FACTORS AFFECTING SUCCESS OF ENTERPRISE RESOURCE PLANNING PROJECTS WITHIN THE TELECOMMUNICATION SECTOR IN KENYA: A CASE STUDY OF TELECOMMUNICATION COMPANIES IN KENYA

LUCY WANINI KIMANI

13S03EMBA005

AN APPLIED RESEARCH PROJECT PROPOSAL SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF BUSINESS ADMINISTRATION DEGREE IN THE BUSINESS SCHOOL OF AFRICA NAZARENE UNIVERSITY

FEBRUARY, 2017
DECLARATION

I declare that this applied research proposal is my original work and that it has not been presented in any other University for academic credit

Signed………………………………… Date …………………………………………..

Lucy Wanini Kimani

SUPERVISOR’S DECLARATION

This applied research project is submitted for examination with my approval as the University Supervisor.

Signe…………………………………… Date …………………………………………..

Dr. Bwibo Adieri

AFRICA NAZARENE UNIVERSITY

NAIROBI, KENYA
DEDICATION

I wish to dedicate this research work to my family for their immense support and inspiration. A special feeling of gratitude goes to my dear son, Aiden for inspiring me to work hard and fulfill my lifetime dreams.
# TABLE OF CONTENTS

DECLARATION....................................................................................................................... ii
DEDICATION........................................................................................................................... iii
TABLE OF CONTENTS........................................................................................................... iv
ABSTRACT ............................................................................................................................. vi
ACKNOWLEDGEMENT .......................................................................................................... vii
LIST OF TABLES .................................................................................................................... viii
LIST OF FIGURES ................................................................................................................ ix
LIST OF ABBREVIATIONS..................................................................................................... x
DEFINITION OF TERM .......................................................................................................... xi

## CHAPTER ONE: INTRODUCTION AND BACKGROUND STUDY ......... 1

1.1 Introduction ..................................................................................................................... 1
1.2 Background of the Study ............................................................................................... 2
1.2.1 GSM Systems Ltd ..................................................................................................... 4
1.3 Statement of the Problem ............................................................................................. 5
1.4 Objective of the Study ................................................................................................. 6
1.4.1 General Objective ..................................................................................................... 6
1.4.2 Specific Objectives ................................................................................................... 6
1.5 Research Questions ..................................................................................................... 7
1.6 Significance of the Study ............................................................................................. 7
1.7 Scope of the Study ........................................................................................................ 8
1.8 Limitations of the Study ............................................................................................. 8
1.9 Delimitation of the Study ............................................................................................ 9
1.10 Conceptual Framework ............................................................................................. 9

## CHAPTER TWO: LITERATURE REVIEW .............................................. 11

2.1 Introduction .................................................................................................................... 11
2.2 Theoretical Review ...................................................................................................... 11
2.2.1 Agency Theory ........................................................................................................ 11
2.2.2 Game Theory .......................................................................................................... 13
2.3 Empirical Review ........................................................................................................ 13
2.3.1 Technology ............................................................................................................. 13
2.3.2 Organization Culture .............................................................................................. 15
ABSTRACT

Enterprise Resource Planning (ERP) application is often viewed as a strategic investment that can provide significant competitive advantage with positive returns thus contributing to the firms’ revenue and growth. In fact, ERP systems are becoming very popular among firms, to a point that they are considered by some organizations as a savior of an ailing business. Despite such strategic importance that is given to the implementation of ERP, the ability to achieve the desired goal has been viewed disappointing. There have been numerous industry studies about failures of ERP initiatives. While focusing on ERP systems, the aim of this study was to assess the factors affecting the success of enterprise resource planning projects within the telecommunication sector in Kenya. The specific objectives of the study are: To establish the effect of Technology on the success of the ERP projects among telecommunication sectors in Kenya, To examine the effect of Resource Base on the success of the ERP projects among telecommunication sectors in Kenya, To establish the effect or Organizational Culture on the success of the ERP projects among the telecommunication sectors in Kenya and finally to determine whether Top Management Preferences affect the success of the ERP projects among the telecommunication sectors in Kenya. The population under study will comprise staff from top management, operations, information technology, research and innovation and human resources divisions of five major Telecommunication systems in Kenya. A sample of the staffs shall be drawn using stratified sampling. Each respondent will fill and submit a structured questionnaire that is administered personally. The processed data will be analyzed using descriptive statistics. The research findings will be presented through appropriate tools like frequency distribution tables, graphs and pie charts. Statistical Package for Social Sciences (SPSS) will be used to analyze the findings. This study will be significant to project managers, especially in organizations that have recently implemented or are in the process of implementing the ERP systems.
I would like to sincerely express my gratitude to Dr. Bwibo Adieri for his guidance and advice as my thesis supervisor. I am very glad that I was able to incorporate my past and current work experience in pursuit of my thesis. Lastly, I would like to express my special thanks to my family and friends for their tremendous support and endless love.
LIST OF TABLES

Table 3.1: Sampling Table..................................................................................22

Table 3.2: Sampling Size......................................................................................24
LIST OF FIGURES

Fig 1.1: Conceptual Framework.................................................................10
**LIST OF ABBREVIATIONS**

**ARPU**: Average Revenue per Unit

**EDGE**: Enhanced Data for Global Evolution

**ERP**: Enterprise Resource Planning

**GSM**: Global System for Mobile Communication

**IMC**: Inventory Management and Control

**LTE**: Long Term Evolution

**MRP**: Manufacture Resource Planning

**PMBOK**: Project Management Body of Knowledge

**TOC**: Theory of Constraint

**UMTS**: Universal Mobile Telecommunications System
DEFINITION OF TERM

**Average Revenue per Unit**: is a measure of the revenue generated per user or unit

**Enhanced Data for Global Evolution**: is a data system used on top of Global System for Mobile Communication

**Enterprise Resource Planning Systems**: a computer based technology that integrates data across an organization and imposes standardized procedures on the input, use and dissemination

**Global System for Mobile Communication**: is a standard developed by the European Telecommunications Standards Institute (ETSI) to describe the protocols for second-generation (2G) digital cellular networks used by mobile phones

**Long Term Evolution**: is a standard for wireless communication of high-speed data for mobile phones and data terminals.

**Project**: a temporary endeavor undertaken to create a unique product or service. Temporary means the project has a beginning and an end

**Universal Mobile Telecommunications System**: is a third generation mobile cellular system for networks based on the GSM standard. Developed and maintained by the 3GPP (3rd Generation Partnership Project), UMTS uses wideband code division multiple access (W-CDMA) radio access technology to offer greater spectral efficiency and bandwidth to mobile network operators.
CHAPTER ONE: INTRODUCTION AND BACKGROUND STUDY

1.1 Introduction

Barton (2001) states that Enterprise Resource Planning is a term originally coined in 1990 by The Gartner Group to describe the next generation of Manufacture Resource Planning (MRP) software. MRP that was used in the 1970’s to generate operation schedules, structuring of production system and raw materials purchasing evolved to MRP II in the 1980s for coordinating manufacturing processes. The purpose was to integrate all facets of the business enterprise under one suite of software applications.

Davenport (2010) provides a generalized definition of ERP as a business management system that integrates all facets of the business, including planning, manufacturing, sales, and marketing. Some of the more well-known ERP software developers include SAP, Oracle, and PeopleSoft. Davenport (2010) notes that ERP is not a project; it is a way of life. ERP system does not change anything, however the organization has to change the way of working. ERP system implementation is a very complicated process as it can take several months or years with a lot of planning and consultation.

According to Al-Jabri (2008), ERP is implemented in stages and thus argued that the stages of ERP implementation can be characterized as a journey with six stages. Post implementation is the last stage of ERP project and it starts after Go-live date of ERP implementation project. ERP systems have become the most important IT solution, very much required by an enterprise in order to function as a well-integrated and coordinated business unit, supported by a unique IT structure. A successful ERP system acts as a backbone of business intelligence for an organization because gives managers an integrated view of the processes involved within it (Ismail, 2014).
Adam, ICIS 2008 Proceedings (2008) further explain that project management enables managers to standardize routine tasks and ensure that available resources are used both efficiently and effectively. The application of its principles allows senior managers to establish and use appropriate measures of success, to quantify value commensurate with cost and to optimize the use of organizational resources.

1.2 Background of the Study

ERP Systems can significantly help any company improve its functioning in different categories. Indeed, ERP systems can provide higher business agility, better productivity, less errors, better integration of information, in addition to allowing the automation of tasks and processes. ERP systems origin can be traced to the early 60ties, back then, the main systems that were used were called Inventory Management and Control (IMC) (Sysoptima, 2005). Next systems that were used were the Material Resource Planning (MRP) in 1975 which later became an advanced version Material Resource Planning version2 (MRP2). These systems were mainly centered on manufacturing and lacked features that would enable them to be useful in other sectors within a given company or industry in general (Sudalaimuthu & Raj, 2009). The dire need for an improved system prompted the creation of what is called nowadays ERP systems.

Yurtkoru (2015) state that there have been a large number of studies on the success factors of ERP implementation. The basic underlying premise of most of these studies is that the success of ERP is largely determined by initial implementation. For this reason, most of these studies focus on the implementation activities and tend to ignore the role of the post-implementation stage that can either improve or impair the performance of ERP regardless of how successful the initial implementation was.
Studies conducted in developed countries show that many organizations often ran into trouble during implementation and subsequent maintenance of ERP systems (Gargeya & Brady, 2005). An example of such a situation as stated by Wagner (2013) is when a typical ERP implementation initiative takes anywhere between one and three years and typical budgets are in tens to hundreds of millions of dollars. The organization might be unable to sustain the project in the long run due to the large ERP system’s capabilities and the essential solutions expected from this system to support the enterprise; its implementation process is complex and risky. A generous amount of organization’s resources are put at risk during the implementation. Majority of managers do not have clear and useful guidelines to direct, effectively and efficiently, the process of implementing an ERP system. They have no guarantee that the system will likely provide the expected benefits.

Leon (2009) in his book “ERP Demystified” points out that the main causes for ERP planning and implementation failures stems from a failure to gauge the importance of the human factor. Some appealing examples of these causes include; Lack of adequate ERP related education and training, a bad fit between the ERP and the users, Low user acceptance, Employee resistance to change, Unrealistic prospects towards ERP and Lack of commitment from the top management. This also includes the poor follow up after the implementation.

A number of reasons why continuous improvement is needed in later stages after implementation could include; the need for maintenance and support arises naturally after go-live (Kocaoglu, 2015). Due to the enormous size of ERP systems, maintenance may involve dealing with serious defects that may require modification or addition of some functions. Tsai (2011) states that the performance of a business
can be influenced by system and data maintenance activities during post-implementation stage, which may mean adjusting of the system architecture to fit in with the organization’s needs.

1.2.1 GSM Systems Ltd

GSM Systems supplies, maintains, and supports multi-vendor telecom network hardware for clients in 70+ countries. Since its’ founding in 2003 the firm has built partnerships with industry leading equipment vendors and carriers to reduce costs and drive efficiency in network maintenance and expansion. As technologies have evolved from EDGE to UMTS, LTE and beyond, the industry continues to face the complex challenge of maintaining, supporting and upgrading multi-vendor and legacy systems. The company continues to ensure that challenge is met and comprehensively overcome. GSM Systems is certified as an ISO company enabling them to ensure that they meet and exceed the needs of customers and other stakeholders while meeting statutory and regulatory requirements related to the products and services they provide.

GSM Systems provides network managed services including spares management, part swap & repair, field maintenance, technical warehousing, logistics management, engineer training, decommissioning, integration and optimization with customized cloud-based reporting tools. Combining flexibility and cost competitiveness with multi-vendor technical skill, GSM Systems delivers agile, transparent and cost effective solutions to optimize network maintenance and asset re-use. Our commitment to excellence in service delivery and customer service is proven in a range of markets and services. In today's telecom environment, OEM vendors & network operators encounter pressing challenges from planning and maintaining
complex multi-vendor networks to competing on ARPU, working with reduced apex budgets, and managing the lifecycle of legacy systems. GSM Systems builds partnerships with these clients and others in the telecom value chain to create sustainable competitive advantage.

GSM Systems stocks, repairs and sources for parts and tailor made systems required to meet the clients’ demands, while helping the clients on cost reduction, gain efficiencies with supply, parts management and repair services. The organization aims at building transparency, sustainability and visibility into the network supply chain, in order to optimize the use of network assets to grow and maintain networks.

1.3 Statement of the Problem

The aim of the research is to assess the factors affecting the success of ERP projects within the Telecommunication Industry in Kenya. The factors that will be researched on broadly are Technology, Organizational Culture, Resource base and Top Management Preferences with regard to their influence on the success of the ERP projects within the telecommunication sector in Kenya.

Enterprise Resource Planning (ERP) implementations have become some of the most important project developments in the corporate use of information technology (Dantes & Hasibuan, 2011). ERP projects are being implemented with the aim of synchronizing business processes within an organization. As stated above, ERP implementation is quite often an uncertain phase for any company wishing to implement. In addition, there is a huge need for any company to assess whether an ERP implementation will be successful or not, and whether a specific ERP system will allow it to improve its functioning significantly to justify the costs that have to be
incurred and the risks that will be taken. A human factor’s importance while implementing an ERP system cannot be underestimated. The system users form a significant part of issues that a company will face during the implementation phase. Research has revealed that almost 65% of the sectors that implement ERP systems for their projects without particularly paying attention to the pre-requisite factors for its success are bound to fail. It is against this background that this study aims to assess the factors that affect the success of ERP systems on projects among the telecommunication sectors in Kenya.

1.4 Objective of the Study

1.4.1 General Objective

The general objective of this research will be to investigate the factors affecting the success of enterprise resource planning projects within the telecommunication sector in Kenya.

1.4.2 Specific Objectives

The specific objectives of this study are:-

i. To establish the effect of Technology on the success of the ERP projects among telecommunication sectors in Kenya.

ii. To establish the effect of Organizational culture on the success of the ERP projects among telecommunication sectors in Kenya.

iii. To examine the effects of Resource Base on the success of the ERP projects among telecommunication sectors in Kenya.

iv. To determine the effects of Top management preferences on the success of the ERP projects among telecommunication sectors in Kenya.
1.5 Research Questions

To achieve the above objectives, the study was sought to answer the following questions.

i. Does technology affect the success of ERP projects among telecommunication sectors in Kenya?

ii. Does Organizational culture affect the success of ERP projects among telecommunication sectors in Kenya?

iii. How does Resource base affect success of ERP projects among telecommunication sectors in Kenya?

iv. How does Top management preference affect success of ERP projects among telecommunication sectors in Kenya?

1.6 Significance of the Study

Every organization is made up of at least three different levels. These include strategic, tactical and operational levels. ERP implementation will affect these levels differently. Some of these include; improved productivity, customer satisfaction, increased rapid response capabilities, reduced cycle time, improved flow efficiency and rapid generation of financial information among others. This study aims at assessing how Technology, Organizational culture, Resource base and Top Management preferences affect the success of ERP projects within the telecommunication sector in Kenya.
1.7 Scope of the Study

This study will be conducted on the telecommunication sector in Kenya. Data will be collected from GSM Systems that have implemented an ERP. The research data will be collected from top management staffs, human resources staffs, top management staffs, information technology staffs, operation staffs and research and innovation staffs. This is because they are the day-to-day users of the system and they are likely to provide the relevant information.

1.8 Limitations of the Study

The researcher assumes that the sample will be representative of the entire population and that the respondents will be truthful in answering all questions pertaining to the study. It is a fair assumption that Technology, Organizational culture, Resource base and Top management preferences have effect on ERP projects within the telecommunication sector in Kenya. The researcher also assumes that appropriate tools will be used both during data collection and data analysis and that findings will be useful to the profiled organization and many others in future.

The researcher expects confidentiality issues as the research touches on sensitive issues and areas of the organization. The researcher will send out an introduction letter from the university to the respondents and promise confidentiality on any information given. Due to the many stakeholders involved while implementing ERP projects, that is, top management, senior and junior managers, consultants, change management team, technical team and other users, stratified sampling will be done as
it will take a lot of time and resources to conduct and collect data from all stakeholders.

1.9 Delimitation of the Study

This research will focus mainly on factors affecting success of enterprise resource planning projects within the telecommunication sector in Kenya. The temporal geographical dispersion of the telecommunications sectors in Kenya could have posed a challenge and thus the study delimited its finding to telecommunication sectors located in Nairobi region. This was moderated by the fact that all other telecommunication sectors outside Nairobi region apply the same operating procedures (SOPs) in terms of their operations, and thus generality and inference would not be lost by narrowing it to Nairobi region branches which in effect led to ease of data collection, correlation analysis and inference.

1.10 Conceptual Framework

A conceptual framework is a diagrammatic presentation of the relationship between the independent and dependent variables; it forms the basis of the research (Zaina, 2009). The conceptual framework illustrates influence of four variables on the success of the ERP projects among telecommunication sectors in Kenya.
Independent Variables

- Technology
- Organizational Culture
- Top Management Preferences
- Resource Base

Dependent Variable

Success of ERP Project

Intervening Variable

- Organization’s policies
- Organization Routines

Figure 1.1 Conceptual framework

(Source: Author 2017)

The conceptual framework illustrates the link between the independent variables which are Technology, Organizational culture, Resource base and Top management preferences and the dependent variable which is success of the ERP projects. The two main variables are regulated by the intervening variable which is the organization’s routines and policies.
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The chapter presents theoretical review, empirical review, summary of the reviewed literature and knowledge gap. Hart (2006) defines literature review as a number of documents that have been selected, both published and unpublished covering topics that contain the information, ideas and evidence written from a particular stand point to express certain views on the topic.

2.2 Theoretical Review

Among some of the theories that have been compiled regarding the ERP projects within the telecommunications sector include the Systems theory, People determined theory, System determined theory and the Interaction Theory.

2.2.1 Agency Theory

Lambert (2001) describes agency theory as one of the most important theoretical paradigms in accounting research during the past 20 years, having at its roots the information economics literature. Eisenhardt (1989) points out that agency theory grew out of risk sharing research by economists in the 1960s and 1970s to include the situation that occurs when cooperating parties have different goals and divisions of labor. Corlett (2014) explains the agency theory originated in natural sciences in efforts to understand the relationships between objects. This theory has been widely applied to various studies of organizations. Patton and Mchahon (2006) have also described agency theory as a theory that has been proposed as a framework to dealing with many issues in human behavior. Basically the agency Theory is concerned with relationships; it views the organization as a system that consists of individuals who work together with a common goal of building an organization. Organizations should
focus on the role played by each individual in the organization. ERP systems are important to the organizations, the human factor is also important too. The relationship between the systems and humans should be as smooth as possible as both factors affect the implementation of the systems immensely. An organization should prepare its employees before implementing a system and carry out training and user involvement throughout the implementation. Majority of organizations within the telecommunication sector in Kenya, often carry out facilitation workshops to train their employees and keep on refreshing the knowledge they have with newer technology according to the present time.

Heil (2014) contends that agency theory became popular as a communication theory because it is believed that communication helps in defining and sustaining a system. Without communication, a system will likely fall out of homeostasis because the feedback loop or channel is not functioning properly. He emphasizes that communication is the key to keeping an interpersonal system operating at its best. Agency theory plays an important role in communication theories because it helps develop strategies for effective communication, whether they are in individual, group or intercultural communication within an organization. This theory is significant to the study in that it provides new, validated measures of prequalification efforts, monitoring, incentive alignment, moral hazards and the adverse selection constructs that are important in permitting decision making process on the implementation of the ERP systems for projects in the telecommunication sectors in Kenya.
2.2.2 Game Theory

Game theory is the branch of mathematics concerned with the analysis of strategies for dealing with competitive situations where the outcome of a participant's choice of action depends critically on the actions of other participants (Ogot, 2011). The solutions derived from game-theory may be thought of as normative or descriptive views of multi-person decision-making. Camerer et al (2001) posit game theory as the analysis of rational behaviour in situations involving interdependence of outcomes. Joseph et al., 2008 noted that game theory studies strategic interactions within a group of individuals in order to come up with solutions which are a thought process emanating from multiple options. The theory believes that actions of each individual firm have various and multiple effect on the outcome of other firms. Each firm is therefore aware of that fact that their competition are also rational and have objectives over the set of possible outcomes and are therefore ready to pursue the best available strategy to counter their competitors. The theory is relevant to the study as it illustrates the essence of organizations such as the telecommunication sector in Kenya engaging in ERP for their projects. This is perceived as a strategy for managing the competitive market situations.

2.3 Empirical Review

2.3.1 Technology

The usage of information technology (IT), broadly referring to computers and peripheral equipment, has seen tremendous growth in service industries in the recent past. The most obvious example is perhaps the telecommunication industry, where through the introduction of IT related products in internet communication, electronic
security investments, and information exchanges have realized a new birth (Berger, 2003). The telecommunications sectors in Kenya now can provide more diverse services to customers with less manpower. Seeing this pattern of growth, it seems obvious that IT can bring about equivalent contribution to profits.

In general, existing studies have concluded two positive effects regarding the relation between IT and telecommunication industry performance. First, IT can reduce the sectors’ operational costs (the cost advantage). For example, internet helps these sectors to conduct standardized, low value-added transactions through the online channel, while focusing their resources into specialized, high-value added transactions through other innovations (Berger, 2003). The application of information and communication technology concepts, techniques, policies and implementation strategies to telecommunication services has become a subject of fundamental importance and concerns to all the sectors and indeed a prerequisite for local and global competitiveness.

Technology directly affects how managers decide, how they plan and what products and services are offered in the banking industry. It has continued to change the way telecommunication sectors and their corporate relationships are organized worldwide and the variety of innovative devices available to enhance the speed and quality of service delivery. Harold & Jeff, (1995) contend that telecommunications service providers should modify their traditional operating practices to remain viable in the nineties and the decades that follow. They claim that the most significant shortcoming in the telecommunication industry today is a wide spread failure on the part of senior management in the industry to grasp the importance of technology and incorporate it into their strategic plans accordingly.
Woherem (2000) claimed that only telecommunications sectors that overhaul the whole of their operation and delivery systems and apply technology to their operations are likely to survive and prosper in the new millennium. He advises these sectors to re-examine their service and delivery systems in order to properly position them within the framework of the dictates of the dynamism of information and communication technology. The Kenyan Telecommunication sector has seen tremendous increase in advancements in Information and Communication Technology in the past decade. The quest for survival, global relevance, maintenance of existing market share and sustainable development has made exploitation of the many advantages of technology through the use of automated devices imperative in the industry.

2.3.2 Organization Culture

Studies done in the past (Bontis & Fitz-Enz 2002, Fitzgerald & Desjardins 2004, Mohanty & Rath 2012) have converged to the conclusion that organizational culture has a great bearing on the way business is conducted within organizations. Studies have further shown that organizations that are keen into tapping into the diversity of cultures have improved performance stemming from collaboration and relationships between employees that work not based on their job script but the intrinsic attribute in their way of having the job done (Bateman & Organ 2003, Baker, Preisinger et al., 2000).

Martin (2001) states that organizational culture and to a larger extent its behaviour can broadly be classified into integration, differentiation and fragmentation perspectives. Stanford (2010) demonstrates the effect of integration cultures that are riddled with “labels” of a certain way of doing things; these in effect may have a
positive or negative impact based on their intended purpose. For instance in Kenya the GSM is a label of affluent in the society, demonstrating the young and rising populace in the social ladder, whereas to the older generation it’s a demonstration of a rather “carefree” set up with no coherent legacy systems to safeguard their wealth, Martin (2001) however concludes that the label mentality in its fixation presents a narrow narrative away from the rigours of the system, and thus it does not necessarily lend any credence to the labels assertions. Organizational culture can also possibly be viewed from the lenses of differentiation, as elaborated by Farh, Zhong et al (2004). Martin (2001) states that unlike the popular belief that organization culture is always an exogenous variable, in retrospect organizational culture ideally is a blend of complex activities and levers that thrive to function as a complete whole with its interactions on the environment it is set in.

Organization culture can also be addressed from the fragmentation perspective. Martin (2001) alleges that this perspective ideally demonstrates the uncertainty nature of organizations, and their unpredictable nature. These may emanate from poor forecasting and the systemic failures within organizations.

2.3.3 Top Management Preferences

According Robson et al (2004) management attitude towards risk exerts considerable influence on ERP project choice. According to him where management attitude favour risk, the range and diversity of ERP choice for projects expand and vice versa. In addition he also asserts that the power/political factors influence ERP choice for projects. According to him, in small enterprises the CEO is the dominant force. Collis (2001) identified another source of power that influences the ERP choice for projects.
in large firms, the coalition phenomena where subunits or influential managers, influence choice of the ERP system.

David et al (2001) state that top management has dual role in formulating and developing of the ERP creation and development of research projects and practical activity -application of research results in determining the course of action. Kylaheiko et al (2007) assert that success of a company does not depend only on the ERP itself, but also on its efficient implementation. According to them, the key to formulating the ERP and projecting a route toward the desired future state is the strategic awareness of top managers. According (Slater & Narver, 2002) the decision enacted through well-developed strategic plans have significant and positive implication for the overall perpetuity of an organization.

2.3.4 Resource Base

Developments of the companies need resources to determine strategic market (Barney & Arikan, 2001). Leitner & Warden (2004) enumerates the various challenges that organizations have to go through in order to have seamless flow of their operations, among the challenges; resources are pointed as being a major predicament of for organizations. Christensen (2004), Bueno, Morcillo et al., 2006 broadly classifies resources as either being tangible or intangible assets firms use to implement their ERP’s. Organisations are currently forced to change tact when competing in market place, both internally and externally and this requires for re-evaluation of their ERP systems and resource allocations to activities (Sune & Gibb, 2015). The cutthroat competition has led to organizations dynamically deploying their resources to not only remain on the competitive edge in the market but to also manage their resource prudently and optimally.
The stages involved in the deployment process in order to gain full advantage of resource base of an organization are exemplified in the (Sune & Gibb, 2015) study of Spain air business model which entailed: resource addition, transfer, integration and shedding. The management using the referenced model was able to recognize size, arrange and place the organization’s resources towards meeting its objective. This strategy also led to restructuring of the organization; this entail reshuffling of staff to key areas of organization that affect the organization bottom line, bundling of structure, and these entails removing redundancies in the structure and merging non performing departments and elevating the prime departments or units.

Resource addition may also entail adding of physical assets, employing new managers to boost operations. Resource shedding on the other hand refers to the ability of an organization to retire layoff transfer or dispose assets deemed to be redundant in the system (Sune & Gibb, 2015). The process of shedding resources may call for integration of some processes and thereby identifying the excesses in system in terms of human capital, IT systems and physical assets. For example procurement department and finance department may shed off their particular systems and adopt a more comprehensive enterprises resource system that integrates both departments seamlessly. In the spirit of concentrating on core mandates of organizations, enterprises are currently outsourcing most of their routine activities to what is popularly known as “managed services”, so that the available resources are left to manage the core business of an organization Hoque, Kirkpatrick et al (2011).

2.4 Summary of the Reviewed Literature

The literature has revealed that the above variables affect the success of the ERP projects. The telecommunication sectors endeavor to choose best ERP options that
guarantee them success for their projects. To stay afloat thus require integration and mix of variables to be considered so that appropriate ERP system is chosen. It is noted in the literature that little is mentioned as to which variables are more critical or have far reaching influence if not addressed in the short run. The Global Mobile Communication systems in Kenya is currently facing dilemma as to prioritizing the factors that influence the success of ERP projects. The financial resources to be dedicated to implementation of any variable are also scarce. There is also the risk involved in any chosen ERP system. The environment is dynamic, competition is stiff and the technology is changing rapidly and customers are more informed.

2.5 Knowledge Gap

It is with this background that the researcher expects to determine from the stakeholders the weighty issues among variables identified to facilitate professional advice to telecommunication industry management on short and long term ERP’S to achieve quality performance management, success and best performance in the light of competition in the sector locally and in the region. The literature explored indicates that the success of the ERP project is influenced by four key variables including technology, organizational culture, resource base, top management preferences in the industry.

However, the literature does not focus on the extent to which the critical variables influence the success of the ERP projects. This assertion is further exemplified by Maritan and Alessandri (2007) who further opines that the relationship between the critical variables affecting ERP project performance of an organization still remain unstudied and unknown. Thus, this study strives to bridge the gaps identified as to the
extent or degree of influence of the variables distilled from the literature have on the ERP telecommunication industry performance.
CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter presents the research design, the target population, sampling size and the strategy, data collection instruments and procedures and instruments of data analysis.

3.2 Research Design

Research design is the pillar and structure of investigation so conceived as to obtain answers to research questions. The main aim of the researcher is to collect data on the factors affecting the success of the ERP projects among the telecommunication sectors in Kenya. Data collection will be based on the independent variables with aim of establishing their influence on the success of the ERP projects. The researcher will use quantitative research design which is descriptive in nature. The main reason for using this design is because the design will be beneficial and advantageous since factual information is obtained with minimum bias and maximum reliability of evidence collected (Kothari, 2003)

3.3 Research Site and Rationale

A research site is an area which the researcher designs and tests the sample (Kothari, 2003). This is the location where a given research study is carried out and why the specific locations is chosen. This study will be conducted in selected telecommunication companies in Nairobi; Ericsson Kenya Limited, Indigo Telecom, Elris Communications Services Limited and Hubtech Limited. The reason the four companies were selected is because they are adopting different ERP systems for their projects according to their market share and because of the different tiers they are in the telecommunication industry. The rationale for this site is that it is the most
accessible and convenient for the researcher. It would therefore, save on time and cost.

3.4 Target Population

This study will comprise of staff from four major telecommunication companies in Kenya. Kenya has approximately 16 registered telecommunication companies (CAK, 2014). The researcher will sample the companies depending on their market share. The staffs will be selected from five major divisions namely: Research and Innovation, Human Resources, Information Technology, Top Management Division and Operations. These divisions will be targeted because they are directly or indirectly involved in the process of ERP choice and implementation (Yahaya, 2014). The IT department is entrusted with the task of research, innovation and consolidation of ERP process across the entire company.

Table 3.1 Sampling Table

<table>
<thead>
<tr>
<th>Division</th>
<th>Ericsson</th>
<th>Indigo</th>
<th>Elris</th>
<th>Hubtech</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Management</td>
<td>107</td>
<td>92</td>
<td>86</td>
<td>84</td>
<td>369</td>
</tr>
<tr>
<td>Human Resources</td>
<td>42</td>
<td>38</td>
<td>50</td>
<td>34</td>
<td>164</td>
</tr>
<tr>
<td>Information Technology</td>
<td>127</td>
<td>102</td>
<td>80</td>
<td>165</td>
<td>474</td>
</tr>
<tr>
<td>Operation</td>
<td>221</td>
<td>199</td>
<td>140</td>
<td>297</td>
<td>857</td>
</tr>
<tr>
<td>Innovation&amp; Research</td>
<td>8</td>
<td>15</td>
<td>20</td>
<td>12</td>
<td>55</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>505</strong></td>
<td><strong>446</strong></td>
<td><strong>376</strong></td>
<td><strong>592</strong></td>
<td><strong>1919</strong></td>
</tr>
</tbody>
</table>

Source: Author (2017)
3.5 Sampling Procedures

A sample will be drawn from a population of telecommunication companies’ staff. In order to have a wide reach, questionnaires will be employed in the research through self-administering and through email (Kothari 2003). Stratified random sampling will be employed to select sample size of respondents, where the population shall be segmented into fractions and thereafter random sampling methods invoked to each fraction to form a test group. This method is beneficial because it lessens sample selection bias by ensuring that certain fractions of the population are not overrepresented or underrepresented.

3.6 Sample Size

Sample size of any given population should be representing a specific target of the population (Mugenda & Mugenda, 2004). Thus, this study will adopt target population to enhance more representation. The study will use the stratified sampling method in selecting targeted respondents. As propounded by Herzog (2006) with probability sampling, all units in the pool of potential selectees will have a known probability of being chosen. Each staff in the population of this study will stand a chance of being included in the sample which will thus make it immune to sample bias. Herzog also observed that stratified sampling is a sampling where the population can be segregated into two or more mutually exclusive sub-population or strata.

The following is the sample size determination formula by Calmorin and Calmorin, (1995):

\[
S = \frac{TV + [E(1 - P)]}{TE + [V * P(1 - P)]}
\]

Where \( S \) = Sample size
T = Total number of population

V = The standard value (1.96) of 5 percent level of probability with 0.95 reliability

E = Sampling error is set to 0.01

P = The largest possible proportion (0.80) in the target population estimated to have the characteristics being measured:

\[
S = \frac{1919 \times 1.96 + [0.01 \times (1 - 0.8)]}{1919 \times 0.01 + [1.96 \times 0.8 \times (1 - 0.8)]}
\]

\[
S = 192
\]

Table 3.2 Sampling Size

<table>
<thead>
<tr>
<th>Division</th>
<th>Ericsson</th>
<th>Indigo</th>
<th>Elris</th>
<th>Hubtech</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Management</td>
<td>11</td>
<td>9</td>
<td>9</td>
<td>8</td>
<td>37</td>
</tr>
<tr>
<td>Human Resources</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>Information Technology</td>
<td>13</td>
<td>10</td>
<td>8</td>
<td>17</td>
<td>48</td>
</tr>
<tr>
<td>Operation</td>
<td>22</td>
<td>20</td>
<td>14</td>
<td>30</td>
<td>86</td>
</tr>
<tr>
<td>Innovation&amp; Research</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>51</strong></td>
<td><strong>44</strong></td>
<td><strong>38</strong></td>
<td><strong>59</strong></td>
<td><strong>192</strong></td>
</tr>
</tbody>
</table>

Source: Author (2017)

3.7 Data Collection Procedures

The study will collect primary data using questionnaires which shall include structural and unstructured questions. The questionnaires will be administered through emails and self-administering to respondents in the various levels of departments. The structured questions will be used to enhance efficiency in terms of resources deployed.
for the same, while unstructured forms will be used in order to enhance a more unhindered response from the respondent ranging from expounding of answers and feelings.

3.8 Research Instruments

The instrument that shall be used is a questionnaire. The questionnaire will be both open-ended and closed ended. In order to cover the whole scope, open and closed ended approach, shall be employed as proposed by (Orodho, 2005). This will further enhance greater understanding of the research problem. The open ended types of questions will give informants freedom of response to the questions without rehearsal to any question and thus ensure correct “first hand response”. The closed ended type's will facilitate consistency of certain data across informants (Kothari, 2003) and it’s time-efficient. The questionnaire method is free from bias of the interview as answers are in the words of respondents and the respondents will have adequate time to give appropriate answers and save on this (Kothari, 2003).

3.8.1 Piloting of Research Instruments

These are measures taken to ensure that the data collection tools are standardized to collect the intended data for the study without ambiguities and duplicity. This will be done through piloting of the study data collection tool. Piloting shall involve administering 10 questionnaires to the target population and review them and any error identified will be rectified.

3.8.2 Validity of Findings

Golafshani (2003) opines that the best test of validity of any findings is the extent to which it can be generalized to a wide range of situations and scenarios. This was in
retrospect reflect how close it is to the reality. Since validity measures the extent to which the tool is likely to show the linking relationships of the variables of the study, a pilot study of 20 respondents to test the validity of the research instrument will be conducted. The research tool will then be collected in line with the feedback received from selected respondents. The validity content will be conducted by asking three subject experts and the supervisor on the relevance of the research questions for the research objectives

3.8.3 Reliability of Research Instruments

Reliability entails to determine whether the questionnaire would be repeated before the situation changes or whether it will gather the same results. A test retest reliability that is high would indicate that the researcher can actually rely on the questionnaire. To determine reliability, the researcher used Cronbach Alpha where by a 0.950 coefficient indicates good and the questionnaire can be relied upon (Mugenda & Mugenda, 2003)

3.9 Data Analysis and Presentation

Analysis of the data collected data will be done using Statistical Package for Social Sciences (SPSS). First, the data will be cleaned and coded and keyed on the software. The output will be informing of descriptive statistics that is frequencies, variances and percentages (Kothari, 2009). In addition, correlations of the variables will be done to establish the relationships. The data will be analyzed and presented inform of tabulation and graphical manner.
3.10 Ethical Considerations

The researcher will maintain all ethical considerations while doing the study. The participants will be well advised of the purpose of the study and their consent sought prior to their participation in the study. Respondents will also be informed that the study is voluntary and adequate measures shall be taken to protect confidentiality. Accuracy will be adhered to in data collection, analysis, interpretation and reporting the findings. The research will also maintain ethics in academic writing and publishing
REFERENCES


http://www.sysoptima.com/erp/implementation_methodologies.php
My name is Lucy Wanini Kimani. I am a post graduate student from Africa Nazarene University. As part of my studies, I am required to conduct a research on “The factors affecting success of Enterprise Resource Planning projects within the telecommunication sector in Kenya; a case of the GSM Systems Limited. I am interested in your experiences and opinion in regard to the above study. I am therefore appealing to you to fill for me this questionnaire. The information you will provide will be treated with a lot of confidentiality and will be strictly for the purpose of this study.

Thank you

INSTRUCTIONS:

This questionnaire will be filled by Employees, Senior Managers, Middle Level Management and Junior Staff in four different Departments of the telecommunication industry companies in Nairobi County.

The purpose of the study is to assess the factors affecting the success of the Enterprise Resource Planning projects within the Telecommunication sector in Kenya.

SECTION A

In this section you will be asked general questions.

To select your responses please tick (✓) appropriately

1. Gender: Male □ Female □

2. Age: 22 and below □ 23-26 □ 27-30 □ 35 and above □
3. Length of service: 1yr ☐ 2yrs ☐ 3yrs ☐ 4yrs ☐ 5yrs ☐ 6yrs ☐ others (indicate)


5. For how long have you been using an ERP (Enterprise Resource Planning) system?
☐ 3–6 months ☐ 7–11 months ☐ 1–3 years ☐ More than 3 years

6. Which ERP system(s) is your company currently using? (Check all that apply)
☐ SAP ☐ Oracle ☐ PeopleSoft ☐ Other, please specify: ______________________

7. What ERP functions / modules are currently implemented at your company? (Check all that apply)
☐ All ERP functions ☐ Financial Accounting ☐ Production Management ☐ Sales and Distribution ☐ Human Resource Management ☐ Payroll ☐ Other, please specify: ______________________

8. What reasons justified the implementation of the ERP system? (Check all that apply)
☐ Standardization of processes ☐ Adaptation of processes to international best practice ☐ Improvement of existing customer-facing services ☐ Creation of new types of customer-facing services ☐ Improved internal logistical processes ☐ Improved management controls ☐ Enabling of future growth ☐ Increasing the market flexibility to respond to new market opportunities ☐ Other, please specify: ______________________

SECTION B

The questions in this section ask you about your experience of work particularly with the implementation of the ERP systems for projects
In this section, select an option that best explains your opinion on each of the following statements.

1= Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

### I. TECHNOLOGY

Please indicate the extent to which you agree with the following statement by ticking (✓) the appropriate response

In your opinion, are the following aspects on Technology important regarding the success of the ERP projects among telecommunication sectors in Kenya?

<table>
<thead>
<tr>
<th>To what extent do you agree or disagree to the opinion that the following aspects are important among the telecommunication sectors in Kenya</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>Total Responses</th>
<th>Weighted Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology Improves Decision Making</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emphasis is laid on Technology in choosing an ERP system for projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology provides a Competitive advantage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology enhances innovation and performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There is diversity in Technological innovation on choosing a Growth the best ERP system for projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which other aspects on Technology do you think are important in the success of the ERP Projects within the telecommunication sectors in Kenya? Please comment (if any)
I. TOP MANAGEMENT PREFERENCES

Please indicate the extent to which you agree with the following statement by ticking (✓) the appropriate response.

In your opinion, are the following aspects on Top Management preferences important regarding the success of ERP projects among telecommunication sectors in Kenya?

<table>
<thead>
<tr>
<th>To what extent do you agree or disagree to the opinion that the following aspects are important among Telecommunication sectors in Kenya</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>Total Responses</th>
<th>Weighted Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Management preferences assures high level of performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top Management Preferences assures efficient implementation of ERP projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental factors affect Top Management Preferences on Choice of ERP systems for projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual factors affect Top Management Preferences on Choice of ERP systems for projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Managerial factors affect Top Management Preferences on Choice of ERP systems for projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political/Power affects the Top Management Preferences on the Choice of ERP system for projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which other aspects on Top Management Preferences do you think are important in the success of the ERP projects among the Telecommunication sectors in Kenya? Please comment (if any)
II. ORGANIZATIONAL CULTURE

Please indicate the extent to which you agree with the following statement by ticking (✓) the appropriate response.

In your opinion, are the following aspects on Organizational Culture important regarding the success of the ERP projects among the Telecommunication sectors in Kenya?

<table>
<thead>
<tr>
<th>To what extent do you agree or disagree to the opinion that the following aspects are important among Telecommunication sectors in Kenya</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>Total Responses</th>
<th>Weighted Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Culture supports ERP Project priorities of the organization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational Culture is aligned with the implementation of the ERP Strategy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Past ERP system affects the Choice of New ERP system</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational Culture enhances Competitive advantage for ERP projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We are conscious of our Organizational culture when implementing ERP for our projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which other aspects on Organizational Culture do you think are important in the Success of the ERP for projects among the Telecommunication sector in Kenya? Please comment (if any)
IV. RESOURCE BASE

Please indicate the extent to which you agree with the following statement by ticking (√) the appropriate response.

In your opinion, are the following aspects on Resource Base important regarding the Success of the ERP projects among the Telecommunication sectors in Kenya?

<table>
<thead>
<tr>
<th>To what extent do you agree or disagree to the opinion that the following aspects are important the Telecommunication sectors in Kenya</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>Total Responses</th>
<th>Weighted Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is a relationship between organizational resources and success of the ERP for projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource Base is a main source of creating Competitive advantage in implementing the ERP systems among the telecommunication sector in Kenya</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our Organization has a strong resource base for implementing the right ERP for projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our ERP Strategies and choices are founded upon our resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We are good stewards for our resources when it comes to using the ERP for our projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which other aspects on Resource Base do you think are important in the Success of the ERP for projects among the telecommunication sector in Kenya? Please comment (if any)
V. SUCCESS OF THE ERP PROJECTS

Please indicate the extent to which you agree with the following statement by ticking (✔) the appropriate response.

In your opinion, are the following aspects on Success of the ERP projects important among the telecommunication Sectors in Kenya?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our projects are efficiently monitored. Activities in progress</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>were supervised to ensure they were on course and on-schedule</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in meeting the objectives and performance targets.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategy used achieved the goals, involved setting goals,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>determining actions to achieve the goals and mobilizing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>resources to execute the actions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The projects are supervised adequately; processes were</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>followed and adhered to by the team.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The workflow involved in the projects shows proper planning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>was observed to ensure all activities took place.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The closure of projects takes place when all it was meant to</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>achieve, has been accomplished</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which other aspects do you think are important in the Success of the ERP for projects among the telecommunication sector in Kenya? Please comment (if any)

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________
## APPENDIX II: RESEARCH BUDGET

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit Cost- Kes</th>
<th>Amount-Kes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stationery</td>
<td>Printing Paper</td>
<td>5 rims @ 750</td>
<td>3,750</td>
</tr>
<tr>
<td></td>
<td>Full scarps</td>
<td>4 rims @ 250</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Photocopying service</td>
<td>1500 copies @ 3</td>
<td>4,500</td>
</tr>
<tr>
<td>Typing and Email Services</td>
<td>Amount of hours and</td>
<td>2* 12 GB@3,000</td>
<td>6,000</td>
</tr>
<tr>
<td></td>
<td>Data bundles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Printing and binding services</td>
<td>Copies of proposal,</td>
<td>15 booklets @ 1,000</td>
<td>15,000</td>
</tr>
<tr>
<td></td>
<td>draft and final report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data analysis software (SPSS)</td>
<td>Statistical Package</td>
<td>25,000</td>
<td>25,000</td>
</tr>
<tr>
<td></td>
<td>for Social Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research Assistant fee</td>
<td>Data collectors</td>
<td>2@ 5,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td></td>
<td>6,000</td>
<td>6,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>71,250</strong></td>
</tr>
</tbody>
</table>
**APPENDIX III: WORK PLAN/TIME SCHEDULE**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic Selection and Allocation of Supervisor</td>
<td>XX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proposal Writing</td>
<td>XX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proposal Defence</td>
<td>XX</td>
<td>XX</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piloting and data collection</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis of Data</td>
<td>XX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Report Writing</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defence of Draft Report</td>
<td>XX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Report Writing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>XX</td>
<td></td>
</tr>
</tbody>
</table>