had a positive influence on intrapreneurial activities in university libraries. The results were in agreement with prior studies by Alpkan (2010) and Rutherford and Holt (2007), that emphasized the contribution of employees towards intrapreneurial activities in an organization.

The coefficient of all the internal organization factors combined was -0.036 which was statistically insignificant. This demonstrated that internal organization factors had no influence on intrapreneurial activities. The regression results were thus contrary to previous studies (Antoncic, 2007; Antoncic & Hisrich, 2004), that considered internal organization factors to be a more important antecedent of intrapreneurial activities than any other factors. This discrepancy may be attributed to the differences in the industry considering that libraries are non-profit making, service oriented organizations.

Table 4.28 also showed that all the external environmental conditions combined had a
coefficient of 0.126 that was statistically significant at 1% level of significant. The coefficient was significantly greater than zero. This indicated that there was a positive significant relationship between external environmental conditions and intrapreneurial activities in university libraries. This meant that a single unit change in external environmental conditions increased intrapreneurial activities by 0.126 units. The results supported prior studies by Antoncic and Hisrich (2001) and Caruana et al. (2002), that external environmental conditions was a key antecedent of intrapreneurial activities.

The overall regression analysis thus showed that individual staff factors contributed more on intrapreneurial activities than any other independent variable contrary to previous intrapreneurship studies. This meant that once the individual staff factors and external environmental conditions are taken into account, intrapreneurial activities no longer varies with internal organization factors. This implied that after accounting for individual staff factors and external environmental conditions, internal organization factors would have no significant influence on intrapreneurial activities in university libraries.

From the findings shown in Table 4.28 the R square for the regression of the three independent variables on intrapreneurial activities was 0.418, implying that only 41.8 percent of intrapreneurial activities were explained by the independent variables. The rest 58.2 percent might be explained by other factors. The ANOVA test was conducted to determine whether the model worked in explaining the relationship among the variables as postulated in the conceptual model. The results in Table 4.28 showed an F-ratio F (3, 83) = 14.717 with a significant level of p<0.05. This implied that the model significantly predicts the outcome of
the relationship between the predictor and the predicted variables.

The study finally sought the opinions of the library staff concerning the measures that university libraries should put in place in order to promote more intrapreneurial activities. The results showed a wide range of suggestions including; staff training, motivating staff, having an adequate budget, building modern libraries (Egerton), marketing library products, employing more permanent staff with requisite skills, encouraging staff to come up with new ideas, promoting trained staff, expanding library facilities, rebranding library products and services, seminars and workshops for staff, benchmarking with other libraries and open communication with the bosses. The wide range of suggestions could be inferred to mean that the library staff were eager and passionate about their libraries becoming more intrapreneural.

To gain further insight into how university libraries in Kenya could become more intrapreneural, university librarians were also asked to offer their suggestions. Similar suggestions to those of the library staff were offered including: more staff training and retraining particularly on entrepreneurship, new mind set for library and management staff geared towards global changes, embracing technological changes, allocation of more funds, motivating staff to be more creative by rewarding and recognizing them appropriately, collaboration and partnerships with other stakeholders, more staff exposure, management being more receptive to staff ideas, embracing change and moving away from the customary. The results indicated that the success of intrapreneurial thinking in the libraries should start from the top leadership and trickle down to the rest of the staff. Conversely, if
top leadership is not willing to embrace changes and adopt an intrapreneurial posture, the intrapreneurial efforts in these libraries will not bear results.

Asked to comment on the future plans that the university management had in the development of intrapreneurial activities in the university libraries, the management staff suggested: implementation of CUE’s recommendations of allocating 10 percent of the university’s budget to the libraries, putting up an ultra modern library (Egerton), re training staff particularly in IT, formation of IT committees to assist staff come up with new ideas, encouraging teamwork between library staff, teaching staff, students and administrators to assist in soliciting for funds and other resources required to boost intrapreneurial activities. The latter idea was supported by Neal’s argument (2001), that if an intrapreneurial approach is one goal, then building partnerships and collaborations both within and beyond the campuses is a major means of attaining that goal.
CHAPTER FIVE
SUMMARY, CONCLUSIONS AND POLICY IMPLICATIONS

5.1 Introduction

This chapter presents a summary of the study findings on determinants that influenced intrapreneurial activities in selected university libraries in Kenya. Through addressing the research objectives, conclusions were made and recommendations for policy implications were drawn. The study contribution to knowledge creation was also discussed. The chapter also offered suggestions for further research.

5.2 Summary of the Study Findings

The adoption of intrapreneurial activities in both small and large organizations has become a common practice as a way of adding value to their functions. However, empirical research showed that the status of intrapreneurial activities in university libraries in Kenya was not clear. In addition, the determinants of these intrapreneurial activities were not empirically established. The purpose of this study was therefore to establish the status of intrapreneurial activities and their determinants in the libraries under study. The study was guided by three objectives namely; to examine the individual staff factors, determine the internal organizational factors, and establish the external environmental conditions that determined intrapreneurial activities in university libraries under study.

To achieve the study objectives, data was collected from 87 library staff in selected university libraries using a structured questionnaire. Additionally, four university librarians and three university management staff each from the respective universities were interviewed.
using an interview guide. The data collected was analysed using descriptive and inferential statistics. The results showed that although intrapreneurial activities were not formally institutionalized, both public and private university libraries had taken an intrapreneurial posture. Diverse intrapreneurial activities were taking place with a major focus on technological innovations in both public and private university libraries. The study findings further showed that university libraries had put in place various strategies to enhance intrapreneurial activities. Future plans for the same were in place.

Multiple linear regression models were used to determine the effects of individual staff factors, internal organizational factors, and external environmental conditions on intrapreneurial activities. The results showed that individual staff factors were found to be stronger predictors of intrapreneurial activities compared to the other two types of determinants. It was followed by external environmental conditions. However, internal organizational factors did not have a significant contribution on intrapreneurial activities. Considering the emphasis put in the proposed theories and research models, the results were surprising and cast doubt on the role of internal organizational factors on intrapreneurial activities in university libraries. Although all the variables contributed to the study results, there was need for more university management consideration on internal organizational factors while planning for intrapreneurial activities in the respective libraries.

5.3 Conclusions

On the basis of the findings, the study concluded that engaging in intrapreneurial activities in university libraries was one of the response strategies of adding value to library operations,
empowering individual employees and leading the libraries to become more competitive. Although both public and private university libraries had engaged in diverse intrapreneurial activities, these activities had not been institutionalized. It is therefore imperative for policy makers to take the necessary measures to ensure that such activities are institutionalized for these libraries to gain a competitive posture and meet the society expectations. This implied integration of innovation as a key element within the library mainstream by having support mechanisms on procedures for dealing with new ideas and having flexible organizational boundaries.

Previous studies in intrapreneurship associated intrapreneurial activities with large business firms of developed countries and transitional economies of Central and Eastern Europe as a way of boosting their overall performance and leading them to competitiveness. This study established that by creating a conducive and supportive environment, service oriented, non profit making organizations such as university libraries could benefit equally by engaging in intrapreneurial activities.

Objective one of the study sought to examine the individual staff factors that determined intrapreneurial activities in university libraries. The study established that there was a positive and significant relationship between individual staff factors and intrapreneurial activities. The findings were surprising considering that individual staff factors did not feature as a key determinant of intrapreneurial activities in most of the previous intrapreneurship studies compared to the other independent variables. It was therefore important for university management to come up with policies that would empower library
staff to be more creative and innovative.

Objective two of the study sought to determine internal organizational factors that determined intrapreneurial activities in university libraries. The study results showed that although there was a positive relationship between the independent and dependent variable, it was not significant. The findings thus disapproved the emphasis in previous intrapreneurship studies and in the proposed study theories and models that internal organization factors was a key determinant of intrapreneurial activities in an organisation. Such a discrepancy could be attributed to the fact that while previous CE studies dwelt more on business firms, the current study was based on libraries which are service oriented, non profit making organizations. It was therefore imperative for university management to take the necessary measures to ensure that internal organization factors do not negate the intrapreneurial spirit in university libraries.

The third objective of the study was to establish external environmental conditions that determined intrapreneurial activities in university libraries. These conditions were found to have a positive significant relationship with intrapreneurial activities. The conclusion drawn was that if university libraries become more flexible and adaptable to external changes, this would most likely influence their intrapreneurial efforts. The libraries should be more proactive and maintain a competitive posture in order to meet the various user demands.

The study thus concluded that individual staff factors and external environmental conditions were positively correlated with intrapreneurial activities while internal organization factors
was not. This meant that individual staff factors and external environmental conditions had some significant influence on intrapreneurial activities while internal organization factors did not. This implied that once the individual staff factors and external environmental conditions are taken into account, intrapreneurial activities no longer varied with internal organization factors. It meant that after accounting for individual staff factors and external environmental conditions, internal organization factors would have no significant influence on intrapreneurial activities in university libraries.

5.4 Policy Implications

From the study findings and conclusions several recommendations were drawn. University management need to institutionalize intrapreneurial activities as a measure of adding value and competitiveness in the libraries. This amounted to the integration of innovation as a key element within the library mainstream by having support mechanisms on procedures for dealing with new ideas and having flexible organizational boundaries. This was because the findings showed that intrapreneurial activities had not been institutionalized in university libraries and were taking place by default.

There was need for university libraries to focus more on young members of staff so that they model into intrapreneurial activities in their workplace resulting in generation of more creative and novel ideas. This was because the study results had shown that younger members of library staff were more enterprising and willing to try new things compared to the older ones who are risk averse. In addition, university management could also arrange for younger members of library staff to take advantage of the available resources such as the
Chandaria Business and Incubation Centre (KU) or CEED (USIU) to develop their creative ideas and acquire new skills and knowledge on intrapreneurial activities. This was because the study results had shown that library staff benefitted from such exposure and were willing to use the acquired entrepreneurial knowledge to effect changes in their workplace. Kenyatta university management had also indicated that the Chandaria Business and Incubation Centre was a reserve for students only.

A review of the library staff training programmes by the relevant authorities was necessary so as to infuse critical aspects of entrepreneurship resulting to more creative, innovative and risk taking inclined staff. Such training needs could be met through early integration of entrepreneurship into the curricula processes in various institutions that offer library and information science programmes. This was because the study findings had shown that most library staff lacked the requisite knowledge on entrepreneurship and university libraries had no provision for such training.

Library staff should also be supported to attend and participate in relevant short courses, seminars, workshops and conferences that would enhance their skills and knowledge in entrepreneurship. This would result to more exposure and acquisition of new knowledge and skills that would benefit both the libraries and the staff intrapreneurally. This was because the study results established that library staff who had attended such courses had benefitted by being able to make decisions and cope with challenges in their workplace.

University management therefore should take cognizance of the fact that staff training in
entrepreneurship and empowerment are key strategies to enhancing creativity, innovativeness, risk taking and competitiveness. This was because although university management had conceded that entrepreneurship knowledge was essential for library staff, at the same time they contradicted themselves by saying that they had no policy for training on the same.

There was urgent need for university management to address the various challenges that hinder development and implementation of staff ideas/projects in libraries as a way of motivating library staff creative and innovative endeavors. This was because the study results had shown several impending challenges that hindered development and implementation of staff new ideas and projects in the libraries. Such challenges included: lack of adequate free time and autonomy, inadequate financial and non financial resources, a lot of bureaucracies in implementation of staff ideas and too many written rules and procedures.

Respective university management should comply with Commission for University Education recommendations of providing 10 percent of the total institutional budget to support breakthrough innovations in the libraries. Study findings established that funding was inadequate and not readily available to support staff new ideas/project development and implementation.

Decision making in the universities should be devolved to some extent in order to give library staff more freedom and make them feel valued as their contributions are taken into account. This is because from the study results, bureaucracies in the universities seemed to be
stifling staff creativity and innovativeness. Library staff had limited freedom to make decisions or implement their ideas/projects without consulting those in authority and there were too many obstructions in their intrapreneurial efforts.

Respective university management needed to review their current rewarding methods and come up with other more appropriate, reward practices based on performance resulting in better motivation for staff creativity and innovativeness. This was because the study findings showed that although university management used various financial and non-financial methods to reward and recognise library staff for their performance, the staff were dissatisfied with the current methods. This was evidenced by the persistent low ratings on this attribute. University management should also be reasonable in assigning workloads to the library staff and allow them adequate free time to work as individuals or as a team. This would result to more staff creative ideas, pursuance of innovation and encourage the staff to take risks for putting their novel ideas into practice. This was because the study results established that university libraries do not provide adequate free time to staff for creativity and reflection.

University libraries needed to become more flexible, adaptable and ready to change direction in order to meet the diverse user needs and maintain a competitive posture. This was because the study findings showed that these libraries had high level technological opportunities and potential for growth. There was also high competition from other information providers in this sector. The study results also established that not only are the numbers of university library users increasing, but their individual needs and demands are changing, becoming
more varied and complex. The clientele thus have high expectations and demands of what the libraries should offer.

5.5 Contributions of the Study to Knowledge

The type of organizations in which this study was conducted had some implications. Previous studies in intrapreneurship had emphasized on individual staff factors, internal organizational factors and external environmental conditions as determinants influencing intrapreneurial activities in large business firms in developed countries. However, none of the studies had attempted to validate the same determinants in university libraries particularly in Kenya. By focusing on university libraries, the current study results established that service oriented, non profit making organizations such as university libraries are capable of developing organizational characteristic attributes of intrapreneurship. The results created a different image concerning these libraries becoming more proactive and changing from their customary way of doing things. This was evidenced by the wide range of intrapreneurial activities that emerged in the studied libraries in the last two years, prior to the study. The implication was that these libraries need to uphold this image by becoming more flexible and adaptable to changes. This would enable them meet the high demands and expectations of users and maintain a competitive posture.

The study results also showed that despite the fact that libraries are service oriented, non profit making organizations, intrapreneurial research may be pursued using same determinants as those of business firms. Previous studies discussed in chapter one had shown that intrapreneurship in university libraries had not received much focus in academic research. This study therefore has contributed to the literary knowledge in this sector. By
applying and adopting the intrapreneurial measurement scales developed by Hornsby et al. (2002) and Zahra (1993), into university libraries in Kenya, the study validated these scales in service oriented, non profit making organizations and enhanced their universal applicability.

In accordance with the three research objectives, the study emphasized the importance of each of the determinants as they relate to intrapreneurial activities. The study confirmed that individual staff factors and external environmental conditions had a positive and significant influence on intrapreneurial activities in university libraries. However, internal organizational factors had a positive but not significant influence. As such it was important for the university management to give more attention to internal organizational factors while planning for intrapreneurial activities in university libraries. More management support was required in terms of providing adequate and timely financial resources, more staff autonomy, appropriate rewards based on performance, adequate free time for staff creativity and project development and supportive structures with flexible boundaries that enable library staff to look at the libraries from a broad perspective. Such support would empower library staff to become more creative and innovative.

The proposed theory and models that guided this study focused on the effects of individual staff factors, internal organizational factors and external environmental conditions on intrapreneurial activities in large business firms of developed countries. Although university libraries are service oriented, non profit making organizations, the results of the study showed that the same theories and models could be applied in research in these
organizations. However, contrary to the emphasis in the study theories and models, it emerged that individual staff factors and external environmental conditions had a more positive and statistically significant relationship with intrapreneurial activities than internal organization factors in university libraries. The implication of this finding was more management support for library staff, particularly training in entrepreneurship to empower them to cope with global competitiveness in a rapidly changing environment.

5.6 Limitations of the Study

The study did not incorporate the satellite campuses and newly established university libraries because it dealt with intrapreneurship in established university libraries. Further, the study focused on determinants of intrapreneurial activities in university libraries. This meant that other library activities and functions were out of the scope of this study. The study also presumed the honesty of the respondents to give correct information regarding determinants of intrapreneurial activities in the respective libraries. The study would have been enriched by inclusion of documented information related to research topic. However, the libraries’ management were not willing to avail such documents for scrutiny. To get a clear picture of the determinants of intrapreneurial activities in the libraries, other measures such as questionnaires and indepth probing during interviews were used.

The findings of this study may be generalized to the situations in other large and established public and private university libraries in Kenya. However, the generalization should be considered with some caution since the selected universities may be unique in many aspects including policies, guidelines and strategic plans. The study did not cover exhaustively all the
variables that may influence intrapreneurial activities in university libraries in Kenya hence the outcome of the study was limited in this sense. The study was cross sectional and therefore sheds no light on what individual staff factors, internal organization factors or external environmental conditions may determine intrapreneurial activities over time.

5.7 Suggestions for Further Research

This study majorly focused on determinants of intrapreneurial activities in both public and private university main libraries. Based on the findings and conclusions of this study, the following areas were recommended for further research:

The current study was a cross sectional snapshot among the public and private university libraries in Kenya and did not cover the evolutionary trend of the study variables. University libraries would benefit a lot if a similar study was carried out on longitudinal basis over a specified period of time so as to examine the evolutionaly effect of determinants of intrapreneurial activities in these libraries. This study focused on four university libraries only. A national study could also be carried out on determinants influencing intrapreneurial activities across all the university libraries in Kenya. In the methodological approach, the study employed descriptive and multiple regression analysis for statistical analysis of the data. A study including a more rigorous statistical tool such as structural equation modeling (SEM) is thus recommended. The study also adopted a sample size of 114 out of the total population of 162 library staff. A study incorporating library users is recommended so as to yield a bigger sample size and thus give more accurate results.

The study was based on university libraries only. A study on complimentaries of
intrapreneurial activities across the universities on the quality of the programmes being offered is recommended. This study attempted to investigate the status of intrapreneurial activities in both public and private university libraries. A comparative study on determinants of intrapreneurial activities between university libraries and pertinent industry is recommended. ICTs were found to have a lot of influence on intrapreneurial activities in the libraries under study. A study specifically on the influence of ICTs on the dynamics of university intrapreneurial undertakings would benefit the universities.
REFERENCES


Dear participant,

This questionnaire is designed to facilitate a Ph.D. research study on “Determinants of intrapreneurial activities in selected university libraries in Kenya”. The information you provide will help university libraries to better understand how to change from the customary way of doing things and become more creative and innovative and thus improve on their performance. I request you to respond to all the questions frankly and honestly.

Your response will be kept confidential and will be used for academic purpose only. Thank you for your time and cooperation. I greatly appreciate your help in furthering this research endeavor.

For further information or clarification, feel free to contact:

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Kenyatta University,
Department of Library and Information Science
P.O. Box 43844,
NAIROBI.

Cell phone 0721279399
e-mail: mmathu07@yahoo.com
APPENDIX II: QUESTIONNAIRE FOR LIBRARY STAFF.

The purpose of this questionnaire is to collect information from you regarding the Determinants of Intrapreneurial Activities from your library. (These activities include: new product development and improvement, new service development and improvement, new organizational routines and procedures, new venture creation, and new strategies). The information you give will be treated with a lot of confidentiality. Kindly answer all the questions in the various sections.

Part A: Status of Intrapreneurial Activities in University Libraries

1. Name of the University...............................................................

2. Indicate any intrapreneurial activities that have been developed in your library in the last two years under each of the following categories:

   i) New product development and improvement............................
   ii) New service development and improvement............................
   iii) New organizational routines and procedures...........................
   iv) New venture creation..........................................................
   v) New strategies.................................................................

3. Please indicate by ticking the level at which the following intrapreneurial activities have increased over the past two years in your library

<table>
<thead>
<tr>
<th>Intrapreneurial Activity</th>
<th>Very low (1)</th>
<th>Low (2)</th>
<th>Uncertain (3)</th>
<th>High (4)</th>
<th>Very high (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New product development and improvement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New service development and improvement</td>
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<td></td>
</tr>
<tr>
<td>New organisation routines and procedures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New venture creation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New strategies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Part B: Individual Staff Factors and Intrapreneurial Activities

I Respondents Characteristics

4. a) Gender i) Male ( ) ii) Female ( )  
b) Does gender difference influence work performance in your library? i) Yes ( ) ii) No ( )

5. a) Age category in years 
   i) 21- 30 ( ) ii) 31 - 40 ( ) iii) 41 - 50 ( ) iv) 51 – 60 ( ) v) Above 60 ( )  
b) Is there any difference in creativity and innovativeness on account of age in your library? i) Yes ( ) ii) No ( )

II Level of Education

6. Indicate the level of your educational qualifications.  
i) Certificate ( ) ii) Diploma ( ) iii) Bachelors degree ( ) iv) Masters degree ( )  
v) PhD ( ) vi) others (specify)…………………………………………………………

7. In a scale of 1- 5 where 1= Strongly Disagree, 2= Disagree, 3=Not Sure, 4= Agree, 5= Strongly Agree, indicate the extent to which you agree with each of the following statements on the influence of education on intrapreneurial activities in a library

<table>
<thead>
<tr>
<th>S/NO</th>
<th>Attribute</th>
<th>SD</th>
<th>D</th>
<th>NS</th>
<th>Agree</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>Entrepreneurship education is a central tool to increase entrepreneurial activities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>ii</td>
<td>Entrepreneurship education promotes creativity and innovation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii</td>
<td>Entrepreneurship education makes the staff highly motivated; pro-active; self-confident and willing to face challenge;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

III. Level of Library Staff Training in Entrepreneurship

8. Does your library have a training and development programme on entrepreneurship for the members of staff? i) Yes ( ) ii) No ( )
9. Indicate any short courses/seminars/workshops/conferences you have attended related to entrepreneurship in the last two years.

10. Explain how the training you received benefitted you in decision making and coping with challenges in your place of work.

11. Please rate by ticking the level of entrepreneurial training in your institution
   1) Very Low ( )  2) Low ( )  3) High ( )  4) Very high ( )

12. In a scale of 1-5 where 1= Strongly Disagree, 2= Disagree, 3=Not Sure, 4= Agree, 5= Strongly Agree, indicate the extent to which you agree with each of the following statements on the influence of library staff training in entrepreneurship on intrapreneurial activities in a library

<table>
<thead>
<tr>
<th>S/NO</th>
<th>Attribute</th>
<th>SD</th>
<th>D</th>
<th>NS</th>
<th>Agree</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>Training stimulate innovative and entrepreneurial mindsets among employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td>Entrepreneurship training empowers staff to become better communicators; decision-makers; problem solvers; and systematic thinkers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii</td>
<td>Training makes the staff less dependent; less risk averse; able to live with uncertainty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv</td>
<td>The staff would be inclined to take risks and develop new services and methods for the delivery of existing services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IV. Level of Entrepreneurship Knowledge

13. Please rate by ticking the level of your entrepreneurship knowledge in library Services
   1) Very Low ( )  2) Low ( )  3) High ( )  4) Very high ( )

14. Indicate by ticking below how you use your entrepreneurship knowledge to effect changes in your library

   i). Setting goals and timelines ( )
ii). Ability to use library resources

iii). Using new methods to offer services

iv). Ability to use new technologies

v). Organising electronic databases

vi). Marketing of library information services and resources

vii). Providing information literacy skills to users

viii). New methods of providing current awareness services and selective dissemination of information

ix). Others (specify) ...............................................................

V. Working Experience

15. How many years have you worked in a library environment or an information centre? .................................................................

16. Have you ever worked in a college/university library setting before?
i) Yes ( ) ii) No ( )

17. Indicate by ticking your main responsibilities in the library where you work.

i) Acquisitions ( )

ii) Processing ( )

iii) Reference ( )

iv) Information technology ( )

v) Africana/special collection/archives ( )

vi) Bindery/photocopying ( )

vii) Indexing and Abstracting ( )

viii) Others specify .................................................

18. Indicate by ticking the challenges that you have encountered in the development and implementation of new ideas in your library

i) Lack of adequate resources ( )

ii) Lack of relevant skills ( )

iii) Technological Obsolescence ( )
iv) Lack of management support

v) Delays in implementation of new ideas

vi) Attitude of the bosses towards new changes

vii) Others (specify) ...........................................

Part C: Internal Organizational Factors and Intrapreneurial Activities

19. Rate the extent to which the following organizational factors determine intrapreneurial activities in your university library.

Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

<table>
<thead>
<tr>
<th>S/NO</th>
<th>Factors</th>
<th>SD</th>
<th>D</th>
<th>NS</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
</table>
| I    | Management Support
Money is often available to get new project ideas off the ground. |    |   |    |    |    |
| ii   | Employees with innovative ideas often receive management encouragement for their activities |    |   |    |    |    |
| iii  | University management accept staff ideas and suggestions if forwarded to them |    |   |    |    |    |
| iv   | The library is quick to use improved work methods developed by the staff |    |   |    |    |    |
| v    | Work Discretion
Staff have much freedom on their jobs and are left on their own to do their work |    |   |    |    |    |
| vi   | This Library provides the chance for staff to be creative and try their own methods of doing the job. |    |   |    |    |    |
| vii  | This library provides the chance to do something that makes use of my abilities. |    |   |    |    |    |
| viii | Rewards
Individual risk takers are recognized for their willingness to champion new projects whether eventually successful or not. |    |   |    |    |    |
| ix   | The university librarian gives special recognition when work performance is especially good |    |   |    |    |    |
| x    | Rewards are performance based. |    |   |    |    |    |
| xi   | Time availability
Staff have plenty of time to get their daily work done |    |   |    |    |    |
| xii  | Jobs are structured such that there is very little time to think about wider organizational problems. |    |   |    |    |    |
During the past three months my work load was too heavy to spend time on developing new ideas.

**Organisational boundaries**
There are many written rules and procedures that exist for doing any major tasks in the library.

Job description clearly specifies the standards of performance on which job is evaluated.

Staff seldom have to follow the same work methods or steps for doing major tasks from day to day.

---

20. In a scale of 1-5, indicate by ticking the extent to which you think the following organizational factors influence intrapreneurial activities in your library.

<table>
<thead>
<tr>
<th>S/NO</th>
<th>Attribute</th>
<th>Very Low</th>
<th>Low</th>
<th>Uncertain</th>
<th>High</th>
<th>Very High</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>Management Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td>Work discretion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii</td>
<td>Rewards</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv</td>
<td>Time availability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v</td>
<td>Organizational boundaries.</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

21. Indicate by ticking any of the following measures that have been used by your university management to support library staff to become more creative and innovative

i) Rewarding system .................................................. ( )

ii) Adequate ICT facilities .......................................... ( )

iii) Teamwork ................................................................ ( )

iv) Training ................................................................ ( )

v) Partnerships with other information providers .............. ( )

vi) Others (specify)............................................................. ( )

---

Part D: External Environmental Conditions and Intrapreneurial Activities

I. Dynamism (Unpredictable changes)

22. Using a scale of 1-5, rate by ticking the extent to which changes in the following areas may have influenced intrapreneurial activities in your library in the last two years
<table>
<thead>
<tr>
<th>S/NO</th>
<th>Change</th>
<th>No change</th>
<th>Minor change</th>
<th>Uncertain change</th>
<th>Moderate change</th>
<th>Major Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>Changes in Technology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td>Changes in User Demographics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii</td>
<td>Changes in Government regulations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv</td>
<td>Changes in number and types of Competitors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v</td>
<td>Changes in number and types of partnerships</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

23. Which of the following information providers do you consider to be the major competitors of university libraries in information provision?

  i) Cyber cafes
  ii) Mobile technology
  iii) Virtual libraries
  iv) Information Bureaus
  v) Other information centres
  vi) Others (Specify)…………………………………………..

24. In what ways do the competitor’s pressure contribute to your library becoming more intrapreneurial? Please indicate by ticking from the list below

  i) Acquiring modern facilities
  ii) Maintaining high standards in information provision
  iii) Digitization of information resources
  iv) Offering free internet services
  v) Introduction of new services and resources
  vi) Embracing new Technology
vii) Adopting new promotional measures 

viii) Others (specify)……………………………………..

II. Technological Opportunities

25. Indicate by ticking the extent to which you agree with the following statements concerning technological opportunities in your library using a scale of 1-5

<table>
<thead>
<tr>
<th>S/N O</th>
<th>Technological opportunities</th>
<th>SD</th>
<th>D</th>
<th>NS</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>Our library offers many opportunities for technological innovation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td>Demand for new technology in our library is growing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii</td>
<td>New technology is needed for growth in our library</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv</td>
<td>A large number of new product/service ideas have been made possible through technological breakthroughs in our library</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v</td>
<td>Technological changes provide big opportunities in our library</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vi</td>
<td>Our library is continually pursuing new technological opportunities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vii</td>
<td>The technology in our library environment is changing rapidly</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

26. In a scale of 1-5, indicate by ticking the level of opportunity for technological innovation in your library.

1) Very low ( )  2) Low ( )  3) Not sure ( )  4) High ( )  5) Very high ( )

27. Indicate by ticking the range of technological facilities in your library.

i) Computers ( )

ii) Television ( )

iii) DVDs ( )

iv) Mobile Technology ( )

v) Internet ( )

vi) Others (Specify) ……………..
III. Organisational growth

28. Indicate by ticking the extent to which you agree with the following statements concerning growth in your library using a scale of 1-5

<table>
<thead>
<tr>
<th>S/NO</th>
<th>Growth</th>
<th>SD</th>
<th>D</th>
<th>NS</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>i</td>
<td>Our library offers many attractive opportunities for future growth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td>Potential for growth opportunities in this library are abundant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii</td>
<td>Our library management continually examines potential new market opportunities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv</td>
<td>Our library management takes calculated risks in exploring and seizing growth opportunities</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

29. In your opinion which of the following growth factors have influenced creativity and innovation in your library over the last two years? Please tick

i) Increased demand for information
   ( )

ii) Increased user population
    ( )

iii) Adoption of new technology
   ( )

iv) New library building
   ( )

v) Diversification of information products and services
   ( )

vi) Others (Specify) ............................................

IV. Demand for new products and services

30. Indicate the extent to which you agree with the following statements concerning demand for new products and services in your library using a scale of 1-5
31. Using a scale of 1-5, Indicate by ticking the level of demand for new products and services in your library.

1) No demand ( ) 2) Low demand ( ) 3) Not sure ( ) 4) High demand ( ) 5) Very high demand ( )

32. What challenges is your library facing in meeting the demands for new products and services? Indicate by ticking from the list below

i) Lack of enough qualified personnel ( )
ii) Lack of adequate funds ( )
iii) Increased user population ( )
iv) Diverse university programmes ( )
v) Limited resources ( )
vi) Limited staff ICT skills ( )
vii) Lack of adequate time ( )
viii) Lack of management support ( )
ix) Rapid changes in IT ( )
x) Others (specify) ........................................

33. Indicate by ticking from the list below the strategies that your library is using in response to user demands for new products and services.

i) Analysis of user demands ( )
ii) Enhancing information literacy skills ( )
iii) Adopting new technologies ( )
iv) Timely response to users’ demands ( )
v) Introduction of virtual reference ( )
vi) Provision of e resources ( )
vii) Extension of opening hours ( )
viii) Others (specify)………………………………………………

34. In your opinion, what measures should your university library put in place in order to promote more intrapreneurial activities? please explain

........................................................................................................
........................................................................................................
........................................................................................................

THANK YOU FOR YOUR COOPERATION
APPENDIX III: INTERVIEW GUIDE FOR UNIVERSITY LIBRARIANS

1. Name of the library…………………………………………………………

2. Date of establishment…………………………………………………….

3. Gender 1) Male ( ) 2) Female ( )

4. Age in years
   i) 21-30 ( ) ii) 31-40 ( ) iii) 41-50 ( ) iv) 51-60 ( ) v) Above 60 ( )

5. How long have you worked as the university librarian? (in years).
   i) 1-5 ( ) ii) 6-10 ( ) iii) 11-15 ( ) iv) 16-20 ( ) v) Over 20 ( )

6. Level of professional education
   i) Diploma ( ) ii) Bachelors degree ( ) iii) Masters degree ( ) iv) PhD ( )
   v) Others (specify) -------------------------------

7. a) How many members of full time staff have you engaged in library related work?.................................................................
   b) How can you rate the performance of your staff according to gender?

8. Does your library have a structured staff development programme on entrepreneurship?
   i) Yes ( ) ii) No ( ). If Yes, please describe the programme.

9. Are individual members of library staff motivated enough to try new ideas on their own?

10. Is there any difference in creativity and innovativeness on account of age among the library staff?

11. What innovative ideas has your library staff brought on board in the last two years?

12. Is the university management usually receptive to the library staff new ideas and suggestions?

13. To what extent are the library staff given freedom to be creative, and try their own methods of doing things?

14. How often do you discuss with the library staff on their work performance?

15. How does the university management perceive failure in staff experimental projects?

16. In what ways are library staff rewarded or recognized for their innovative ideas or
performance?

17. How much free time are the library staff given in a month for flexibility, reflection and creativity? Do you think that amount of time is enough?

18. Does your library have written rules and standard operating procedures to be followed by the staff in doing major tasks and assignments?

19. What criteria do you use for evaluating staff performance in terms of amount, quality and timelines of output?

20. What changes has your library encountered in user demographics?

21. Are there any changes in government regulations that have influenced your library operations?

22. Which other information service providers do you consider to be the major competitors of your library?

23. What Intrapreneurial activities has your library engaged in, in the last two years?

24. To what extent is the demand for new technology growing in your library?

25. Which new technologies are in great demand in your library and why?

26. Which new products and service developments have been made possible through technological breakthroughs in your library?

27. a) Do you foresee potential for substantial growth in the user markets served by Your library?

   b) What strategies have you put in place to ensure such growth for your library?

28. In your opinion, is user demand for new products and services growing in your library? If yes, what strategies has your library adopted to meet the above demands?

29. What do you consider to be the most commonly demanded products and services in your library?

30. What challenges do you encounter in embracing intrapreneurial efforts in the library?

31. What strategies have you put in place to promote and stimulate creativity and innovation in your library?

32. What suggestions would you offer to enable university libraries in Kenya become more intrapreneural?
APENDIX IV: INTERVIEW GUIDE FOR UNIVERSITY MANAGEMENT STAFF

1. In your opinion, do you think entrepreneurial knowledge is necessary for library staff and why?
2. Does the university management have a policy for training employees on entrepreneurship?
3. Does the university management usually avail funds to get new project ideas developed and implemented in the library?
4. How is the fund managed and dispersed to library staff with innovative ideas?
5. What other non-financial resources has the university management put in place for enhancement of intrapreneurial activities in university libraries?
6. In your own opinion do you think the above resources are adequate?
7. How does the university management encourage library employees to come up with new ideas and suggestions on products and service development?
8. Has the university management established a separate unit responsible for innovation promotion from which the library staff benefits?
9. How does the university management encourage library staff to make decisions and act on innovative projects without asking for permission?
10. What methods are used by the university management to reward and recognise library employees who are creative?
11. Does the university management create time for the library staff for reflection and creativity?
12. Are there specified standards of performance on which the library staff are evaluated?
13. Which opportunities do you think technological changes is providing for the university library?
14. Which new products/service ideas have been made possible through technological breakthroughs in your library?
15. How do you foresee the growth in the user markets served by your university library? Are there any indicators of such growth?
16. Are there any threats to your library services from other information providers?
17. What strategies has the university management put in place to meet the increased demand for new products and services in the library?
18. What strategies does the university management use to promote and stimulate intrapreneurial activities among the library employees?
19. How does the university management implement these strategies?
20. What challenges has the university management faced in the development of intrapreneurial activities in the university as a whole?
21. What future plans does the university management have in the development of intrapreneurial activities in the entire organization?
## APPENDIX V: COMPOSITE INDICES FOR THE VARIABLES

Table A1: Composite Indices for the Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Aggregate Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrapreneurial Activities</td>
<td>4.06</td>
</tr>
<tr>
<td>Individual Staff Factors</td>
<td></td>
</tr>
<tr>
<td>- Library Staff Education</td>
<td>4.18</td>
</tr>
<tr>
<td>- Library Staff Training in Entrepreneurship</td>
<td>3.98</td>
</tr>
<tr>
<td>Internal Organisation Factors</td>
<td></td>
</tr>
<tr>
<td>- Management support</td>
<td>3.2</td>
</tr>
<tr>
<td>- Work Discretion</td>
<td>3.4</td>
</tr>
<tr>
<td>- Rewards</td>
<td>3.1</td>
</tr>
<tr>
<td>- Time Availability</td>
<td>3.3</td>
</tr>
<tr>
<td>- Organisational Boundaries</td>
<td>3.6</td>
</tr>
<tr>
<td>External Environmental Conditions</td>
<td></td>
</tr>
<tr>
<td>- Changes</td>
<td>3.8</td>
</tr>
<tr>
<td>- Technological Opportunities</td>
<td>4.1</td>
</tr>
<tr>
<td>- Organisational Growth</td>
<td>3.7</td>
</tr>
<tr>
<td>- Demand for new Products and Services</td>
<td>4.0</td>
</tr>
</tbody>
</table>
APPENDIX VI: REGRESSION RESULTS FOR INDIVIDUAL STAFF FACTORS ON INTRAPRENEURIAL ACTIVITIES

Table A 2 : Model Summary for Individual Staff Factors

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.639</td>
<td>.409</td>
<td>.402</td>
<td>.95472</td>
</tr>
</tbody>
</table>

Table A 3: ANOVA for Individual Staff Factors

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>53.540</td>
<td>1</td>
<td>53.540</td>
<td>58.739</td>
<td>.000&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Residual</td>
<td>77.477</td>
<td>85</td>
<td>.911</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>131.017</td>
<td>86</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table A4: Coefficients for Individual Staff Factors

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>3.240</td>
<td>.704</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INDIVIDUAL STAFF FACTORS</td>
<td>.354</td>
<td>.046</td>
<td>.639</td>
<td>7.664</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), INDIVIDUAL STAFF FACTORS
b. Dependent Variable: INTRAPRENEURIAL ACTIVITIES
APPENDIX VII: REGRESSION RESULTS FOR INTERNAL ORGANISATION FACTORS ON INTRAPRENEURIAL ACTIVITIES

Table A 5 : Model Summary for Internal Organisation Factors

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.283</td>
<td>.080</td>
<td>.069</td>
<td>1.19090</td>
</tr>
</tbody>
</table>

Table A 6: ANOVA for Internal Organisation Factors

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>10.466</td>
<td>1</td>
<td>10.466</td>
<td>7.380</td>
<td>.008b</td>
</tr>
<tr>
<td>Residual</td>
<td>120.551</td>
<td>85</td>
<td>1.418</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>131.017</td>
<td>86</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table A 7: Coefficients for Internal Organisation Factors

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>6.558</td>
<td>.753</td>
<td>8.707</td>
<td>.000</td>
</tr>
<tr>
<td>INTERNAL ORGANIZATION FACTORS</td>
<td>.125</td>
<td>.046</td>
<td>.283</td>
<td>2.717</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), INTERNAL ORGANIZATIONAL FACTORS
b. Dependent Variable: INTRAPRENEURIAL ACTIVITIES
APPENDIX VIII: REGRESSION RESULTS FOR EXTERNAL ENVIRONMENTAL CONDITIONS ON INTRAPRENEURIAL ACTIVITIES

Table A8: Model Summary for External Environmental Conditions

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.417$^a$</td>
<td>.174</td>
<td>.164</td>
<td>1.12864</td>
</tr>
</tbody>
</table>

Table A9: ANOVA for External Environmental Conditions

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>22.742</td>
<td>1</td>
<td>22.742</td>
<td>17.853</td>
<td>.000$^b$</td>
</tr>
<tr>
<td>Residual</td>
<td>108.276</td>
<td>85</td>
<td>1.274</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>131.017</td>
<td>86</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table A10: Coefficients for External Environmental Conditions

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>4.173</td>
<td>1.049</td>
<td>3.978</td>
<td>.000</td>
</tr>
<tr>
<td>EXTERNAL ENVIRONMENTAL CONDITIONS</td>
<td>.210</td>
<td>.050</td>
<td>.417</td>
<td>4.225</td>
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</table>

*a. Predictors: (Constant), EXTERNAL ENVIRONMENTAL CONDITIONS

*b. Dependent Variable: INTRAPRENEURIAL ACTIVITIES
APPENDIX IX: TABLE FOR DETERMINING SAMPLE SIZES FOR DIFFERENT SIZES OF POPULATION

Table A11: Sample Sizes for Different Sizes of Population at 95 percent Confidence Level

<table>
<thead>
<tr>
<th>Population</th>
<th>5%</th>
<th>3%</th>
<th>2%</th>
<th>1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>44</td>
<td>48</td>
<td>49</td>
<td>50</td>
</tr>
<tr>
<td>100</td>
<td>79</td>
<td>91</td>
<td>96</td>
<td>99</td>
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<tr>
<td>150</td>
<td>108</td>
<td>132</td>
<td>141</td>
<td>148</td>
</tr>
<tr>
<td>200</td>
<td>132</td>
<td>168</td>
<td>185</td>
<td>196</td>
</tr>
<tr>
<td>250</td>
<td>151</td>
<td>203</td>
<td>226</td>
<td>244</td>
</tr>
<tr>
<td>300</td>
<td>168</td>
<td>234</td>
<td>267</td>
<td>291</td>
</tr>
<tr>
<td>400</td>
<td>196</td>
<td>291</td>
<td>434</td>
<td>384</td>
</tr>
<tr>
<td>500</td>
<td>217</td>
<td>340</td>
<td>414</td>
<td>475</td>
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<tr>
<td>750</td>
<td>254</td>
<td>440</td>
<td>571</td>
<td>696</td>
</tr>
<tr>
<td>1000</td>
<td>278</td>
<td>516</td>
<td>706</td>
<td>906</td>
</tr>
<tr>
<td>2000</td>
<td>322</td>
<td>696</td>
<td>1091</td>
<td>1655</td>
</tr>
<tr>
<td>5000</td>
<td>357</td>
<td>879</td>
<td>1622</td>
<td>3288</td>
</tr>
<tr>
<td>10000</td>
<td>370</td>
<td>964</td>
<td>1936</td>
<td>4899</td>
</tr>
<tr>
<td>100000</td>
<td>383</td>
<td>1056</td>
<td>2345</td>
<td>8762</td>
</tr>
<tr>
<td>1000000</td>
<td>384</td>
<td>1066</td>
<td>2395</td>
<td>9513</td>
</tr>
<tr>
<td>10000000</td>
<td>384</td>
<td>1067</td>
<td>2400</td>
<td>9595</td>
</tr>
</tbody>
</table>

APPENDIX X: RESEARCH PERMIT

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471, 2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacost.go.ke
Website: www.nacost.go.ke
When replying please quote
Ref: No.

NACOSTI/P/14/0858/589

Milkah Njeri Mathu
Kenyatta University
P.O.Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “Determinants of intrapreneurial activities in selected University Libraries in Kenya,” I am pleased to inform you that you have been authorized to undertake research in Nairobi and Nakuru Counties for a period ending 31st December, 2014.

You are advised to report to the Vice Chancellors of selected Universities before embarking on the research project.

On completion of the research, you are expected to submit two hard copies and one soft copy in pdf of the research report/thesis to our office.

DR. M. K. RUGUTT,PhD, HSC.
DEPUTY COMMISSION SECRETARY
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Copy to:

The Vice Chancellors
Selected Universities.