MACRO ENVIRONMENT AND PERFORMANCE OF DONOR FUNDED HEALTH PROJECTS IN KENYA

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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 BUSINESS (PROJECT MANAGEMENT) OF KENYATTA UNIVERSITY

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DECLARATION

This thesis is my original work and has not been presented for any award of a degree in any other university or institution. No part of this thesis should be reproduced without the authority of the author, and or Kenyatta University

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DEDICATION

To my wife Agnes Ong'era, daughter Shantel Ong'era and son David Ong'era Jnr as well as my parents John and Dorcas Mobegi who have been my source of inspiration in this study.

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ABBREVIATIONS AND ACRONYMS

APM:	Association for Project Management
BMG:	Boston Marketing Group
DANIDA:	Danish International Development Agency
DFID:	Department for International Development
EU:	European Union
GAVI:	Global Alliance for Vaccines and Immunizations
GDP:	Gross Domestic Product
GMT:	Greenwich Mean Time
GTZ:	German Agency for Technical Cooperation
HIV:	Human Immunodeficiency Virus
ICAI:	Independent Committee for Aid Impact
IEG:	Independent Evaluation Group
IFC:	International Finance Corporation
IPA:	Innovation for Poverty Action
KPI:	Key Performance Indicator
LLITNs	Long Lasting Insecticidal Nets
MDGs:	Millennium Development goals
MDPs:	Major Development Partners
MoH:	Ministry of Health
MUSA:	Mercy United States of America
NACOSTI:	National Commission for Science, Technology and Innovation
NEPAD:	New Partnership for Africa's Development
NGO:	Non-Governmental Organization
ODA:	Official Donor assistance
OOF:	Other Official flow
OECD:	Organization for Economic Cooperation and Development

PMBOK:	Project Management Body of Knowledge
PMI:	Project Management Institute
SIDA:	Swedish International Development Agency
UNAIDS:	United Nations Programme for HIV & AIDS
UNCTAD:	United Nations Commission for Trade and Development
USAID:	United States Agency for International Development
UTC:	Coordinated Universal Time
VIF:	Variation Inflation Factor
WHO:	World Health Organization

OPERATIONAL DEFINITION OF TERMS

Cost:	Is a planned or estimated amount of money within which a project should be completed.
Donor:	Is a person, organization or government who gives out something voluntarily to a person, organization or government in need of it in the form of grants, loans and aid.
Donor funded projects:	Are projects that are implemented by use of funds provided by governments and private organizations.
Economic factors:	Are factors that affect consumption decisions of individuals and organizations and they include; taxes, government policy, exchange rates, interest rates and labor costs.
International Development Projects :	Are public projects in all sectors of developing countries financed by international development banks which include The World Bank, Regional Development Banks, and other international bodies namely; United Nations Associated Agencies, Bilateral and Multi-lateral Government Agencies and Non-Governmental Organizations

Macro environment:	Are a set of uncontrollable factors which originate from outside a project organization but can affect it as it is being implemented. They include; social-cultural, political, economic, legal, technological and physical environment factors
Performance criteria:	Is a measure of the progress of a project. In this study the basis of measurement is time, cost or budget and quality
Performance factors:	Are the inputs into a project that affect its performance either directly or indirectly.
Political factor:	Any activity that is related to government policy and its administrative practices that can affect an organization's operations, which includes new legislation, political instability and political decisions.
Project:	Is a task or a set of tasks carried out to achieve a certain objective and produce a unique product within a stipulated time frame and budget, and to produce an identifiable deliverable.

Project environment:	Are all those factors both internal and external to a project which are likely to affect its performance.
Project Performance:	Is a measure of how well a project is progressing towards its set objectives based on certain key indicators which in this study are time, cost, scope and quality.
Project risk management:	Is a series of actions that include anticipating, recognizing, recording, examining and managing project risk factors throughout the life of a project.
Quality:	Is a standard of a project output as measured against user expectations.
Social-cultural factors	Are factors that directly affect lifestyles They comprise of; religious belief, tribe, race, decent, family, physical status, economic status, education level, spouses, children and political organization.
Technological factors:	Are factors which relate to the presence and development of technology.
Time:	Is a planned schedule or duration within which a project should be done.

Top management: Is the senior management of a project organization or a team of officials at the highest position of the project organization who take part in its day to day running.

Top management support: Refers to the involvement of the senior project managers in the initiation, planning and implementation of a project by developing policies and frameworks that support project performance as well as providing the necessary resources and an enabling environment for the projects to perform well.

Uncontrollable factors: Are the aspects of a project environment that cannot be manipulated or managed by a project team.

ABSTRACT

Projects have become an integral part of organizations' strategy. Health projects in particular, have been found to carry out a critical function in enhancing the well-being of society. In Kenya, many health projects are funded by donors. Although the amounts of funding from donors have been rising over the years, most donor funded health projects in Kenya are not performing well. According to the World Health Organization, almost 50 percent of health projects in Kenya do not achieve the performance measures of cost, time and quality. Recent studies have demonstrated that the macro environment comprising of the economic, social-cultural, political, technological, legal and the physical environment has a significant effect on the performance of government funded projects. However, there is scanty information on the effect of the macro environment on the performance of donor financed health projects in Kenya. This study specifically sought to determine the effect of social- cultural, economic, technological and political environments on the performance of donor funded health projects in Kenya. The moderating effect of top management support and the mediating effect of project risk management on the relationship between the macro environment, and the performance of donor funded health projects in Kenya were also investigated. The research was anchored on The Theory of Constraints and supported by Hofstede's Cultural Dimensions Theory and The Goal Setting Theory. The study was guided by the positivism philosophy and it adopted an explanatory and descriptive research designs. A census of all the sixty-nine donor funded health projects initiated between 2008 and 2018, and were ongoing was conducted. Six section heads for the donor financed health projects at the Ministry of Health were also included in the study. Primary data was gathered by administering semi-structured questionnaires to identified respondents after seeking official authorization from relevant entities. Both descriptive and inferential statistics were applied in the analysis and presentation of data. Quantifiable data was examined using the Statistical Package for Social Sciences (SPSS) software while qualitative data was examined by content analysis based on patterns and themes. A multiple regression model was used to explain how the macro environment affects the performance of donor funded health projects in Kenya and to test hypothesis.The study found out that social-cultural, economic and political environment had a significant effect on the performance of donor funded health projects. The study further established that top management support moderated the relation between the macro environment and the performance of donor funded health projects. The research also determined that project risk management had a partial mediation on the relationship between the macro

environment and the performance of donor funded health projects. Consequently, the study recommended that the government of Kenya should develop policies and frameworks that will minimize the negative effects of the economic environment and maximize the positive effects of the social-cultural and political environments on the performance of donor funded health projects. The study also recommended that all decision makers and other donor funded health project stakeholders should devise strategies for enhancing the performance of their projects within their macro environment.It is also imperative for the government and other stakeholders in the donor funded health projects to embrace project risk management practices to ensure the projects are successful. Furthermore, the donor funded health projects top management should provide the needed support in the initiation, planning, and execution of the projects to enhance the performance of the projects.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Due to the dynamic nature of the work environment, organizations are increasingly using projects in their operations to achieve organizational objectives (Hyvari, 2016). Governments too initiate and run projects aimed at meeting the needs of the citizenry. Whether company, organizational or government, projects are funded from internal resources or by international agencies. Of concern to all organizations is the performance of their projects which is measured by the project success pillars of time, quality and budget alongside other project specific parameters (PMI, 2013).

Projects by the Kenya government are funded by the government or donors and through private public partnership. The projects cover a wide range of areas which include health, water and sanitation, agriculture, education, security, energy, infrastructure and tourism. The Kenya Vision 2030 categorizes the government projects into economic, social and political projects which it calls the pillars of Vision 2030. Vision 2030 in Sessional Paper 10 of 2012 identified flagship projects which are expected to directly address priorities in key sectors such as agriculture, education, health, water and the environment. According to Vision 2030, health projects are critical to the attainment of all the other pillars of Vision 2030 because they ensure the availability of healthy and sufficient

manpower. A good and working health system also reduces the costs of downtime due to the ill health of workers by ensuring that the workers are healthy and fit to perform their work.

Although donor funded projects exist in most parts of the world, third world countries have been the main beneficiaries of these projects for over fifty years (Mujabi,Otengei, Kasekende & Ntayi, 2015). Appendix II shows the official donor assistance and other official flows to health broken down into developing countries, Africa, South of Sahara and Kenya in particular. It shows that most of the donor funding on health flows to Africa. Donor funded projects are supported mainly by external funds that are obtained from international aid agencies through local organizations that act as intermediaries excluding those supported by locally generated funds as well as government (Kuria & Wanyoike, 2016). Donor funding is also seen as the provision of direct or indirect finance for goods or services (Ouma, 2012).

According to Font, Goodwin and Walton (2012) donors who include development banks, governments and philanthropic charities, aim to reduce poverty in Third World Countries by generating economic growth through financial investments and interventions. The donors also aim at providing technical solutions to social problems without changing the basic social structures of the recipient countries. Mitchell (2013) agrees that the main goal of donor funding is to alleviate poverty

in the long term, directly or indirectly. Donations and foreign aid to the Third World Countries are made with the belief that Third World countries do not have the capital required in making income-generating investments due to poverty. The World Bank Group (2013) concurs that aid has been essential in lifting people from extreme poverty by helping low-income countries to accelerate their economic growth.

Many costlier projects undertaken world over tend to have sustainability challenges which is a concern for key donors like the Asian Development Bank, the World Bank, as well as Bilateral Aid Agencies (Mugambi, 2014). According to Kiprop, Nzulwa and Kwena (2017), little progress has taken place in Sub-Sahara Africa despite donor funding for over a half a century. High levels of unemployment, indebtedness, poverty, poor health and poor economic performance are still prevalent in most of the Sub-Saharan countries. Kiprop et al (2017) recommend that due to the performance issues tagging the donor funded health projects, studies should be conducted to establish the challenges facing implementation of donor funded projects in Kenya. Project challenges emanate from both inside and outside the project. Those from within the project are controllable while those from outside are largely uncontrollable. According to Musa, Amirudin, Sofield and Musa (2015), the political, technological, economic and social environments are external project environment factors.

1.1.1 Project Performance

Projects in the health sector enable medical facilities to enhance their capacity to offer adequate and appropriate services to their clients. This is in terms of service quality, shorter waiting periods, quick responses to medical situations and good customer service (WHO, 2019). Thus, good project performance is important if these objectives of a performing facility are to be achieved.

The Project Management Body of Knowledge (PMBOK) guide suggests that the performance of projects is measured in terms of time, budget or cost and quality which according to the guide are the three constraints of project performance (PMI, 2013, p. 1) as illustrated by Figure 1.1. According to Gaturu and Muturi (2014), time is an important factor and measure of the performance of projects. The Bostock Marketing Group (BMG) Research (2015) also suggested that budget and quality standards are critical measures of project performance.

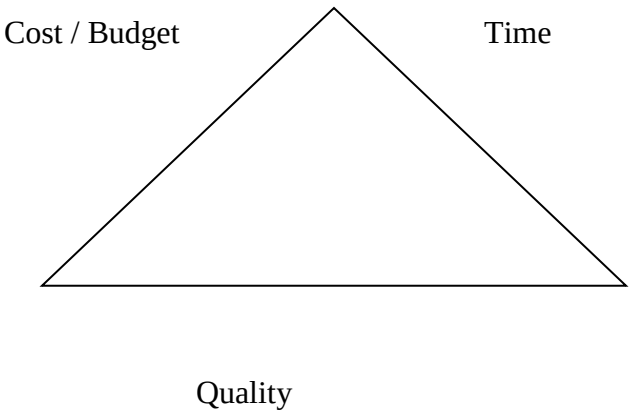

Figure 1.1: Project Performance Constraints
Source; Project Management Institute, 2013

Time is an essential resource in the management of projects. It is irrecoverable, limited and dynamic (Adeojo, 2012). It is a critical factor in the measurement of the performance of projects (PMI, 2013). Projects are time-bound and as such, during the project planning phase, a clear start and end time for the project should be determined (PMI). According to Mortaheb,Amini, Younesian and Soltani (2012), the performance of projects is measured on the basis of time. Memon, Rahman and Azis (2012) also indicated that time performance is an important criterion for measuring the performance of projects.

The PMI (2013) suggested that the performance of a project is good if its progress against time is good. World over, many projects are experiencing time overruns. According to Memon et al., (2012), 79.5 percent of public projects and 66.25 percent of private projects experience time overruns in Malaysia. Assedri (2009) found out that the Northern Bypass project in Uganda had a time overrun of up to 100 percent of the planned duration. The 2017 edition of Deloitte Africa Construction report indicated that 87 percent of projects in Kenya experience time overruns. Solis-Carcano, Corona-Suarez and Garcia- Ibarra (2015) revealed that prolonging the project execution time will result to cost overruns as a result of the additional expenses on materials, personnel,financial costs and contract penalties.

Memon et al., (2012) associated time overruns to both internal and external factors. Akanni et. al (2014) identified social, economic, technological, political

and environmental factors as the external factors.This study sought to determine the effect of the external environment on the duration of projects which is a measure of project performance. The data on time collected from the respondents of the study was analyzed together with cost and quality weights to determine a composite measure of the performance of projects.

Cost is an estimate of the total of what has been spent on the project to the current level. It is dynamic and not static (Adeojo, 2012). According to PMI (2013), cost is one of the measures of the performance of projects alongside time and quality. Memon et al., (2012) concurs that cost is a vital measure of the performance of a project. In Malaysia, 53.2 percent of public projects and 62.8 percent of private projects experience cost overruns with an overrun of between 5 – 10 percent of project cost (Memon et al., 2012). In Kenya, 48 percent of the projects experience cost overruns (Deloitte Africa Construction report, 2017).Cost overruns are caused by inflation on materials (Olawale & Sun, 2018), time overruns (Solis-Carcano et al.,2015) and rework (Hwang,Thomas & Haas, 2009). This study sought to determine the effect of the macro environment on the cost measure of performance.

Every project has an anticipated level of quality based on the details and specifications set out by the users (WHO 2009; Lazarevic, Prlincevic, Stajcic & Miletic, 2014). According to Ng and Anuar (2011), quality performance is

concerned with the quality of the project's outcome and the project's objectives on quality. Mortaheb et al., (2012) indicated that a project's outcome has quality if it satisfies the overall expectations of the user, and if it achieves the technical specifications. Quality is a key measure of the performance of a project. To conclude that the performance of a project is good, time, cost and quality outcomes have to be taken into consideration,

The quality of a project is affected by lack of knowledge and skills to transform ideas into quality outcomes (Ng & Anuar, 2011), lack of understanding on quality expectations and the newness and uniqueness of the project (Stojcetovic et al., 2014), and project risks (Aller, 2016). Project risks emanate from both the inside and outside of the project. This study focused on social-cultural, economic, technological and political sources of project risks, which are external sources.To achieve the expected levels of quality and hence performance, quality management practices should be adopted. According to Stojcetovic (2014), the management of project quality includes the processes and activities involved in determining the organizational quality policies, objectives and responsibilities that satisfy the needs for which the project was undertaken.

1.1.1.1 Performance of Donor Funded Health Projects

The performance of donor funded health projects is affected by different factors across projects and countries.Thiele (2016) suggested that both internal and macro

environments affect project performance. Thiele identified the level of community development, community cohesion, community trainings and involvement of local leadership (Barangay Captain) as the external factors that affect the performance of donor funded projects in the Philippines.

Although donor-funded projects are considered important in the growth and development of many developing countries, their quality, cost, time and stakeholder satisfaction outputs remain the subject of debate (Azhar, 2008). According to Kuria and Wanyoike (2016), although donor funding to governments and non-governmental organizations towards poverty reduction has been on the increase, poverty in Africa is also on the increase. In Uganda, many donor-funded projects depict signs of irrationality, a deficient risk assessment and management mechanism (Mujabi et al ., 2015). According to Assedri (2009) the "Northern By-pass Project" which was completed more than two and half years beyond schedule, had a cost overrun of over 100 percent of the estimated cost. The project had poor quality on road lighting and had narrow lanes. Kenya's donor funded projects faced similar outcomes despite the country's strong economic growth and reform efforts in the period from 2008 to 2018. In that period Kenya's health system remained underdeveloped and the performance of donor funded health projects was not steady.

Endemic corruption and poor reporting structures in the public sector in Kenya are causes of delays in donor funded health projects (DFID, 2012). Gaturu and Muturi (2014) indicated that the delivery of donor funded projects in many developing countries is affected by delays. The consistent delays in the completion of projects and cost overruns in Kenya just like in most parts of the developing world calls for research to determine the factors that are causing poor project performance. The findings of this study sought to confirm that the macro environment factors have an effect on the performance of donor funded health projects in Kenya.The level of performance of a project in this study is a composite measure of time, cost and quality.

1.1.2 Project Macro Environment

A project environment can either be macro or micro. The micro environment comprises of the organizational culture, structure, policy, politics, and the leadership structure adopted within an organization (Ogunsina, 2014). All these factors are controllable by the project manager. According to Ogunsina those factors that affect a project but are not controllable by the project organization form the macro environment. These factors affect the way the project manager carries out his responsibilities.

According to Akanni et al.,(2014) the macro environment has an impact on the performance of building projects in Nigeria. The researchers further revealed that

the external environment comprises of the political, legal, technological, economic, social-cultural and physical factors. The political environment includes excessive bureaucratic contract procedures, political instability and lack of adequate infrastructure such as telecommunication systems, transportation networks, and electricity supply which the researchers found to be critical in the performance of projects. According to the researchers, the political environment determines government policy and affects political decisions on projects. It affects the elections processes, legislation and development of policies, trade reforms, unity, political stability, and government leadership. The economic environment zeroes in on the general level of economic activity while the technological environment ensures the availability of technology, skilled manpower resources, as well as continuing research and development to innovate, invent or improve existing technologies (Akanni et al.,2014). The lack of required technology and skills will slow down the progression of the project and lead to time overruns. The availability of the desired technologies and skills will speed up the implementation of the projects thus leading to the attainment of the expected performance levels. Akanni et al. indicated that the social-cultural environment consists of values, customs, and lifestyles that characterize a society.

Musa et al. (2015) classified the project environment factors as those related to the external environment, the project, the organization, and the project manager and team members. The researchers identified political, economic and social

factors as the macro environment factors affecting the performance of construction projects in developing countries. According to them, political factors concern political stability, infrastructure development, good governance, political support, provision of enabling environments for development and provision of incentives and guarantees. Economic factors constitute low interest rates, flow of funds and availability of financing and a stable macroeconomic environment. Musa et al indicated that social factors concern culture, health consideration and the general lifestyle of people.

The economic environment factors such as taxes, economic growth or recession, government economic policies, exchange rates, interest rates, and minimum wages affect the consumption decisions of individuals and organizations. They affect the affordability in financing and the flow of funds. According to Musa et al.(2015), the economic factors include low interest rates, availability of credit facilities, a stable macroeconomic environment and long facility repayment periods. A stable macroeconomic environment will enable the project team to prepare fairly accurate cost estimates and ensure the project cost is controlled. Unstable macroeconomic policies will push up the project cost.

The social-cultural environment factors like language, economic status, religion, education, ethnicity, family and physical status directly affect lifestyles. According to Gudiene (2013), social-cultural factors include cultural issues, the

general lifestyle of people and health considerations. Akanni et al. (2014) opines that socio-cultural dimensions of a project environment consist of values, customs, and lifestyles that characterize a society. Further, norms and values, rising educational levels, language and attitudes towards social responsibilities and population demographics are examples of socio-cultural variables. These variables have the potential to affect project organizations that operate within the society. Community hostilities towards a medical initiative will, for example, hinder the uptake and success of the project.

The political environment of a project comprises of any activity that is related to government policy and its administrative practices that can have an effect on an organization's operations such as new legislation, political instability and political decisions. According to Musa et al., (2015), political factors concern political stability and government intervention in providing both incentives and enabling environments for public housing development.

The macro environment factors affect the performance of the projects differently. Although there are many macro environment factors, this study focused on social-cultural, economic, technological and political factors because they are rated higher by past researchers on their effect on project performance and they are the major differentiating elements among nations (UNCTAD, 2017). The social-cultural factors directly affect lifestyles such as ethnicity and literacy levels of

communities around the projects, language, and religious beliefs. Economic factors affect consumption decisions of individuals and organizations and they include taxes, government policies, interest rates, currency exchange rates, and labor costs. Technological factors which include the availability of tools, equipment and skilled manpower affect the ability of the project team to effectively and efficiently manage the donor funded projects.

Macro environment factors pose greater threats to projects, management and organizational structures than the internal environment factors (Akanni, et al., 2014) since the factors are not controllable by the project team. According to the UN-Habitat (2012) report, social and economic aspects of the macro environment factors have been inadequately addressed in the housing policies of many developing countries. According to Musa et al.(2015) political, economic and social environment factors, have an effect on the performance of public housing projects in developing countries.The choice of external factors to study is based on the Cultivation Theory developed by Prof. George Gerbner of Anneberg school of communication University of Pennyslvania which states that our logical thinking, attitudes and choices are influenced by what we see over and over again. Past studies on the external environment and the performance of projects have put a lot of weight on the external factors while arguing that internal factors are largely controllable and so their effect on the project performance can be controlled.Moreover, the social, economic and political factors form the key

pillars of Kenya's vision 2030. Besides, Kenya being a net importer of technical manpower just like most developing countries, with most spare parts being obtained from abroad, as well as research and development of new products (Akanni et al.,2014), technological factors become an important area of study too.

1.1.3 Top Management Support

For project managers to successfully complete their projects, the top management must be actively involved (Zwikael, 2008). Top Management should determine the various involvement processes which will affect the performance of the projects. Zwikael identified the six main involvement processes; develop project procedures, involve the project manager during the initiation stage, support ongoing project management training programmes, establish a project management office, develop a supportive project organizational structure, define clear project performance measures and support projects in quality management.

Top Management support is an essential factor in project performance (Khan,Long & Iqbal, 2014). For some projects, it is a critical performance factor. Kandelousi,Ooi and Abdollahi (2011),indicated that top management support in projects includes; helping teams in dealing with hurdles, encouraging workers and creating a sense of commitment to work. Khan et al also opined that top management support takes the form of providing timely financial resources,

allocation of human and physical resources and delegation of power and authority to project leaders necessary for the successful completion of projects.

The performance of projects is affected by top management support both directly and indirectly (Intakhan, 2014). Direct effects include; top management playing a vital role in enabling projects to achieve their objectives, directing and motivating workers, providing projects with materials, equipment and enhancing commitment to work. Intakhan identified the indirect involvement of top management in projects in planning, controlling, checking, evaluating and making decisions about training, performance evaluation and determining policy.

According to Iqbal, Long, Fei and Bukhari (2015), top management support is a key factor in attaining project performance. Top management is the joining glue between the project manager's transformational leadership behaviours and project performance factors in construction projects in Pakistan. According to Iqbal et al, top management should enable the project managers to execute their roles by providing them with the required power and authority. Project managers may fail to deliver successful projects even with excellent skills due to the lack of top management support (Meredith & Mantel, 2010).

1.1.4 Project Risk Management

All projects have risks (Baccarini & Melville, 2011). Donor funded health projects in Kenya, in the region and generally world over, run a high risk of being over budget, significantly late and of poor quality. Risks observed on these projects have external and technical sources (Khraiwesh, 2012; Peixoto, Tereso, Fernandes & Almeida, 2014). Musa et al., (2015) suggested that donor funded health project's risks are caused by macro environment factors.

According to Baccarini and Melville (2011) projects seldom or never apply formal risk management in projects. This makes many projects to fail. The success of projects is achieved through the development of good risk management plans. Junior and Carlvalho (2013) suggested that projects should hire a project risk manager or dedicate a resource to risk management for this constitutes a significant factor in risk management.

Managing project risks is important in coping up with the threats arising from the environment (Teller & Kock, 2013; Didraga, 2013). It enables project managers to plan and carry out actions and control the outcomes to meet the time, cost and quality measures of performance (Rodrigues-da-Silva & Crispim, 2014). According to Kerzner (2017), the management of project risks includes risk identification, risk assessment, risk handling by use of an appropriate method, and monitoring and documentation of the risks.

1.1.5 Donor Funded Health Projects in Kenya

Donor funded projects is a worldwide phenomenon. However, the developing countries are the greatest beneficiaries (Park, 2019). The Department for International Development (DFID, 2016) suggests that to advance the achievement of Kenya's Millennium Development Goals (MDG) 4, 5 and 6 which target to minimize health inequalities and to reverse the downward trends in health related outcomes and impact indicators, DFID is working with others to ensure support for vulnerable groups. Donor funding is necessary if Kenya's Vision 2030 is to be achieved.

In Kenya, several health projects are funded by donors such as the World Bank, International Monetary Fund, United States Agency for International Development (USAID), European Union (EU),International Finance Cooperation (IFC), Germany Agency for Technical Cooperation (GTZ),Danish International Development Agency (DANIDA), Swedish International Development Agency (SIDA) and other Major Development Partners (MDPs) which include specific countries like United States of America, United Kingdom, China, Japan, Italy, Germany among others. The projects have been initiated and run to help alleviate poverty in Kenya (Adhiambo, 2012).

The funding from donors to Kenya comes from both Official Donor Assistance (ODA) and Other Official Flow (OOF) sources and covers many areas which

include education, infrastructure, health, investments and even military support (Wexler,Valentine & Kates, 2013). However, health captured an increasing share of all ODA (WHO, 2009), not just in Kenya but the world over from the start of the 21st century. Donor funding for health and the number of funding organizations have grown dramatically in this period (Wexler et al., 2013). All countries have seen an increase in financial commitments towards global health over the last decade (Mitchell, 2013). Since 2013 when the highest level of development aid for health was recorded, a falling trend in the share of aid going to the most needy sub-Saharan African countries has been witnessed, although health has still kept on receiving the highest funding (Wikipedia, 2017; Wexler et al., 2013) as indicated in Figure 1.2.

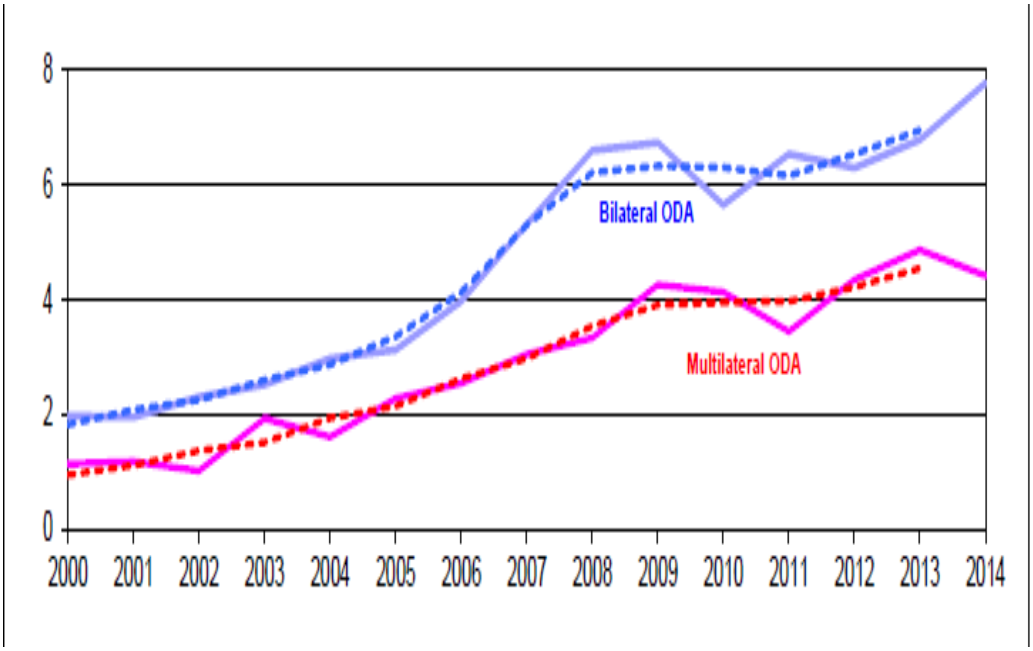

Figure 1.2: Total ODA USD Billion over 15 years
Source: *Statistics from the Development Assistance Committee of the Organization for Economic Co-operation and Development*

Appendix II shows Official Donor Assistance (ODA) and Other Official Flows (OOF) broken down into totals for all the developing countries, Africa and then Kenya specific to health for 11 years between 2008 and 2018. The World Bank (2007),estimates that development assistance for health grew from US$ 2.5 billion in 1990 to almost US$ 14 billion in 2005.Besides the ODA increase, private funding for global health has also been on the increase and now accounts for about a quarter of all development aid for health (McCoy,Chand & Sridhar, 2009)

In Kenya, contributions to the health sector by donors have been on the increase, rising to 15 percent of the health budget in 2009/10 from 11 percent in 2005/06. The contribution by donors to the development budget of the Ministry of Health accounted for over 90 percent in some years. According to The Netherlands Enterprise Agency (2016), 57 percent of the MoH National Health Budget for Development was provided by Development Partners as of financial year 2014/15. Donor funds are used for varying health projects which include the construction of hospital buildings, capacity development, nutrition and care, provision of drugs and treated nets as well as fighting epidemics. This is in line with the assertions by Santos, Santos, Tavares and Varajao (2014) that health projects are either on research, development or implementation. The donor funded health projects in Appendix V have been classified as building and construction, capacity development, nutrition and care and treatment and prevention.

Between 2008 and 2018, 69 health projects funded by the ODA and OOF funds were initiated and are ongoing (Africa's Largest Volunteer Driven Open Data Platform, 2015). These funds were given either bilaterally or multilaterally and by several other philanthropic organizations (WHO, 2011). These projects are as indicated in appendix III. Despite the huge bilateral and multilateral donor funding to the Kenyan health projects, the performance of the projects has been poor or unsatisfactory. Most of the projects are facing delays on completion time, cost overruns or unsatisfactory quality. Due to these problems, a study has been necessitated to find out the factors that affect the performance of donor funded health projects in Kenya.

1.2 Statement of the Problem

Kenya's vision 2030 has identified health as a key factor in the attainment of the vision objectives. This explains the many donor funded projects implemented in the country's health sector. However, the Wolfensohn Center for Development Working Paper 8 of 2009 observed that donor funding has not produced the desired results in Kenya (Mwega, 2009).The poor performance of health projects dates back to the 1950s (Ika et al., 2011). According to Muchungu (2011), 58 percent of donor funded projects in Kenya show poor performance as measured by time, budget, scope and client satisfaction. According to the 2017 edition of Deloitte Africa report, approximately 48 percent of all projects report cost overrun and 87 percent of the projects have a time overrun in Kenya.

According to the Independent Commission for Aid Impact (ICAI, 2014), DFID programmes underperformed as compared to the global and regional averages since the level of child mortality in Kenya is still high. ICAI (2014) further observed that the Global Fund's Monitoring System judged the performance of the main grant for malaria to Kenya during the period 2013 – 14 as below expectations. An independent donor review concluded that the delays for implementation of Global Fund grants in Kenya typically ranged between 6 and 24 months (ICAI, 2014) implying that the projects fail. Further, Kirui and Moronge (2016) found out that many health projects initiated in Bomet County had stalled. Gitonga and Keiyoro (2017) also found out that health grants were not utilized well in the implementation of health care projects in Meru County due to corruption.

Akanni et al. (2014) and Musa et al. (2015) investigated the influence of macro environment factors on the success of building and construction projects in Nigeria while Otieno and Waiganjo (2015), and Namukunda and Ogolla (2016) investigated the effect of micro environment factors on the performance of health projects in Kenya. These studies investigated the direct relationship between the independent and the dependent variables, but this study, in addition, investigated the moderating effect of top management support and the mediating effect of project risk management on the relationship between the macro environment and the performance of donor funded health projects.

After an extensive study of the struggling donor funded health projects in Kenya, reasons for the poor performance of the projects need to be determined. This is to ensure the projects perform well and that they achieve their objectives of ensuring a healthy nation. In this regard, the study sought to find out the effect of the macro environment; social-cultural, economic, technological and political environments on the performance of donor funded health projects in Kenya.

1.3 Objectives of the study

1.3.1 General Objective

To determine the effect of the macro environment on the performance of donor funded health projects in Kenya.

1.3.2 Specific Objectives

The specific objectives for this study were:

i) To establish the effect of the social-cultural environment on the performance of donor funded health projects in Kenya.

ii) To find out the effect of the economic environment on the performance of donor funded health projects in Kenya.

iii) To investigate the effect of the technological environment on the performance of donor funded health projects in Kenya.

iv) To determine the effect of the political environment on the performance of donor funded health projects in Kenya

v) To determine the moderating effect of the top management support on the relationship between the macro environment factors and the performance of donor funded health projects in Kenya

vi) To determine the mediating effect of project risk management on the relationship between the macro environment factors and the performance of donor funded health projects in Kenya

1.4 Research Hypotheses

This research was guided by the following hypotheses.

$Ho_{1:}$ The social-cultural environment has no significant effect on the performance of donor funded health projects in Kenya

$Ho_{2:}$ The economic environment has no significant effect on the performance of donor funded health projects in Kenya

$Ho_{3:}$ The technological environment has no significant effect on the performance of donor funded health projects in Kenya

$H_{04:}$ The political environment has no significant effect on the performance of donor funded health projects in Kenya

$Ho_{5:}$ The top management support has no significant moderating effect on the relationship between the macro environment factors and the performance of donor funded health projects in Kenya

$H_{o6:}$ Project risk management has no significant mediating effect on the relationship between the macro environment factors and the performance of donor funded health projects in Kenya.

1.5 Scope of the study

Projects in a country can be government, private or donor funded. This study focused on donor funded health projects for a period of 11 years ranging between 2008 and 2018. This period had a very rapid increase in financial commitments towards global health across all countries and particularly Kenya (Mitchell, 2013). This saw an increase in the health projects funded by the donors.The projects covered in this study range from building and construction, capacity development, nutrition and care to treatment and prevention.

The study focused on the macro environment factors that affect the performance of donor funded health projects in Kenya. The macro environment variables investigated were; social-cultural, economic, technological and political variables. The social-cultural factors studied were language, local community literacy levels, community support and corruption practices. This study focused on currency exchange rates, interest rates and taxation rates as economic factors, and new skills and technology as technological factors. Political factors investigated were; government policy, political leadership and legislation on donor funding. Top management support and project risk management were investigated as a

moderating and mediating variables between the macro environment factors and the performance of donor funded health projects.

1.6 Significance of the Study

The findings from this study are expected to provide the much needed information to project planners and financiers on those factors that affect the performance of donor funded health projects. The study outcome could form a basis for developing policies and making more informed decisions by the project planners and financiers which would result in improved projects performance. This would reduce the possibility of failure of the projects.

The study may also benefit Kenya's health sector, particularly policy makers in the ministry of health, by establishing the extent to which social-cultural, economic, technological and political factors affect the performance of donor funded health projects in Kenya. This would be vital in project planning and implementation of future projects to ensure more donor funded health projects succeed.

It could also be useful to researchers and scholars who wish to generate more knowledge or fill gaps on the performance factors for donor funded projects. Students and scholars researching on the factors influencing the performance of donor funded health projects will find this research resourceful in their study. The

study findings may also provide a basis on which to interrogate the significance of other variables not covered in this study**.**

1.7 Limitations of the Study

This study used a semi-structured questionnaire in collecting data. The technique often faces non- response challenges which are common in most of the survey-based researches. To overcome this challenge, the researcher devised mechanisms such as sending reminders and administering the questionnaire directly to enhance the response rate. Suspicion from some respondents on the intention of the study also led to non-response challenges.

This study focused on projects initiated between 2008 and 2018 which are located in different geographical and physical locations. Challenges of locating the respondents were experienced. To overcome this challenge, the researcher obtained their locations from the implementing agency which is the Ministry of Health.

Donor funded project information was also not published and therefore not readily available because of its sensitive nature. The information touches on the government of Kenya's relationship with the donors. To overcome this challenge, the researcher obtained the necessary approvals from the project implementing

agencies to access the data. Besides, the researcher assured the respondents that the data obtained was to be treated with confidentiality.

Moreover, the current study focused only on donor funded health projects in Kenya which might limit its generalization to government and private funded projects as well as to international development projects in developed countries.

1.8 Organization of the Study

There are five chapters in this thesis. Chapter one consists of the background to the study, the statement of the problem, the research objectives and hypotheses. The significance, scope, limitations and the organization of the study are also outlined. Chapter two reviews the relevant literature to build a foundation for the study. The theoretical literature review, empirical discussions and conceptual framework are also presented. The chapter also highlights the research gaps between the empirical studies analyzed and this study's research problem.

The third chapter details the research methodology, research design, model specifications, target population specification, sampling design and sample size, the instruments and procedures for collecting data, tests for reliability and validity, and data analysis. Chapter three further presents the ethical considerations to be made in the study. Chapter four presents the research findings and discussions on the various factors investigated in the study. The

chapter also provides an analysis of the findings which are presented using tables, charts, figures and discussions. In chapter five, a summary of the study, conclusions, recommendations, and the study's contribution to knowledge as well as suggestions for further study are presented.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter, the theoretical and empirical literature review, summary of literature, research gaps and the conceptual framework are discussed.

2.2 Theoretical Literature Review

Researchers have developed many management theories that have formed the basis for research. Some of the researches have provided a good basis for decision making in business. These theories include The Theory of Constraints, Goal-Setting Theory, Theory of Performance and Hofstede's Cultural Dimensions Theory.

2.2.1Theory of Constraints

This theory was developed by Dr. Eliyahu M. Goldratt in his 1984 book "The Goal". The theory forms the basis for the continuous achievement of goals by organizations (Chowdhary, 2009). Aguila-Escobar,Garrido-Vega and Gonzalez-Zamora (2016) revealed that the goals of any economic activity are the reduction of costs, improvement of service and the increase of client satisfaction. The goals of projects are to achieve time and cost schedules, and attain the desired levels of output quality (PMI, 2013).

According to this theory, a very small number of constraints limits any manageable system in achieving more of its goals (Chowdhary, 2009).The attainment of project goals is affected by both internal and external constraints. If these constraints are not managed well, projects are bound to fail (Muchungu, 2011). The theory provides for ways of identifying the key factors that limit (constrain) the achievement of goals. It also provides for ways of ensuring that the constraint is not a limiting factor by improving it in a well-organized manner. Kiprop, et al. (2017) has suggested that the overall performance of a project could be improved by focusing on fixing the main problem (constraint).This study sought to determine if the macro environment factors have an effect on the overall performance of the donor funded health projects in Kenya. The determination would guide project managers in the development of project plans and their execution to achieve expected levels of performance in the projects.

According to Maina and Gathenya (2014), every system is limited in getting more of what it strives for by at least one constraint. Were it not so, then the system's output would be infinite. The Theory of Constraints has been applied to accounting, production control, project management, production planning, supply chain management, performance measurement and other spheres of business such as hospitals and military depots which are not-for-profit facilities. Although performance constraints may be acknowledged or not, they determine the output

of a system. To achieve organizational goals, a manager should identify and reduce the organization's system constraints (Maina & Gathenya 2014).

The main assumption of this theory is that the performance of organizations can be measured and controlled by variations in output, operating expenses and inventory measures, where output are the goal units generated from the activity carried out and operating expenses are the resources going into the activity. The theory indicates that inventories are the resources acquired and used in the operations. This theory thus agrees that cost and quality are important measures and therefore goals of any project.

Projects are designed with specific cost, time and quality objectives in mind. The attainment of these objectives results in good performance for the project. However, attainment of the project goals faces several external and internal environment constraints (PMI, 2013). The external environment constraints are legal, economic, political, social – cultural, technological, and environmental. The Theory of Constraint provides a good base for determining the most limiting constraint to the attainment of project goals. This base was applied in this study to determine the most limiting factors to the performance of donor funded health projects in Kenya. Multiple regression analysis was applied on the data collected for this study to determine the effects of each of the factors under study on the performance of the donor funded health projects.

2.2.2 Hofstede's Cultural Dimensions Theory

This theory was devised by Geert Hofstede in 1993 (Anastasia, 2015).It establishes a framework circling around cross-cultural communication which collectively portrays the impact of the culture established in society on the values of the society members. This model is used to explain organizational behaviours based on six entirely different dimensions which are; job-oriented versus employee oriented, process- oriented versus results-oriented, professional vesus parochial, tight versus loose control, open systems versus closed systems, and pragmatic versus normative (Hofstede, 2011). Hofstede also indicated that cultures can change their position on a dimension within the dimensional model. He further observed that technological modernization is an important force toward culture change, despite there being not the slightest proof that it wipes out variety on other dimensions. It leads to partly similar developments in different societies (Hofstede, 2011).

Hofstede's original theory had four dimensions which were; uncertainty avoidance, power distance, individualism versus collectivism and masculinity versus femininity which he later increased to six after further studies (Anastasia, 2015). The additional dimensions are long-term versus short-term orientation and indulgence versus self-restraint. These aspects embody the deeply rooted values of different cultures. These values affect how people from different cultural backgrounds behave in a work-associated context (Anastasia, 2015).

According to Hofstede (2011), culture differentiates members of groups or categories. The term refers to tribes or ethnic groups, organizations, nations and occupations. The term can also be used to refer to generations, genders, or to social classes. Organizations have organizational cultures which enable individuals to discern what goes on in their organizational environment. The cultures exist in systems that may be visible and conscious (Hofstede, 2011).

Donor funded projects are often implemented by people from diverse cultures namely; locals and expatriates seconded to the projects from the donor. Foreign engineers or doctors are often deployed to work in community based projects in developing countries due to shortages (Anastasia, 2015). The cultural diversity between local communities and the external engineers or doctors often leads to the failure to manage projects effectively. This greatly contributes to the performance of the projects (Anastasia, 2015). Businesses occurring in cross-cultural contexts are often affected by cultural differences. Most of the problems arising in these businesses are in matters of conversation, participation and how the business parties relate. To address these problems, business leaders and even staff need to apply Hofstede's six cultural dimensions (Anastasia, 2015).

Different regions, countries and organizations have different social-cultural values which affect how they carry out their day to day activities. This creates a social structure (Muchungu, 2011) which affects the work patterns and the performance

of projects. Hofstede's six dimensions describe the various social structures that a project may adopt in the execution of their projects. The type of structure adopted by a project will determine the performance. This theory formed a good basis for determining how social-cultural factors affected the performance of donor funded health projects.

2.2.3 The Goal Setting Theory

This theory was developed by Edwin Locke and Gary Latham in 1990 to provide a basis for employee motivation in organizations (Lunenburg, 2011). It puts emphasis on the importance of the relationship between goals and performance. The theory further indicates that when goals are specific and challenging the most effective performance will result (Lunenburg, 2011). Lunenburg further indicated that both group goal-setting and individual goal-setting are important in attaining effective performance. According to Lunenburg some form of goal setting in operation is found in nearly every modern organization. It is seen as a means of improving and sustaining performance (Dubrin, 2012).

The word goal means the object of an effort or ambition. It is the destination of a journey (Sinay, 2016). Mitchell (2013) concurs that donor funding has a goal which is to directly or indirectly alleviate poverty in the long term. The goals of

any project revolve around completion within the time frame, the budgetary plan and the achievement of the desired quality outcomes.

To ensure the success of donor funded projects, donors develop and track time, cost and scope goals (Pitagorsky, 2013). To track these three goals, Pitagorsky further states that Key Performance Indicators (KPIs) that will tell whether the project is being successful or not and to what degree will be identified. Cost, time and scope are the pillars of project success and they are the factors used to measure the performance of projects. This theory formed a good base for estimating the performance of projects based on the project goals of time, cost and quality.

2.3 Empirical Literature

The empirical literature comprises of literature related to the perceived relationships between the macro environment and the performance of donor funded health projects in Kenya. The various constructs of this study were; social-cultural environment, economic environment, technological environment, political environment, top management support, project risk management and the performance donor funded health projects. The following sections examine these relationships.

2.3.1 Social – Cultural Environment and the Performance of Projects

Akanni et al.,(2014) in a study on the impact of environmental factors on building project performance in Delta State , Nigeria investigated construction technological and resources, economic, political, legal and financial, socio-cultural and physical environment factors. The researchers applied a survey study approach and analysed data by use of the Spearman correlation technique.According to this study,social-cultural factors had a significant relationship with cost overruns in building projects in Nigeria. They found out that disturbance and attacks by youths on building workers especially the capturing and holding of foreign workers for ransom, and combativeness were key social factors that distressed the performance of the building projects. The study further affirmed that language had a significant distress on building projects in Nigeria as the illiterate building workers developed "Pidgin English" which was a corrupted form of English that they used for communication among them. This study found out further that the groups of unemployed youth often demanded for unlawful payments commonly known as ''settlement''which caused delays in the construction activities running into weeks. The study by Akanni et al.,focused on economic, social and technological factors among others and their distress on the performance of construction projectsin Nigeria but not on donor funded health projects.

A study by Zuo et al. (2014) on ‘’Does project culture matter? A comparative study of two major hospital projects’’, investigated the effect of project procurement culture which included cooperation, flexible and people - oriented, integration, and goal – oriented factors on project performance. The study applied a case study research design and was based on Hofstede’s Dimension Theory. The study was based on two public hospitals in South Australia. The study confirmed that the culture in a project played a vital part in attaining cordial relationships between project players, resulting to better project outcomes in terms of time, use, process satisfaction, gratification with the relationships, addressed environmental issues, commercial success, enhanced business opportunities and the overall project performance. Zuo et al. further suggested that the culture in projects should be established from the onset of the project and preserved during the entire project lifecycle. Furthermore, the study also observed that the culture in projects should be cascaded to all supply chain levels to include sub-contractors and suppliers if the desired performance is to be attained. Although the study by Zuo et al was on hospital projects, it was different from this study in a number of aspects. First, its location was different from this study; second, its focus was on the effect of the internal project culture on project performance and not the effect of the external project culture on the performance of projects; third, it applied a case study research design while this study used explanatory and descriptive research designs. Additionally, the projects they focused on were not donor funded.

In their study on the impact of the macro environment on the success of public housing projects in developing countries, Musa et al. (2015) interrogated the distress of the economic, social and political factors on the success of public housing projects.The study employed a survey study and structural modelling techniques as well as narrative and factor analysis techniques in analysing the collected data.The study found out that the housing projects success was distressed by the macro environment factors , namely; economic, social and political factors. From the study ,the researchers came up with a hypothetical model for illustrating how the critical success factors and public housing project success relate. The model is as in Figure 2.1.

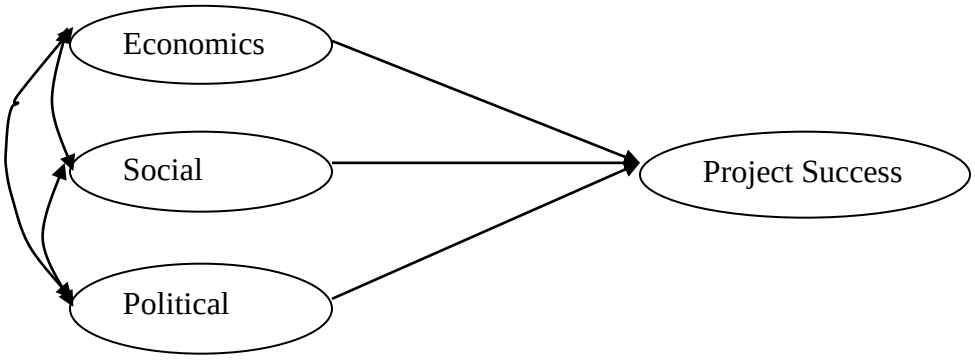

Figure 2.1 Hypothetical Model adapted from (Musa et al., 2015)

Musa et al., (2015) further revealed that the economic environment constitutes factors that affect the movement of funds and its cost effectiveness, while the social environment constitutes cultural aspects, general lifestyle and health considerations. The political environment constitutes political stability and government intervention in the provision of both stimulus and enabling

environments for projects (Chen, Zhang & Peng Mo, 2012). Although Musa et al. studied the effect of social, economic and political factors on the performance of projects , the researchers did not focus on donor funded health projects but on public housing projects. The study by Musa et al was located in Nigeria and the researchers used structural equation modelling, narrative and factor analysis in data analysis and interpretation while this study applied multiple regression analysis.

Namukunda and Ogolla (2016) studied the factors affecting the implementation of family planning projects by non-governmental organizations in Kenya. The study investigated the effect of technical capability, project planning, financial controls and project communication (independent variables) on the implementation of family planning projects in Kenya (dependent variable). The study also investigated the moderating effect of culture on the relationship between the independent and the dependent variables. This study found out that the independent variables affect the implementation of family planning projects in Kenya. The study used descriptive research design and the data was analyzed by multiple regression models. Further, Namukunda and Ogolla anchored their studies on the Project Management Theory, Lewin's Change Management Theory and The Logical Framework Model and Network Theory. The study recommended for further investigation on the factors not identified in the study but are causing low execution of family planning projects. Namukunda and

Ogolla (2016) specifically revealed that cultural norms, beliefs and taboos affected the implementation of family planning in Kenya and hence the perfomance of the projects. Although this study was based on health projects, it investigated the effect of internal project environment factors on family planning projects. The projects were not donor funded and culture was tested as a moderating factor on the independent variables. The theories on which the Namukunda and Ogolla study is anchored are also different from the theories anchoring this study.

2.3.2 Economic Environment and Project Performance

Economic environment is known to affect the economic workability of the project including the local economic conditions adjustments of the beneficiary country or imprecise project development plan due to economic conditions that are erratic (Maina & Gathenya, 2014). Sang (2015) identifies exchange rate fluctuations, interest rate and inflation as economic factors. The successful completion of projects depends on the availability of resources as well as finance (Maina & Gathenya, 2014). According to Maina and Gathenya (2014) the success of projects is affected by project financing, foreign currency exchange rate as well as foreign investments and joint venture in various ways. These economic factors affect the economic workability of the project including the changes in domestic economic conditions of the recipient country and may lead to the development of inaccurate project plans (Maina & Gathenya, 2014).

In their attempt to find out the effect of economic factors on the performance of project management among petroleum marketing firms in Kenya, Maina and Gathenya (2014) focused on economic factors as predictor variables and project management performance as the predicted variable. Their study was anchored on The Agency Theory, Theory of Constraints, Bargaining Theory of Distribution Channels, and The Theory of Resources and Capabilities. The study applied a descriptive research design and attributed the project management performance to various economic factors such as; foreign currency exchange rate, funding, joint ventures and foreign investments. The study by Maina and Gathenya found out that project management among the firms is poor. The results of this study further infer that the success of projects in oil marketing companies is affected by the use of efficient project specific technology, good forecasting of work plan, efficient procurement of materials and equipment and exchange rate on the acquisition of resources. Although the study concludes that economic factors have an effect on the performance of project management among petroleum marketing firms in Kenya, its focus was not on donor funded health projects.

The Akanni et al. (2014) study on the impact of environmental factors on building project performance in Delta State, Nigeria, investigated the economic factor as an independent variable amongst other independent variables. The study revealed that economic factors have an effect on the building project performance in Delta State. The fluctuating economic environment affects the project's financial

position which then influences the project performance. Although this project studied the effect of economic factors on the performance of building projects, the focus was not on donor funded projects.

In their study on the influence of external environmental factors on the success of public housing projects in developing countries, Musa et al. (2015) investigated the economic factors as an independent variable. The study found out that the success of public housing projects is affected by economic factors. The study further revealed that only government can control economic factors and not any individual donor funded project. The study identified a stable macroeconomic environment, available credit facilities to intended recipients, low interest rates, implementation of sound economic policy, loan repayment periods that are long term and low down payment requirement as the economic factors. This study focused on macroeconomic environment, accessible credit facilities to target beneficiaries and interest rates. Although the study focused on environmental factors influence on the success of housing projects, the focus was not on donor funded health projects.

2.3.3 Technological Environment and Project Performance

Afande (2013) in a study on factors affecting the use of donor Aid by International Non – Governmental Organizations in Kenya; Case of USAID, investigated the effect of technical factors, donor behaviour and managerial

factors on the use of donor aid. The study applied a descriptive research design and a multiple regression model. Factor analysis, correlation and content analysis were used in the analysis of data. The study found out that technical factors, which comprise appropriate technology, adequate infrastructure and equipment to support new technologies, skilled personnel in ICT, adequate coordination at different levels in making effective use of the technology, quality data systems and lack of compatibility, and supportive ICT policies were critical in the success of projects.The study argued that lack of formal training in foreign aid management, budgeting and accounting by the officers in the donor funded projects chain may affect their performance. The study by Afande focused on the internal project environment and was limited to USAID only. It was not on donor funded health projects either. Afande's use of case study makes the outcomes of the study limited in replicability and generalizability.

In their study, on the impact of environmental factors on building projects performance in Delta State, Nigeria, Akanni et al., (2014) investigated the construction, technological and resources factor as one of the macro environment factors that distress the performance of building projects in Nigeria. The study found out that in developing project plans, technology is an important environmental aspect to consider. This is in terms of availability of the technology and the manpower to run it. According to Akanni et al. the accelerated industrial growth of a country is constrained by the absence of elementary knowledge of

methods of production and machinery design techniques. This is further complicated when the country obtains her technical manpower mainly through importation. With the exception of research and development financed by the government in state run institutions, most machinery accessories and expenditure in research and development are made overseas for most developing countries (Akanni et al., 2014). Although the study by the Akanni et al., found out that technological factors had an impact on building projects performance, their study did not focus on donor funded health construction projects. The study was also based in Nigeria while the current study is based in Kenya.

In their study on project management success in health; the need for additional research in public health projects, Santos et al., (2014) investigated the project success factors and project perfromance through a literature review. The study found out that the present research endeavor largely concentrates on information technology, engineering and software development projects, and not on public health projects. The study further revealed that by integrating new research findings and technical innovation, project performance can be enhanced.The study recommended for additional research to advance know-how about success factors in public health projects. Although the study by Santos et al., was on health projects, it investigated internal project environmental factors and it was not on donor funded health projects. The study was not hinged on primary data but on a literature review.

A study by Otieno and Waiganjo (2015) on factors affecting the performance of donor funded nutrition projects, a case of Mercy USA nutrition projects in Kenya focused on the effect of training in project management and project identification on the performance of donor funded nutritional projects in Kenya. A descriptive research design was applied in the inquiry and the data collected from the study was analyzed by content data analysis. The Otieno and Waiganjo study was guided by the goal setting theory and the transfer of training model. The study revealed that other factors other than training on project management affected the performance of Mercy USA nutrition projects. The study recommended that subsequent studies look at factors affecting the performance of donor funded projects in association with the government of Kenya and further look at how the project manager's education level affects the performance of donor funded nutrition projects. Although this study focused on donor funded health projects in Kenya, its independent variables were internal to the project and not external as in this study.

A study by Namukunda and Ogolla (2016) on the factors affecting the implementation of family planning projects by non- governmental organizations in Kenya investigated technical capability as one of the independent variables. The study revealed that technical capability of the project team members had a positive and significant effect on the implementation of family planning projects in Kenya. The study found out that trainings on the management of projects, the

number of trainings in communication and the frequency of trainings on family planning and allocated budget on family planning were low, thus leading to the low technical capability of the project team. The study investigated the effect of technical factors on the implementation of family planning projects which are internal project factors. The focus of the study by Namukunda and Ogollla was not on donor funded projects but on non – governmental organization's projects.

2.3.4 Political Environment and Project Performance

In their study on the impact of environmental factors on building project performance in Delta State, Nigeria, Akanni et al., (2014) determined 29 factors which had an effect on the building project performance. The political factor was one of the 29 factors. Akanni et al, found out that of these factors, political factors had a significant impact on project time overruns alongside social and cultural factors. The researchers used the Spearman correlation analysis to determine the impact of political factors on the performance of building projects in Delta State Nigeria, while this study used multiple regression analysis to find out how the performance of donor funded health projects in Kenya is affected by political factors.

In a research carried out by Musa et al., (2015) in Nigeria on the influence of external environment factors on the success of public housing projects in developing countries, external environment factors which include political

environment, economic environment and the social environment were investigated. In the political environment, the study focused on changes in government policy, changes in legislation on donor funding, and changes in political leadership. The study found out that these factors affect the success of public housing projects in developing countries. While Musa et al., used the structural equation modelling for data analysis, this study applied multiple regression analysis in determining the effect of the macro environment on the donor funded health projects in Kenya.

In their study on the factors affecting completion of government funded projects, a survey of projects in The Ministry of Water and Environment, Kyalo and Muturi (2015), investigated political interferences as one of the variables. The study found out that political interferences influence the completion of the projects funded by government to a great extent. The study further revealed that the project manager's expertise also affects the completion of the projects. The study which was conducted in Kenya sought to determine the influence of timeliness of payments of contracts, expertise of project managers, political intervention and project planning process on project completion.

Another study by Ishtiaq and JahanZaib (2017) on the impact of project complexity and environmental factors on project success: A case of oil and gas sector of Pakistan investigated the political situation as one of the variables. The

study whose independent variables were project complexities and environmental factors applied the structural equation modelling in the analysis of data. To collect data, Ishtiaq and JahanZaib used a questionnaire survey. The study found out that the political situation was a key factor affecting the performance of projects.

2.3.5 Top Management Support and Project Performance

Moderating variables determine how strongly the dependent and independent variables relate. This study analyzed the effect of the top management support on the macro environment factors and the performance of donor funded health projects in Kenya.

Khan et al, (2014) in their study on top management support, a potential moderator between project leadership and project success; a theoretical framework found out that, top management support is a glue between project leadership behaviours and project success that can strengthen or weaken the proposed relations. Khan et al, conceptualized top management support as a potential moderator. In their study Iqbal et al.(2015) concluded that a project's top management support had a link in the moderating effect between the transformational leadership and the success of construction projects in Pakistan. Top management support can lead a project towards success or failure.

In their study on the effect of the senior management's support on the relationship between factors affecting employees and performance in the Al-Zawiya University of Libya, Dukhan,Mohamad and Ali (2017) found out that top management plays a vital role in achieving synergy between the activities and operations of an organization. Dukhan et al. further revealed that top management ensures that workers understand the organizational goals and provides the necessary conditions for achieving them. The top management also meets the employee's needs, empowers them and motivates them to be initiative and creative (Dukhan et al, 2017).

2.3.6 Project Risk Management and Project Performance

A study by Thomas and Merath (2017), on an integrative model linking risk, risk management and project performance; support from Indian software projects found out that project performance is defined by the combined impact of the risk factors present and the efficacy of the risk control approach adopted. Gitau (2015) agrees that, to reduce the negative effect of these risks on the projects, risk management strategies should be improved.

According to Na, simpson, Xiaotong, Singh and Kim (2007), although there may be many other factors, deficient risk control is definitely one of the leading factors that may cause project failure. Teklemariam and Mnkandla (2017) opined that risk is one of the factors that threatens the performance of projects and even

results in project failure. According to Singh and Dey (2017), as social context risks increase due to the disagreement between clients and the project team, project managements risks also increase; thus, having a significant negative effect on the performance of the project. Risk management cultures have an effect on the performance of projects (Junior & Carvalho, 2013). To minimize the negative effects of project risk on the performance of projects requires even a modest level of risk management planning (Carvalho & Junior, 2015).Thus, risk should be managed well to avoid severe consequences on project performance.

According to Teller and Kock (2013), risk transparency is directly influenced by the formalization of the management process of project risks, the identification of project risk, and the risk management culture, while the risk coping capacity is directly influenced by the prevention of risk ,monitoring and the integration of risk management into project management. Both risk transparency and risk coping capacity directly affect the performance of projects. According to Gitau (2015) the impact of identified but unmitigated risk is high on the performance of construction projects.

2.4 Summary of Literature and Research gaps

Public health projects have a divergent focus from other projects and their concern is in availing conditions in which people can be healthy. The projects are fundamental for the people's welfare. Their peculiar characteristics rationalize the

need for a study to develop a distinct model of performance factors, to back health top management and managers of projects in the planning and operational management of projects (Santos et al., 2014). Although no research focusing on the effect of external environment factors on the performance of donor funded health projects in Kenya has been documented, a couple of related empirical studies have been carried out. Table 2.1 provides the existing gaps from earlier studies that were filled by this study.

Table 2.1 Research gaps summary

Author (s)	Topic	Key Findings	Knowledge gaps	Study focus
Afande, Ofunya Francis , (2013)	Factors affecting use of donor aid by international non-governmental organizations in Kenya: A case of USAID	The study found out that technical factors, factors attributed to donor behavior and managerial factors affect the effectiveness of donor aid in Kenya.	The study did not investigate the macro environment factors but internal environment factors .The study was also not specific to donor funded health projects performance. It applied a descriptive study design while the current study applied explanatory research design	This study investigated external project environment factors and was anchored on the theory of constraints
Akanni, Oke & Akpomiemie (2014)	Impact of environmental factors on building project performance in Delta State, Nigeria.	Economic and financial, Political, and Social and cultural factors had a significant relationship with time and cost overruns	The study sought to find out how the independent and the dependent variable relate directly. It was on building projects performance in Nigeria and not on donor funded health construction projects in Kenya It also used Spearman correlation coefficients, Chi square and Kendall's coefficients while this study applied multiple regression analysis While the study has no underpinning theory, this study was underpinned on the theory of Constraints While the study applied survey research design, this study applied explanatory research design	This study investigated the effect of top management support and project risk management as moderating and mediating variables respectively.
Maina & Gathenya, (2014)	Influence of economic factors on performance of project management among petroleum marketing firms in Kenya	Economic factors affect the performance of petroleum marketing projects	It investigated the performance of petroleum marketing firms and not donor funded health projects It used a descriptive research design while this study applied explanatory research design. .	This study investigated three additional factors which are social-cultural, technological and political factors

Santos, Santos, Tavares & Varajao, (2014)	Project management success in health – the need for additional research in public health projects	This study found out that project success will be brought about by strong leadership, effective management, realistic financing arrangements, country ownership, openness and receptivity to learning by doing, constantly improving on strategies and processes, by incorporating new research findings and technical innovation	The study investigated internal environmental factors and not macro environment factors It applied literature review while this study applied explanatory research design It also did not identify the theory upon which their study was anchored	This study collected and analyzed primary data as opposed to Santos literature review.
Zuo et al., (2014)	Does project culture matter? A comparative study of two major hospital projects	Project culture plays an important role in creating harmony between project participants and hence better project outcomes for hospital projects	Was conducted in Australia which is in a different geographical location from Kenya Focused on the internal project culture and not on the external project culture. Was also based on a small sample and so generalization on causality was not possible. Was also not on donor funded health projects It applied a case study research design which limits on replication and generalization The study was based on Hofstede's cultural dimension theory	Also investigated a fairly large sample and collected primary data to make it possible to generalize. This study was underpinned on the theory of constraints

Musa, Sofield, Amirudin & Musa, (2015)	Influence of external environmental factors on the success of public housing projects in developing countries	The Economic, social and political factors have a significant influence on the success of public housing projects	The study applied structural Equation modelling and not multiple regression analysis that this study applied The study was on public housing projects performance in developing countries and not on donor funded health projects in Kenya The study applied survey study The study did not identify the theory underpinning it.	This study in addition investigated technological factors and was underpinned on the theory of constraints The study applied explanatory research design
Otieno & Waiganjo, (2015)	Factors affecting performance of donor funded nutrition projects: A case study of Mercy USA Nutrition project, Kenya	Factors other than training in project management affected the performance of the MUSA nutrition project. Project identification is a crucial factor in the performance of donor funded projects	Although the study was on donor funded health projects, it did not determine the factors that affect the performance of donor funded health projects. The study was anchored on the Goal setting theory and the transfer of training model while this study was based on the theory of constraints, Hofstede's dimension of culture theory and the goal setting theory.	This study investigated external project environment factors
Namukunda & Ogolla , (2016)	Factors affecting implementation of family planning projects by Non -Governmental organizations in Kenya	The study determined that technical capability, project planning, financial controls , project communication and culture have an effect on the implementation of family planning projects	Was focused on internal environment factors and not macro environment factors The study did not focus on donor funded health projects. The study investigated project culture as a moderating variable and not a direct variable on implementation of family planning projects. Was based on Project Management theory, Lewin's change management theory, the Logical framework theory and the network theory. It applied descriptive research design while this study applied multiple regression analysis	This study investigated the moderating effect of top management support as well as the mediation of project risk management between the study variables

Source; *Author (2017)*

2.5 Conceptual Framework

The variables of focus on the relationship between the macro environment and the performance of donor funded health projects in Kenya were summarized by the conceptual framework in Figure 2.2. The framework illustrates how the variables in this study relate. It further shows the specific parameters studied in each of the variables.

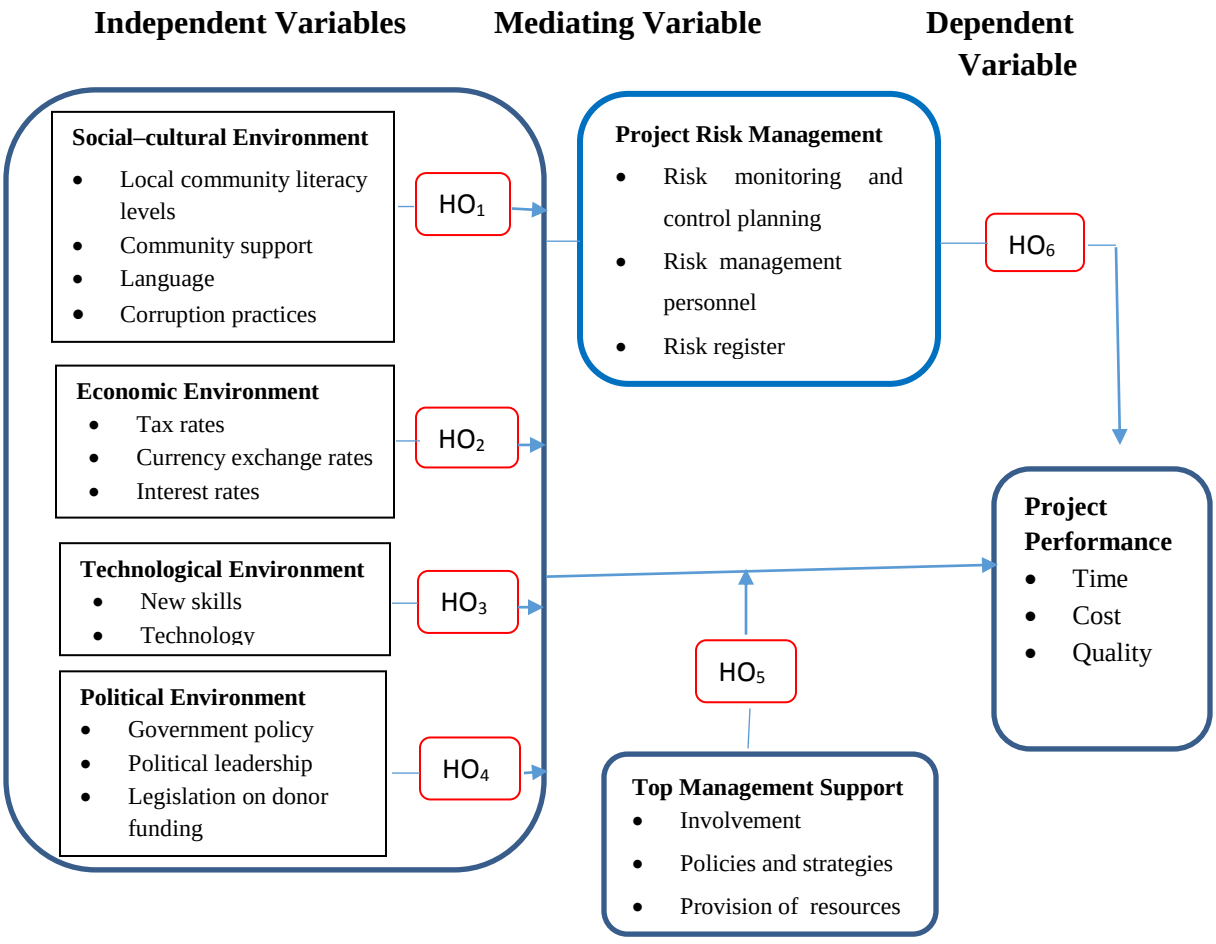

Figure 2.2 Conceptual framework
Source: Author (2017)

The conceptual framework is based on the premise that the macro environment has an influence on the performance of donor funded health projects in Kenya, although this influence is mediated by project risk management and moderated by top management support as detailed in the empirical literature in the preceding segment.The macro environment factors investigated were; the social-cultural, economic ,technological and political factors and their effect on the performance of donor funded health projects in Kenya. The social-cultural factors investigated were; local community literacy levels, community support, language and corruption practices. The economic factors investigated were; changes in currency exchange rates, changes in interest rates and changes in tax rates. The technological factors investigated in the study were; need for new skills to run the project,and availability of technology.The political factors investigated were; changes in government policy, changes in legislation on donor funding and changes in political leadership.

This study investigated top management support and project risk management as moderating and mediating variables respectively. The moderating variables investigated were; provision of resources, top management involvement and top management policies and strategies. The mediating variables investigated were; the availability of a risk register, availability of dedicated risk management personnel and the existence of risk monitoring and control plans.

The performance of the projects was measured by the project performance constraints which were; cost or budget, time and quality (PMI, 2013). A donor funded health project was considered performing well if its composite measure of cost, time and quality was above 3.5 (or at 70 percent) on the likert scale where: 1.0 is very poor and 5.0 is excellent as recommended by Reeves et al, (2007) and Yeung et al, 2013).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the study philosophy, study design, empirical model and measurement of variables. The target population, sampling design, sample size, data collection instruments and techniques, validity and reliability of data collection instruments, data analysis and results presentation are also discussed in this chapter.

3.2 Research Philosophy

A research philosophy underpins a researcher's preferred methodology, strategy for the research as well as the techniques and procedures for collecting and analyzing the data (Saunders, 2016). It guides researcher's disciplined actions (Haq, 2015) and affects the way knowledge is acquired and understood (Lincoln, Lynham & Guba, 2011). Most scientific researchers are guided by either the positivism or the interpretivism paradigm frameworks (Collis & Hussey, 2009; Lincoln et al, 2011; Haq, 2015). The choice of a paradigm guiding any research is based on whether the research is quantitative or qualitative.

According to Collis and Hussey (2009), the belief behind the positivism paradigm is that the central goal of any scientific inquiry is to apply empirical evidence to discover knowledge and that reality is separate from the researcher. Positivism

has interest in cause and effect and the outcomes are generalizable. On the other hand interpretivism belief is that the general reality is intuitive since it is shaped by the researcher's viewpoint. In order to attain comprehension of the subject of investigation, a positivism paradigm was adopted in the collection and analysis of data in this study.

3.3 Research Design

This study used explanatory and descriptive research designs. The combined designs have the potential to offer a more robust research (Caruth, 2013). A combination of explanatory and descriptive research designs provides more insights into the subject of investigation and captures information that could have been left out when using only one study design. While the descriptive research seeks to answer the question "what is going on?" explanatory research answers the question "why is it going on?" Applying both the explanatory and descriptive designs provides a stronger design than a single method design. This enables the researcher to simultaneously understand mechanisms, explore associations and document risks (Morse & Niehaus, 2016).

In a descriptive research, respondents answered a set of questions administered by either interview or a questionnaire from which the researcher described the study phenomenon. By measuring the relationships between the predictor and the predicted variables, explanatory research was used to test hypotheses by

analyzing the collected data using statistical techniques. Explanatory research will not just describe, but explains the phenomena being studied (Given, 2008).

3.4 Empirical Model

To analyze the data collected on the macro environment factors and the performance of donor funded health projects so as to figure out the relationship between them, a multiple regression model was used as suggested by Muthen and Muthen (2012) .They suggested that for continuous outcome variables, linear regression models should be applied. This model is suitable for this study since performance is a continuous variable. According to Gujarati and Sangeetha (2007), where the dependent variable Y is quantitative in a model, estimation of its expected mean or mean value from the values of the independent variables given is the objective. Three sub-models were used to indicate the causal link between the study variables.

3.4.1 The Direct Effects Model

The performance of projects is reliant on various macro environment variables (independent variables) whose effect on the performance varies. This study focused on social-cultural, economic, political and technological environments. The study's multiple regression model was expressed as in equation 3.1. It was used to determine the causal relationships between the study variables.

$Per = \beta_0 + \beta_1 Soc + \beta_2 Eco + \beta_3 Tech + \beta_4 Pol + \mu_i$ 3.1

Where;

Per = Performance of the donor funded health projects

β_0= Constant term

β_1, β_2, β_3 and $\beta_4$are regression coefficients

Soc = Social-cultural factors

Eco = Economic factors

Tech = Technological factors

Pol = Political factors

μ_i = The error term.

To determine the values of the independent variables; social-cultural, economic, technological and political, and the dependent variable; performance, an arithmetic mean of the likert weights of the factors in each variable for each project were computed to obtain the composite indices as recommended by Mazziota and Pareto (2013). Mazziato and Pareto,further indicated that the use of arithmetic mean is found to be simple, easy to understand and apply. The formula for determining the composite measures is as in equation 3.2.

$C_i = \sum W_i \div \sum f_i$ …….. 3.2

Where;

C_i = Composite index for variable i. The composite indices were computed for the macro environment factors and the performance of projects

f_i = Total number of components that comprised the specific variable

W_i = The relative weight given to each component in a particular variable based on a 1-5 likert scale.

3.4.2 The Mediating Effect Model

This study applied the Baron and Kenny (1986) four step regression in determining the mediating effect of project risk management on the relation between macro environmental factors and the performance of donor funded health projects. The approach involves conducting four regression analysis and determining the significance of each coefficient at each step.

Step 1: Conduct a simple regression analysis of macro environment factors (*MEF)* predicting the performance of donor funded health projects (*PER)*

$$PER = \beta_0 + \beta_1 MEF + \mu_i \quad \text{.....3.3}$$

Where,

PER = Performance of Donor funded health projects

β_0 = Constant term

β_1 = Regression coefficient

MEF = Macro environment factors

μ_i = Error term

The aim of this analysis was to find out whether the macro environment variables had a zero order and were significant predictors of the performance of donor funded health projects in Kenya.

Step 2: Conduct a simple regression analysis of the MEF envisioning project risk management (PR)

$$PR = \beta_0 + \beta_1 MEF + \mu_i \quad \text{.....3.4}$$

Where,

PR = Project risk management

The objective of this analysis was to find out whether the macro environment factors had a significant effect on the project risk management.

Step 3: Conduct s simple regression analysis of PR predicting PER

$$PER = \beta_0 + \beta_1 PR + \mu_i \quad \text{.....3.5}$$

The aim of this analysis was to determine if project risk management had a significant effect on the performance of donor funded health projects in Kenya.

Step 4: Conduct a multiple regression analysis with MEF and PR predicting PER

$$PER = \beta_0 + \beta_1 MEF + \beta_2 PR + \mu_i \quad \text{.....3.6}$$

The objective of this analysis was to determine if the macro environment variables had a significant effect on the performance of donor funded health projects when regressed together with the project risk management as a mediating variable.

Steps 1 to 3 are used to ascertain the existence of zero-order associations amongst the variables. Mediation will be unlikely if a non-significant relationship is obtained in one or more of the relationships in these steps. The 4th analysis is

conducted once significant relationships are observed from steps 1 to 3, as per step 4. If the effects of PR remain significant after controlling for MEF, then mediation is supported. If MEF is not significant after controlling for PR, then there is full mediation. If both MEF and PR significantly predict the performance of donor funded health projects, then there is partial mediation.

3.4.3 The Moderating Effect Model

The moderating effect of top management support on the relationship between the macro environment factors and the performance of donor funded health projects in Kenya, was determined by using the regression model 3.7 below as recommended by Fairchild and Mackinnon (2010).

Project Performance = $\beta_0 + \beta_1 X_i + \beta_2 Z + \beta_3 X.Z + \mu_i$ ……... 3.7

Where

Per = Performance of donor funded health projects

β_0 = The constant term

Z = Top management support

X_i = Composite index representing the macro environment factors

β_1 = Coefficient of the macro environment factors

β_2 = Coefficient of the effect of top management support on the performance of donor funded health projects

β_3 = Coefficient measuring the moderating effect of top management support on the relationship between macro environment factors and the performance of donor funded health projects.

If β_3 is statistically different from zero, a significant moderation effect of top management support on the relationship between macro environment and performance of donor funded projects in Kenya is concluded.

3.5 Operationalization and Measurement of Variables

This segment detailed the basis, independent, dependent, moderating and mediating variables used to operationalize the research as well as the measures used in their estimation. Table 3.1 summarizes the various variables, their pointers, their working definitions and the mechanisms used to appraise each of the variables. The operationalization and measurement is based on a likert scale utilized in collecting data.

Table 3.1 Operationalization of Variables

Variable	Nature	Operationalization	Hypothesized direction	Measurement level
Performance of donor funded health projects	Dependent	Composite measure of cost or budget, time and quality for each project from the likert responses	None	Interval
Social-cultural factors	Independent	Perception on the effect of language barrier on project performance	Positive	Interval
		Perception of the effect of community literacy the performance of projects	Positive	
		Perception of how the lack of local community support affects the performance of projects	Positive	

		Perceptions on the effects of corruption on the performance of the projects	Positive	
Economic Factors	Independent	Perception of the effects of taxation rate changes on project performance	Negative	Interval
		Perception of the effect of interest rates fluctuation on project performance	Negative	
		Perception of the effect of exchange rates fluctuation on project performance	Negative	
Technological factors	Independent	Perception on the effect of the need for new skills for running the project on project performance	Positive	Interval
		Perception on the effect of lack of technology in health projects on project performance	Positive	
Political factors	Independent	Perception on the effect of changes in government policy on project performance	Positive	Interval
		Perception on the effect of the changes in legislation in donor funding on project performance	Positive	
		Perception on the effect of the changes in political leadership on project performance	Positive	
Top Management support	Moderating variable	Perception on the effect of provision of resources on project performance	Positive	Interval
		Perception on the effect of continuous top management involvement in the project performance	Positive	
		Perception on the effect of top management involvement in the development of policies and strategies on project performance	Positive	
Project risk management	Mediating variable	The degree to which the availability of risk registers will affect project performance	Positive	Interval
		The degree to which having dedicated risk management personnel affects project performance	Positive	
		The degree to which risk monitoring and control planning affects project performance	Positive	

Source; Author (2017)

To measure the performance of each of the variables, an average of the weights attached to each of the key indicators from the likert measurement for each project was determined. The main performance pointers for each project were time, cost or budget and quality. To determine the performance of a project at a point in time in the life of a project, a percentage of the cost incurred or time consumed was determined and measured against the planned cost or time. Quality being a qualitative indicator, the project manager's perceptions of the progression of the project against user specifications was used to determine performance.

3.6 Target Population

All ongoing donor funded health projects in Kenya, initiated between 2008 and 2018 formed the target population. According to Open Data Africa .org there were sixty-nine donor funded health projects which were initiated between 2008 and 2018 and were ongoing. The projects were classified into four thematic areas which this study classified as building and construction, capacity development, nutrition and care as well as treatment and prevention. Table 3.2 shows these classifications.

Table 3.2: Target Population

Project Thematic Area	**Number of Projects**
Building and construction	19
Capacity development	24
Nutrition and care	2
Treatment and prevention	24
Total	**69**

Source; *Open Africa Data.org (2017)*

This study focused on donor funded health projects as the units of analysis, and the project heads and the heads of donor funded health projects at the ministry of health as units of observation. The heads of each project and six heads of the various donor funded health projects at the ministry of health formed the population, providing total of 75 respondents. The composition of the study population is as in Table 3.3

Table 3.3: Respondents

Respondents	**Population of projects**
Heads of projects	69
Head of donor funded projects at the ministry of health	6
Total	**75**

Source; *Author (2017)*

3.7 Sample Design

Since the population in this study was small, a census study was carried out to ensure representativeness and effectiveness. This is as recommended by Daniel (2012) and Martinez-Mesa,Gonzalez-Chica, Duquia, Bonamigo and Bastos (2016), who argue that census-based studies should be preffered whenever possible, especially when populations are small. Martinez-Mesa et al. further argued that a census study is better to a sample study because sample results are often affected by the random or sampling error. According to Daniel (2012), users of research findings are more likely to attribute credibility of findings based on a census than findings based on sampling.

3.8 Data Collection Instruments

To empirically study the effect of the macro environment on the performance of donor funded health projects in Kenya, a semi-structured questionnaire (Appendix I) was applied. Saunders et al., (2012) observes that in a questionnaire research, objectives are translated into specific questions whose answers provide data for hypothesis testing. A questionnaire allows for the collection of data from large samples, has no bias, upholds confidentiality and saves time.

The questionnaire comprised of open and closed ended questions with some of them being measured on a likert scale of 1-5. Part A of the questionnaire was used to collect data on the identification of the projects and the respondent's

background information. Part B collected data on the project's key performance indicators. Part C, D, E and F of the questionnaire collected data on the effect of the social–cultural, economic, technological and political environments on the performance of donor funded health projects. Part G of the questionnaire collected data on the moderating variable while part H was used to collect data on the mediating variable.

3.8.1 Data Collection Procedure

To reduce on the time taken to distribute the questionnaires, they were delivered at the respondents' offices. The respondents were encouraged to fill out the questionnaires within a given time frame. Where possible the questionnaire was administered directly. For respondents who were constrained with time, the questionnaire was dropped and picked later once it was completed.

3.8.2 Piloting of the Instruments

The questionnaire was subjected to pilot testing for ten days to test it out and determine if it performs as per the researcher's plan, and if the questions in the questionnaire were well understood (Chenail, 2011). It involved fewer respondents than in the main study (Sunders et al., 2012; Cooper &Schindler, 2013).In the pilot, the researcher administered the questionnaire to 10 managers of donor funded health projects who were identified and recruited outside of the study population but within the donor funded health projects category, data

collected and analysed (Babbie, 2012). The projects selected for piloting were initiated between 2008 and 2018.

Piloting the questionnaire enabled the elimination of inconsistencies in the wording and formatting of the questions. Further, piloting enabled the evaluation of the duration required to fill in the questionnaire completely. Piloting also gave an early caution on where the actual research project could flop, where research rules may fail to be adhered to or whether advanced techniques or instruments were not appropriate or were too complex (Ondara, 2017).

3.8.3 Reliability of the Instrument

According to Weiner (2007) a measurement technique is reliable if it can be depended upon to secure consistent results following repeated application. Heale and Twycross (2015) indicated that reliability relates to the consistency of a measure. Reliability also refers to exact replicability of the processes and the ressults (Leung, 2015).

Reliability of the research instrument was measured by determining the Cronbach's alpha coefficients of the pilot study data with the help of the SPSS computer software. The cronbach value obtained indicates if the instruments can collect reliable data as expected. According to Heale and Twycross (2015) the Cronbach's alpha coefficient lies between 0 and 1. A value of 0.00 on the alpha

scale implies that the instrument is not reliable while a value of 1.00 means the instrument is perfectly reliable. An acceptable reliability score is one that is 0.7 and higher. Reliability tests were conducted to test for homogeneity in the collected data and to test for the stability of the instrument. If the Cronbach's alpha coefficient generated is less than 0.7, the questionnaire is often adjusted by adding or removing some questions or resetting them to enhance its reliability.

3.8.4 Validity of the Instrument

The validity of an instrument is the suitability of the tools, steps, and data (Leung, 2015). It ensures accuracy in measuring a concept quantitatively (Heale & Twycross, 2015). Before the research tools were used in collecting the data, they were tested for validity.They were tested for content, face, construct and internal validity (Heale & Twycross, 2015). Content validity measures whether the instrument adequately covers all the content that it should with respect to the variable. Content validity was ensured by conducting a comprehensive literature review and confirming by consulting an expert panel, consisting of my research supervisors (Saunders et al., 2012).

Face validity was also ensured by having the instrument reviewed and analyzed by experts who included my two supervisors and one lecturer who has good knowledge in project management. This ensured the questions made sense in the area of study. The pilot conducted also ensured that face validity of the instrument

was achieved by outlining and eliminating any errors. To ensure construct validity, questions in the instrument were restricted to the conceptualization of the variables. Internal validity was ensured by adequately covering all the themes and variables of the inquiry.

3.9 Data Analysis and Presentation

Before the collected raw data was analyzed, it was first cleaned and organized to make sure that it was consistent with the requirements of statistical analysis. The process which involved editing, coding and sorting checked the data for relevance, legibility, clarity and suitability, and ensured comprehensiveness and steadiness of information. According to Gravetter and Forzen (2012), errors or omissions on questionnaires can be checked and adjusted through editing. Saunders et al., (2012) suggests that data editing ensures completeness, interpretation of ambiguous responses, checking for consistency and elimination of unusable data.

Descriptive and inferential statistics with the assistance of the Statistical Package for Social Sciences (SPSS) version 20.0 was applied in the analysis of quantitative data. This involved computation of mean scores, frequencies, percentages, standard deviations and variances (Berenson, Levine, Krehbiel, O'Brien, Jayne & Watson, 2013). Correlation analysis was conducted to find out the strength of the relation between the predictor and the predicted

variables. Multiple regression analysis was applied to determine the relationship between the independent and dependent variables, since the study's model has many predictor variables and one possible outcome. According to Muthen and Muthen (2012), multiple regression analysis is the best statistical approach in analyzing continuous dependent variable outcomes. Multiple regression analysis was done to come up with inferential statistics. In addition, multiple regression analysis was applied to find out how top management support moderates and how project risk management mediates the relationship between the independent and the dependent variables.

Content analysis procedures were used in analysing qualitative data on the basis of themes and patterns (Mayring, 2014). The quantified data was subjected to descriptive analysis and presentation. According to Muli (2014), to answer some underlying research questions, themes and patterns should be developed from qualitative data. This enabled the researcher to bring out certain implicit issues, which could otherwise have been left out, to the fore.

3.9.1 Diagnostic Tests

Before the data was analyzed, it was tested to determine if it satisfied the assumptions of normality, linearity, homogeneity of variance and multicollinearity as recommended by (Malhotra & Dash, 2011). The diagnostic trials were conducted to make sure the regression results were robust.

To test for multicollinearity, tolerance and variance inflation factor (VIF) tests were conducted. A standard tolerance value less than 0.10 confirms multicollinearity. According to Hair et al., (2010), a multicollinearity of a VIF of less that 10 is acceptable and that above 10 shows a serious existence of multicollinearity. An increase in collinearity will increase the standard error of coefficients thus affecting the multiple regression outcomes. Multicollinearity will also make it difficult to assess the importance of each individual predictor.

If an error term shows a constant variance of the error terms it is said to show homoscedasticity. If the error terms variance is inconstant, then the data has a problem of heteroscedasticity which may lead to unbiased parameter estimates. The error of heteroscedasticity may lead to type I or type II error. Heteroscedasticity was tested by the Cameron and Trivedi's IM-test.

Linearity on the data was tested by use of correlation analysis (Hair et al., 2011). To establish the correlation between the variables, Coakes and Ong (2011) suggest that a Pearson product moment coefficient, r, be established. The coefficient can take a range of values from +1 to -1 with 0 showing no association, a value more than 0 showing a positive association while a value less than one indicating a negative association (Laerd Statistics, 2013). A higher correlation coefficient implies a stronger linear relationship.

Many statistical tests require that normality of data is determined before analysis (Ghasemi & Zahediasl, 2012). As suggested by Ghasemi and Zahediasl, the test of the data for normality was done by the Shapiro – Wilk test. From the test, normality is concluded if a p – value higher than 0.05 is obtained.

3.10 Ethical Considerations

The information collected from respondents was kept confidential to ensure that the research adhered to the broad ethical requirements.To ensure anonymity, the respondents were not required to provide their personal details on the questionnaire.The researcher also provided adequate information to respondents on the study's goal, besides requesting them to take part voluntarily. Further, the researcher gave the participants the assurance that the data obtained from them was strictly for academic purposes. This was done through the cover letter attached to the questionnaire. Before commencing the actual data collection exercise, the researcher obtained authorization from Kenyatta university as well as research permits from the National Commission for Science, Technology and Innovation (NACOSTI).

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

The results of the data analysis as per the objectives and hypotheses are presented in this chapter. The chapter is structured as follows; pilot results, descriptive statistics, diagnostic tests, inferential statistics and discussion of the results. The results are presented in the form of tables and figures.

4.2 Reliability of the Research Instrument

Prior to collecting data for this study, the research instrument was tested for reliability as recommended by Heale and Twycross (2015).Table 4.1 presents the reliability results from the pilot study.

Table 4.1: Reliability Results

Variable	Cronbach's Alpha	No of Items	Comment
Project Performance	.852	15	Reliable
Social–cultural factors	.801	3	Reliable
Economic Factors	.767	3	Reliable
Technological factors	.914	2	Reliable
Political factors	.976	3	Reliable
Top Management Support	.815	12	Reliable
Project Risk Management	.929	3	Reliable
Overall reliability Coefficient	**0.865**	**41**	**Reliable**

Source: Pilot data (2018)

Table 4.1 indicates the Cronbach's alpha coefficients for each variable in the study model. Political factors had the highest Cronbach's alpha of 0.976, followed by project risk management factors with a coefficient of 0.929. The technological environment factors had a coefficient of 0.914. Project performance, social-cultural and economic environments, and the top management had coefficients of 0.852, 0.801, 0.767 and 0.815 respectively. These values indicated that the tool was reliable in gathering data for the variables. Based on the reliability scale, the overall Cronbach's alpha coefficient for this research was 0.865 indicating good internal consistency. According to Heale and Twycross (2015), a research instrument with Cronbach's alpha coefficient of 0.7 and above is reliable. Thus, the questionnaire for this study had a good internal consistency and therefore reliable.

4.3 Response Rate

This study focused on respondents from all the 69 ongoing donor funded health projects in Kenya which were initiated between 2008 and 2018, and 6 officials from the Ministry of Health, thus making a total of 75 respondents.

Out of the questionnaires issued out to the study participants, 42 respondents completed the research instrument while 33 returned blank or incomplete questionnaires. This formed a response rate of 56 percent. According to Dixon (2012) and Saunders (2012) a 50 percent and above response rate is sufficient for

analysis and reporting on the phenomenon under study. Therefore, the response rate achieved in this study was enough to draw conclusions on the effect of the macro environment on the performance of donor funded health projects in Kenya. Data on the rate of response is as presented in Table 4.2.

Table 4.2: Response Rate

Response	**Frequency**	**Percent**
Responded	42	56.0
Did Not Respond	33	44.0
Total	**75**	**100.0**

Source: Survey data (2019)

4.4 Background Information

The background information provided in this study is on the gender of the respondents, age, academic qualification and the respondent's period of working in the project.

4.4.1 Distribution of Respondents by Gender

The study sought to determine the distribution of the respondents by gender. Results show that 57.14 percent of the respondents were men and 42.86 percent were women. This implies that, both genders were represented and thus more likely to have balanced findings**.** Figure 4.1 exhibits the classification of the responses on the basis of gender.

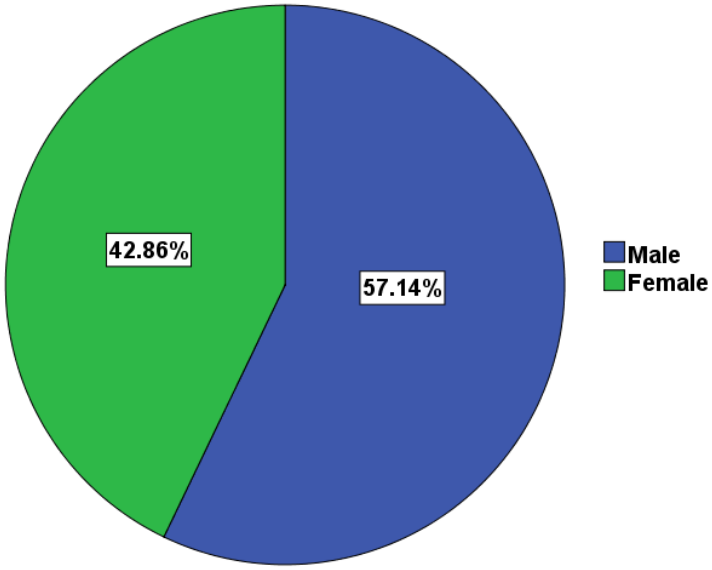

Figure 4. 1: Gender of the Respondents

Source: Survey data (2019)

4.4.2 Distribution of Respondents by Age

The researcher also sought to determine how the respondents were distributed age wise. This was to find out the ages of the active employees of the donor funded health projects. The distribution of the respondent's ages is as in Table 4.3.

Table 4.3: Respondents' Age

Age Category	Frequency	Percent
18-27	2	4.8
28-37	16	38.1
38-47	15	35.7
48-57	8	19.0
Above 58	1	2.4
Total	**42**	**100.0**

Source: Survey data (2019)

Most of the respondents were aged between 28-37 years which is equivalent to 38.1 percent of the respondents. A proportion of 35.7 percent represented those aged 38-47 years while 19 percent were those aged 48-57 years. Respondents aged 18-27 years were only 4.8 percent while those aged above 58 years were 2.4 percent. The study found out that most of employees working in the donor funded health projects in Kenya are aged between 28 – 57 years.

4.4.3 Distribution of Respondents by Academic Qualification

The researcher sought to determine the academic qualifications of the respondents. This was to determine how well the respondents understood the

project macro environment and its effect on the performance of donor funded health projects. The respondents' academic qualification results were as in Figure 4.2.

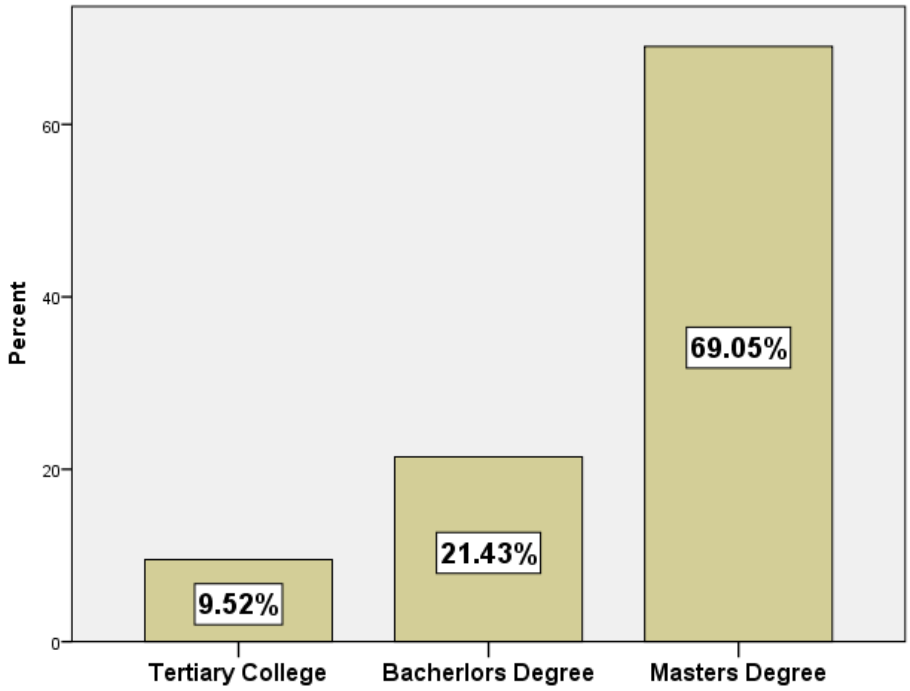

Figure 4.2: Academic Qualification

Source: Survey data (2019)

The study findings indicated that, majority of the respondents had a master's degree as indicated by 69.05 percent. A proportion of 21.43 percent had bachelor's degree while 9.52 percent represent those under tertiary level. As found out from the data, more than 80 percent have university degree. Therefore, based on the academic qualifications, it can be deduced that the respondents had

good understanding of the macro environment and how it might affect the performance of donor funded health projects.

4.4.4 Distribution of Respondents by Duration Worked in Current Project

The researcher collected and analysed data on the duration that the respondents had worked in their current projects. This was to determine if the respondents had enough experience with the current projects so as to provide good information on how the macro environment affects the performance of the donor funded health projects. The findings were presented as in Figure 4.3.

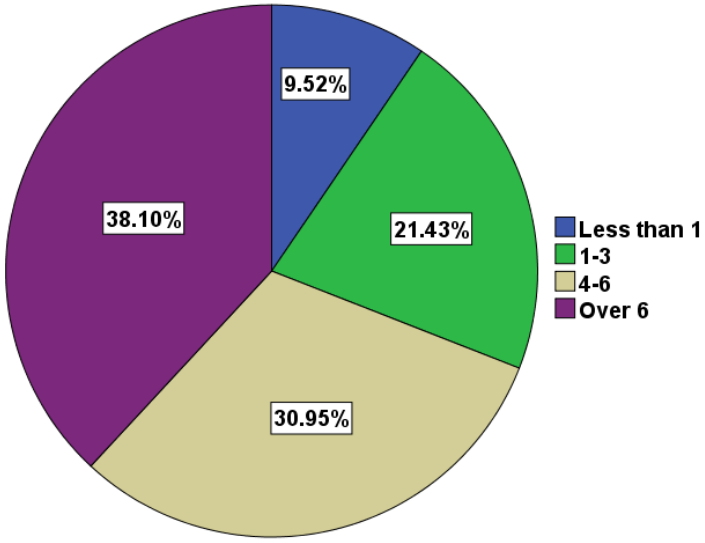

Figure 4.3: Period of Working

Source: Survey data (2019)

Figure 4.3 indicates that 38.10 percent of the respondents had worked in their current projects for over 6 years. A proportion of 30.95 percent indicated to have

worked for 4-6 years, while 21.43 percent indicated that they have worked with the current project for 1-3 years. Only 9.52 percent had less than a year in the current projects. Going by the statistics, it can be concluded that more than 50 percent have worked in the current projects for 5 years and above, implying that they have good information on how the social, economic, technological and political environments can affect the performance of donor funded health projects.

4.5 Descriptive Statistics

The researcher sought to find out the effect of the macro environment on the performance of donor funded health projects. This section enumerates the descriptive statistics of the macro environment variables that were investigated, namely; social-cultural, economic, technological and political environments. The descriptive statistics utilized in the analysis of data in this study were the mean and standard deviation as recommended by Sykes, Gani and Vally (2016). The mean was used to indicate the average of the measure of interest while the standard deviation measured the variability of the dataset from the mean (Sykes et al., 2016).

The mean was used to describe the average number of respondents who picked a measure. A low mean implies a few respondents picked the measure while a high mean implies more respondents picked the measure. A 5 point likert scale was

used where; 1 stands for strongly disagree or very low, 2 represents disagree or low, 3 represents neutral or medium, 4 stands for agree or high and 5 stands for strongly agree or very high. The means determined from the data collected were approximated to a close point on the likert scale to give an indication of the result. According to Sykes et al. (2016), a low standard deviation implies that the points of data collected are near to the mean and a standard deviation that is high means that the data is dispersed over a vast range of values. It is used to describe the margin of error in the statistical analysis.

4.5.1. Social-cultural Environment

The social-cultural environment factors investigated were; level of literacy in the community, lack of support from the local communities on the project, language barrier between the project organization and the local society, and corruption in the running of the projects. The analysis results were presented as in Table 4.4

Table 4.4: Social-cultural Environment

	N	**Mean**	**Std. Deviation**
Local community literacy level	42	2.48	1.330
Community support	42	2.33	1.337
Language	42	2.05	1.287
Corruption practices	39	1.64	1.266
Overall		**2.125**	**1.305**

Source: Survey data (2019)

From the study, the level of literacy in the local community, support from the local community on the project and language differences between project team and local community have a low effect on the performance of donor funded health projects. This is shown by their low means of 2.48, 2.33 and 2.05 respectively. These means that approximate to a 2 on the likert scale used in the data collection instrument, imply a low effect. The support from the local community on the project had the highest standard deviation of 1.337 followed by the level of literacy in the local community at 1.330. Corruption practices in the project had the least standard deviation at 1.266, implying the data collected had the least variability from the mean on this variable.

The study further found out that corruption practices in the project affect the donor funded health projects to a very low extent as exhibited by the low mean of 1.64 and standard deviation of 1.266. Overall, the social-cultural environment had a mean of 2.125 which approximates low on the likert scale used. This suggests a low effect of the environment on the performance of the donor funded health projects. The social-cultural environment also had a mean standard deviation of 1.305 which implies a low variability of the collected data from the mean.

Although the study revealed that corruption had the least effect on the performance of the donor funded health projects in Kenya, the researcher expected the variable would have a very high effect since corruption is rampant in Kenya as is evident in the Transparency International Index of 28 out of 100 which places Kenya as one of the countries highly affected by corruption (Transparency International, 2018). According to Eldridge and Tekolste (2016), the low corruption levels reported in this study and the improved donor funded health projects outcomes might be due to the results-based financing approaches taken by the donors, where the donor only disburses more funds when the agreed results have been achieved.

The respondents who rated the effect of social-cultural factors on the performance of donor funded health projects as low and very low held that; the community was very receptive and participated in the project activities, majority of the community members are literate and aware of development issues, community priority to implement projects is low and there is an indirect contact between the donors and the community members. On corruption, most respondents attributed the low levels of corruption to the stringent controls by the donors on the disbursement of donations such as the direct payment for goods and services by the donors rather than the provision of funds to the Kenyan government to procure the goods and services. Those who rated social-cultural environment high and very high held

that, norms and beliefs affected testing and usage of HIV/AIDs drugs, some counties required translators who may not translate well and language barrier between community members and the personnel implementing the project.

4.5.2 Economic Environment

The economic environment variables investigated were changes in tax rates, changes in currency exchange rates and changes in interest rates. The findings of the study on the economic factors are as presented in Table 4.5.

Table 4.5: Economic Environment

	N	Mean	Std. Deviation
Tax rates	37	2.68	1.396
Currency exchange rates	39	2.56	1.501
Interest rates	37	2.11	1.350
Overall		**2.45**	**1.416**

Source: Survey data (2019)

The findings indicate that the changes in the tax rates had the highest mean of 2.68 followed by changes in currency exchange rates with a mean score of 2.56, while changes in interest had the lowest mean of 2.11. The mean of the changes in tax rates and changes in currency exchange rates approximates to 3 on the likert scale which indicates the two variables had medium effect on the performance of the donor funded health projects. The changes in interest rates approximates to 2

indicating that the factor had a low effect. The changes in currency exchange rates had the highest standard deviation of 1.501, followed by changes in tax rates which had a standard deviation of 1.396. The changes in interest rate had the least standard deviation of 1.350. The data on changes in currency exchange rates had the highest variability from the mean, while the data on changes in interest rate had the least variability from the mean. Overall the economic environment had a mean of 2.45 which approximates to 2 on the likert scale and a mean standard deviation of 1.416. This suggests that the economic environment affects performance of donor funded health projects to a low extent.

The respondents who indicated low and very low rating on economic environment indicated that, funding was provided in Kenya shillings thus minimizing the effect of exchanges rates. The projects were also not affected by interest rates since the funding was not obtained on loan. Further, the respondents indicated that most of the grants are tax exempt thus they suffer little on changes on tax rates. Those who rated the economic environment high and very high held that; donor funding is in US dollars and that they suffer highly when there is a change in exchange rates especially when the Kenyan shilling gains value against the dollar. Others held that, changes in tax rates like the addition of Value Added Tax on petroleum products in the 3rd quarter of 2018 by the Government of Kenya increased the cost of transport thus affecting the performance of donor funded health projects.

4.5.3 Technological Environment

The study investigated the need for new skills to run the projects and the availability of technology required to run the project as the two technological variables. The analysed results are as summarised in Table 4.6.

Table 4.6: Technological Environment

	N	Mean	Std. Deviation
New skills	41	3.20	1.520
Technology	41	2.71	1.470
Overall		**2.955**	**1.495**

Source: Survey data (2019)

The study findings indicated that, the need for new skills to run the donor funded health projects had an average of 3.20 and the availability of technology required to run the project had a mean of 2.71. Both means approximate to 3 on the likert scale used in the data collection instrument which points to a medium effect of these variables on the performance of donor funded health projects in Kenya. The need for new skills to run the project had the highest standard variation of 1.520 which implies the data collected in this variable had the highest variability from the mean. The availability of technology required to run the project had a standard deviation of 1.470. In overall, the technological environment had a mean of 2.955 which approximates to 3 on the likert scale and a standard deviation mean of

1.495. This suggests that the variable has a medium effect on the performance of donor funded health projects.

Respondents reporting a high effect indicated that lack of internet and access to data, skill gaps in implementation of the projects were causes of poor performance of the donor funded health projects in Kenya. Most of the respondents pointed out that availability of technology in data collection, reporting, and monitoring and evaluation affected the project performance. Respondents giving a low rating held that, their projects had adopted new technologies for project implementation and communication.

4.5.4 Political Environment

The researcher sought to find out how the changes in government policy, changes in political leadership and changes in legislation affect the performance of donor funded health projects in Kenya. The analyzed results were as in Table 4.7.

Table 4.7: Political Environment

	N	Mean	Std. Deviation
Government policy	40	2.88	1.399
Political leadership	41	2.88	1.400
Legislation on donor funding	40	2.80	1.418
Overall		**2.853**	**1.406**

Source: Survey data (2019)

The study found out that the changes in government policy, changes in political leadership and changes in legislation on donor funding had means of 2.88, 2.88 and 2.80 respectively. On the likert scale used, the means of the three variables approximate 3, which indicate a medium effect on the performance of donor funded health projects. The changes in legislation on donor funding variable had the highest standard deviation of 1.418, followed by the changes in political leadership. The changes in government policy had the lowest standard deviation of 1.399. The data on the changes in legislation on donor funding had the highest variability from the mean while the data on changes in government policy had the lowest variability from the mean. Overall the political environment had a mean response of 2.853 which approximated to 3 on the likert scale and a mean standard deviation of 1.406.This suggests that the political environment has a medium effect on the performance of donor funded health projects in Kenya.

The responses on the political environment were attributed to; the policy changes which affect project implementation thus affecting the pillars of project success, newly elected leaders who preferred the funding of new projects and changes in policy in order for them to gain political mileage, changes in political leadership effects on the project duration which affects the performance of donor funded health projects on the basis of time, and changes in political environment that cause laying off of staff who may be replaced by incompetent or unqualified staff.

4.5.5 Macro Environment and Project Performance

The effect of the macro environment on the performance of donor funded health projects is as presented in Table 4.8 below.

Table 4.8: Macro Environment and Project Performance

Macro Environment Factors	N	Mean	Std. Deviation
Political	42	3.10	1.206
Technological	42	3.10	1.265
Economic	42	3.05	1.248
Social – cultural	42	2.55	1.173

Source: Survey data (2019)

The study found out that the political and the technological environments had the highest means of 3.10 each while the economic environment had a mean of 3.05. The social-cultural environment had the lowest mean of 2.55. The means of all the macro environments approximate to 3 on the likert scale utilized implying

they all have a medium effect on the performance of donor funded health projects in Kenya. The technological environment had the highest standard deviation of 1.265 which indicates the highest variability in the data collected for the variable. The technological environment was followed by the economic variable and the political environment in that order with standard deviations of 1.248 and 1.206 respectively. The social-cultural environment had the lowest standard deviation of 1.173 implying the lowest variability of the data collected for the variable.

4.5.6 Top Management Support

This study investigated the top management support variable to determine if it moderated the relationship between the macro environment and the performance of donor funded health projects. The findings were as presented in Table 4.9.

Table 4.9: Top management support

	Frequency	Percent
Yes	42	100
Total	42	100

Source: Survey data (2019)

All the respondents acknowledged that top management support had an effect on the relationship between the macro environment factors and the performance of projects as shown in Table 4.9.

4.5.6.1 Top Management Support Involvement

The study further investigated the top management support in the initiation, planning, implementation and support and the findings were as in Table 4.10.

Table 4.10: Rating Top Management Support

	N	Mean	Std. Deviation
Involvement	42	4.02	.924
Policies and strategies	42	4.00	1.012
Provision of resources	42	3.74	.989
Overall		**3.92**	**0.975**

Source: Survey data (2019)

The study found out that the donor funded health project's top management were involved in project planning and implementation with an average of 4.02 and a standard deviation of 0.924. They developed appropriate policies and strategies with an average of 4.00 and a standard deviation of 1.012, and they provided adequate resources for the project with an average of 3.74 and a standard deviation of .989. The means of all the three variables used in rating top management involvement in the donor funded health projects approximate 4 on the likert scale which indicates that the top management involvement in the projects was very good. The top management support had a mean rating of 3.92 by the respondents which approximated to 4 on the likert scale, which implies the top management support to the donor funded health projects was very good. This suggests that top management support had a high effect on the relationship

between the macro environment and the performance of donor funded health projects in Kenya.

Moreover, the study revealed that a proportion of 78.5 percent agreed or strongly agreed that the project top management were involved in project initiation. Only 11.9 percent were neutral, while 9.5 percent disagreed or strongly disagreed. On whether top management were involved in project planning and implementation 71.5 percent agreed or strongly agreed, 19 percent were neutral, while 9.5 percent either disagreed or strongly disagreed. Of the 42 respondents, 76.2 percent held that project top management provided adequate human resources to the project, while 9.6 percent disagreed and 14.3 percent were neutral. This means that project top management supported the implementation of projects. On whether project top management provided adequate support in the execution of project plans, 35.37 percent strongly agreed, 33.3 percent agreed, 16.7 percent were neutral while 9.5 percent disagreed as 4.8 percent strongly disagreed. Further, 76.2 percent held that project top management policies adequately supported project implementation, 16.7 percent were neutral and 10.2 percent disagreed.

The statement on whether project top management develops workable project strategies was highly supported with 66.7 percent of the responses either agreeing or strongly agreeing with the statement. A proportion of 21.4 percent were neutral on this statement while 7.1 percent and 4.8 percent either disagreed or strongly

disagreed respectively. Regarding whether project top management plays their liaison roles well with donors, 45.2 percent agreed while 31 percent strongly agreed. A proportion of 11.9 percent gave a neutral rating, while 11.9 percent disagreed. Three quarters of the responses received indicated that top management fully supported monitoring and evaluation activities, while 66.6 percent confirmed that top management adequately motivated project team members.

4.5.7 Project Risk Management

The researcher further investigated project risk management to determine if it mediated the relationship between the macro environment and the performance of donor funded health projects in Kenya. The findings were as in Table 4.11.

Table 4.11: Project Risk Management

	Frequency	**Percent**
Yes	42	100
Total	**42**	**100.0**

Source: Survey data (2019)

As presented in Table 4.11, all the respondents agreed that project risk management affects the relationship between the macro environment and the performance of donor funded health projects in Kenya. This is in line with the findings of Carvalho and Junior (2015).

The macro environment brings about project risks (Akanni et al, 2014). The political environment was rated highly as a cause of donor funded health project risks followed by the economic and technological environments respectively with means of 3.66, 3.45 and 3.15 respectively. Although social-cultural factors were found to cause risks in donor funded health projects, their rating was lower at an average of 2.66 and standard deviation of 1.353.

4.5.7.1 Project Risk Management Effect

The study investigated the presence of a risk register, risk monitoring and control plan and dedicated risk management personnel which are project risk management factors, and their effect on the relationship between the macro environment and the performance of donor funded health projects. The results were as highlighted in Table 4.12.

Table 4.12: Project Risk Management Effect

	N	Mean	Std. Deviation
Risk monitoring & Control planning	41	3.80	1.209
Risk management personnel	41	3.34	1.442
Risk register	42	2.86	1.441
Overall		**3.33**	**1.364**

Source: Survey data (2019)

Table 4.12 indicates that risk monitoring and control planning had the highest effect on the performance of donor funded health projects with a mean of 3.80

which approximates to 4 on the likert scale, and a standard deviation of 1.209. Having dedicated risk management personnel had a medium effect on project performance as shown by the mean of 3.34 which approximates to 3 on the likert scale with a standard deviation of 1.442. The presence of a risk register also had a medium effect on the performance of donor funded health projects with a mean of 2.86 which approximates to 3 on the likert scale, and a standard deviation of 1.441.Overall, the project risk management variable had a mean of 3.33 which approximates to 3 on the likert scale. This implies that project risk management was a moderately important factor in the relationship between the macro environment and the performance of donor funded health projects. Over 66.67 percent of the respondents confirmed that the presence of a project risk management plan enhanced the project's performance.

4.5.8 Project Performance

To estimate the performance of donor funded health projects in Kenya, cost, time and quality factors were investigated. A composite measure of the performance indicators (cost, time and quality) was developed by determining the mean of the three factors. On a scale of 1 to 5 where 1 was very poor and 5 was very good, a mean of 3.5 or 70 percent and above for the three factors implied the project was performing well. This was as guided by Reeves et al. (2007) and Yeung et al. (2013). Reeves et al, suggested that an all-or-none or a 70 percent standard is

appropriate for composite measures on performance. An all-or-none principle means that all the variables need to be achieved for the performance to be considered good, or a 70 percent and above measure should be achieved for the three variables for the performance of the project to be considered good. The mean of cost, time and quality findings for all the projects was 3.313 which translates to 66.26 percent. Since the mean did not meet the 70 percent threshold on performance, and not all variables were achieved, then this study confirmed that donor funded health projects in Kenya were not performing well. This is in line with the findings by Muchungu (2011) that a myriad of projects in Kenya exceed their estimated budget, are completed beyond planned time and are of poor quality leading to dissatisfied clients.

4.5.8.1 Areas Covered in Project Plan

The study found out that the donor funded health projects had project plans which covered the areas as presented in Table 4.13.

Table 4.13: Areas Covered in Project Plan

Areas	Frequency	Percent
Expenditure estimates	10	23.8
Human resource requirements	8	19.0
Time Schedules	7	16.7
Outcome Specifications	6	14.3
Scope changes	4	9.5
Risk management plans	7	16.7
Total	**42**	**100.0**

Source: Survey data (2019)

The study found out that expenditure estimates, human resource requirements, time schedules, outcome specifications, scope changes and risk management plans were in the initial project plans. The most planned for areas in the project plans were expenditure estimates at 23.8 percent, human resource requirements at 19 percent, time schedules and risk management at 16.7 percent each and outcome specifications at 14.3 percent. Very few projects planned for scope changes as indicated by their proportion of 9.5 percent.

4.5.8.2 Planned Project Duration

The study investigated the durations of the donor funded health projects and found out the distribution of the project durations were as in Table 4.14.

Table 4.14: Planned Project Duration

Duration (in Years)	Frequency	Percent
less than 2	3	7.1
2-3	7	16.7
3-5	24	57.1
Over 5	7	16.7
Total	**41**	**97.6**

Source: Survey data (2019)

Most of the donor funded health projects have a planned duration of between 3 – 5 years. This is as indicated by 57.1 percent of the respondents. However, some projects take more than 5 years as shown by 16.7 percent of the respondents and 2-3 years as indicated by 16.7 percent. Very few projects equivalent to 7.1 percent have a planned duration of less than 2 years. The study further revealed that majority of the ongoing donor funded health projects were initiated in the last four years.

This study found out that half of the projects were 30 percent complete and below, while three quarters were less than 60 percent complete. Those that were 60-99 percent compete were just a quarter. This is in line with the target of this study which focused on ongoing projects initiated between 2008 and 2018.

4.5.8.3 Project Performance on the Basis of Time

Means and standard deviations were applied in the analysis of the performance of projects against time. The analysis of time is summarised in Table 4.15.

Table 4.15: Project Performance on the Basis of Time

	N	Mean	Std. Deviation
The project will be completed within the planned time	41	3.63	1.337
Time schedule review followed laid down procedures	39	3.41	1.517
The initial project completion time has been reviewed	40	2.85	1.748
Overall		**3.30**	**1.534**

Source: Survey data (2019)

The analysis of project performance in relation to time established that a mean of 3.63 (which approximates to 4 on the likert scale) of the respondents observed that the projects were to be completed within schedule. It was also observed than many projects had reviewed their project schedules. A mean of 2.85 of the respondents which approximates to 3 in the likert scale were neutral that the initial project completion time had been reviewed and a mean of 3.41which approximates to 3 on the likert scale were neutral that the time schedule review followed the laid down procedures. In overall, the project performance on the basis of time had a mean of 3.30 which approximates to 3 on the likert scale. This

implies that the respondents were neutral on whether the projects were to be completed in time or not. This, according to Reeves et al. (2007) and Yeung et al. (2013) is less than 3.50 or 70 percent thus implying that the projects were not performing well on time. Some of the reasons given for not completing the donor funded health projects in time included; delayed financing from the donor, limited funding from the partners, wide scope of the project, slow implementation phase, late start, competing Ministry of Health activities and little support from the County Governments.

4.5.8.4 Project Performance Based on Cost

The study also investigated cost as a measure of the performance of donor funded health projects using the variables in table 4.16.

Table 4.16: Project Performance Based on Cost

	N	Mean	Std. Deviation
The project will be completed within budget	41	3.61	1.070
The project budget was revised upwards	41	2.49	1.519
The project expenditure is higher than planned	41	2.05	1.244
Overall		**2.717**	**1.278**

Source: Survey data (2019)

The study found out that a mean of 3.61 of the respondents which approximates to 4 on the likert scale agreed that the donor funded health projects in Kenya would

be completed within budget, while a mean of 2.05 of the respondents which approximates to 2 on the likert scale disagreed that the project expenditure was higher than planned. A mean of 2.49 of the respondents which approximates to 2 on the likert scale disagreed that the project budget was revised upwards. Overall, the study found out that a mean of 2.717 of respondents which approximates to 3 on the likert scale were neutral on whether the project would be completed within cost. Since the 2.717 mean or 54.34 percent approximates to 3 (neutral) and is less than the 3.5 mean or 70 percent which approximates to 4 (agree) in the likert scale as recommended by Reeves et al (2007) and Yeung et al.(2013),the donor funded health projects in Kenya were considered not to be performing well on a cost measure. Table 4.17 highlights the causes of cost overruns in donor funded health projects.

Table 4.17: Causes of Budget Overrun

	Frequency	**Percent**
Changes in commodity prices	7	16.7
Increased taxation	5	11.9
Unfavourable exchange rates	5	11.9
Lack of adequate skills in management of donor funded projects	6	14.3
Lack of appropriate tools	1	2.4
Lack of government support	1	2.4
Other	12	28.6
Missing	5	11.9
Total	**42**	**100.0**

Source: Survey data (2019)

From the respondents who indicated that they have budget overruns, the researcher found out that the overrun was majorly caused by other factors which included; high turnout of trainees, employment of new staff in the project, under-budgeting on some components and wide scope of the project. A proportion of 16.7 percent attributed budget overrun to changes in commodity prices, while 11.9 percent held that increased taxation and unfavourable exchange rates are some of the factors causing budget overrun. Lack of government support and lack of appropriate tools were found to contribute 2.4 percent each.

4.5.8.5 Project Performance on the Basis of Quality

The study further investigated the performance of the donor funded health projects on the basis of quality. The findings are as indicated in Table 4.18.

Table 4.18: Project Performance on Quality Basis

	N	Mean	Std. Deviation
The project will achieve the expected quality expectations	42	3.93	.894
The level of the project quality is good as compared to the user specifications	40	3.90	1.008
Overall		**3.915**	**0.951**

Source: Survey data (2019)

Table 4.18 indicates that most of the respondents affirmed that their projects were to achieve the expected quality expectations as indicated by a mean of 3.93, which on the likert scale approximates to 4 (agree) and a standard deviation of 0.894. The findings also indicated that, most of the projects had a good level of the project quality as compared to the user specification as indicated by the mean of 3.90,which approximates to 4 (agree) on the likert scale , and a standard deviation of 1.008. In overall, quality as a measure of the performance of donor funded health projects had a mean of 3.915 which translates to 4 (agree) and a standard deviation of 0.951 which implies that this factor was to be achieved and the quality of the donor funded health projects was good. For those projects with poor performance in quality expectations, a highlight of the causes of unsatisfactory project quality is summarised in Table 4.19.

Table 4.19: Causes of Unsatisfactory Project Quality

	Frequency	**Percent**
Poor communication within the project team	16	38.1
Lack of tools and equipment	8	19.0
Lack of skills	4	9.5
Availability of technology	3	7.1
Hostility from local community	4	9.5
Low literacy levels	4	9.5
Missing	3	7.1
Total	**42**	**100.0**

Source: Survey data (2019)

Inability to achieve project quality as outlined in the project plan was linked to a number of factors. A proportion of 38.1 percent attributed unsatisfactory project

quality to poor communication within the project team, while 19 percent linked it to lack of tools and equipment. Lack of skills, hostility from local community and low literacy levels were rated to affect project quality by 9.5 percent each while availability of technology in donor funded health projects could only affect project quality by 7.1 percent.

4.6 Inferential Statistics

Inferential statistics were conducted on the data collected to test hypothesis and to draw conclusions on the population parameters. Before this, diagnostic assessments were conducted on the data to check if it was fit for analysis.

4.6.1 Diagnostic Tests

Diagnostic tests were done to determine if the data was fit for regression analysis as suggested by Muli (2014). These diagnostic tests were; normality test, homoscedasticity or heteroscedasticity test and multicollinearity test.

4.6.1.1 Normality Test

Normality test for the data was conducted by the Shapiro-Wilk and Kolmogorov-Smirnov tests. This assessment is important for detecting skewness, kurtosis or

both in a set of data (Korkmaz,Goksuluk & Zararsiz, 2014). In this test, a p value for each macro environment is determined and compared with a p-critical value of 0.05. If the p-value is greater than the p-critical, then normality is proved (Ghasemi& Zahediasl, 2012). The results of this test were as in Table 4.20.

Table 4.20: Normality Test

	Kolmogorov-Smirnov[a]			**Shapiro-Wilk**		
	Statistic	**df**	**Sig.**	**Statistic**	**Df**	**Sig.**
Social-Cultural	.158	42	.114	.874	42	.051
Economic	.132	42	.078	.908	42	.163
Technological	.139	42	.091	.921	42	.088
Political	.114	42	.200	.937	42	.097
a. Lilliefors Significance Correction						

Source: Survey data (2019)

The normality test results indicate that, significant values were recorded which were greater than 0.05 for all the macro environments. Thus, the data collected was confirmed normally distributed and suitable for further parametric tests (Saunders, 2016).

4.6.1.2 Heteroscedasticity Test

Heteroscedasticity refers to a situation in which the error term is not the same across all values of the independent variables. In this study, Cameron and Trivedi's IM-test was applied. To test for heteroscedasticity, a p-value was

computed and then compared with the p-critical of 0.05. If the p-value was greater than the p-critical, then the error term was confirmed to be the same and hence the data was confirmed to be homogenous. The test results were summarised as in Table 4.21**.**

Table 4. 21: Heteroscedasticity Test

Source	Chi2	Df	P
Heteroscedasticity	12.78	41	0.275

Source: Survey data (2019)

The null hypothesis used for Heteroscedasticity stated that, there was no heteroscedasticity. Results tabulated in Table 4.21 indicate that the p value was 0.275 which is greater than 0.05. Therefore, the null hypothesis was not rejected, and the variance of the primary data was confirmed homogenous.

4.6.1.3 Multicollinearity Test

Multicollinearity tests were conducted on the collected data from the predictor variables to check if they are interrelated. According to Mwencha, (2015), if two or more predictor variables are strongly correlated with each other, then multicollinearity exists. According to Cooper and Schindler (2008), collinearity is confirmed if a correlation value of 0.8 or greater is attained. The findings of the multicollinearity assessments are as in Table 4.22

Table 4.22: Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	**VIF**
1	Social-Cultural	.676	1.480
	Economic	.527	1.898
	Technological	.522	1.915
	Political	.531	1.884

a. Dependent Variable: Project Performance

Source: Survey data (2019)

To ascertain the presence of multicollinearity, Variance Inflation Factor (VIF) was used. According to Neeleman (2014), if the VIF values are below 4, there is no multicollinearity. Based on the VIF values presented in table 4.22 for the primary data, there was no value above 4. Therefore, the data didn't suffer multicollinearity effect. This is further confirmed by the tolerance values which are all below 0.8 as recommended by (Cooper and Schindler, 2008).

4.6.2 Correlation Analysis

To establish the association between the macro environment and the performance of donor funded health projects in Kenya, correlation analysis was applied. The macro environment variables were social-cultural environment, economic, technological and political environment. The Pearson correlation coefficient which indicates how variables correlate was used. In the analysis, a positive coefficient implied a direct relationship while a negative coefficient implied an

inverse association. The correlation coefficients were computed to determine the strength of the relationship between the correlated variables at 5 percent significance level (one tailed). The results were as in Table 4.23.

Table 4.23: Correlation Analysis

		Project Performance	Social-Cultural	Economic	Technological	Political
Project Performance	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	42				
Social-Cultural	Pearson Correlation	.038	1			
	Sig. (2-tailed)	.222				
	N	42	42			
Economic	Pearson Correlation	-.187**	.330**	1		
	Sig. (2-tailed)	.000	.000			
	N	42	42	42		
Technological	Pearson Correlation	.066*	.411**	.494**	1	
	Sig. (2-tailed)	.057	.000	.000		
	N	42	42	42	42	
Political	Pearson Correlation	.063*	.324**	.610**	.535**	1
	Sig. (2-tailed)	.044	.000	.000	.000	
	N	42	42	42	42	42
***. Correlation is significant at the 0.01 level (2-tailed).*						
**. Correlation is significant at the 0.05 level (2-tailed).*						

Source: Survey data (2019)

Table 4.23 indicates that the social-cultural environment has a positive but weak correlation (r = 0.038) with the performance of donor funded health projects but which at 5 percent significance level was not significant. The analysis further posted a negative and weak correlation between economic factors and project performance (r = - 0.187). This association was found significant at 0.05 level of

significance (*P value = 0.000 < 0.05*). The analysis also found a weak but positive correlation between the performance of donor funded health projects and the technological environment (r = 0.066, *P value* = 0.037 < 0.05), and a positive but weak correlation between the political environment and the performance of donor funded health projects (r = 0.063, *P value* = 0.044<0.05). These correlations were found significant at 0.05 significance level. The correlations between the independent variables were also moderate and significant at 0.05 significance level. According to Schober, Boer & Shwarte (2018), very weak correlation coefficients for fairly large data sets can be statistically significant thereby leading to accurate regression results.Consequently, the performance of donor funded health projects was regressed against all the independent variables and the results reliably interpreted as recommended by (Hubbard, 2009).

4.6.3 Regression Analysis

Regression analysis was undertaken to determine the relationship between the macro environment and the performance of donor funded health projects. The predictor variables were; social-cultural, economic, technological and political environment.

Table 4.24: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.815a	.665	.630	.0387452
a. Predictors: (Constant), Political, Social-Cultural, Technological, Economic				

Source: Survey data (2019)

Table 4.24 shows the findings of the model's goodness of fit. R represents the correlation coefficient of the variables in the model. In this study model, R was 0.815 indicating a strong and positive correlation as suggested by (Mukaka, 2012). The coefficient of determination, R squared estimates the percentage of the total change in the predicted variable that is accounted for by the predictor variable (Hamilton, Ghert & Simpson, 2015). The R^2 = 0.665 in this study indicates that 66.5 percent of the change in project performance is explained by the predictor variables. Therefore, only 33.5 percent is explained by other factors. The Adjusted R^2 which considers the number of variables in the model summarises the model's goodness of fit as suggested by (Harel, 2009). The adjusted R^2 implies that the model explains 63 percent of the dependent variable.

Table 4.25: Overall Model Significance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.012	4	.253	12.785	.000[b]
	Residual	13.756	37	.393		
	Total	14.768	41			
a. Dependent Variable: Project Performance						
b. Predictors: (Constant), Political, Social-Cultural, Technological, Economic						

Source: Survey data (2019)

Overall model significance was tested by the analysis of variance or F-test as suggested by Kao and Greene, (2008). According to Kao and Greene, the F test is applied in testing the significance of a model when the outcome of interest is a continuous variable like in this study. From the results in table 4.25, the F statistic is 12.785 which has a p-value of 0.00 and p-critical value of 0.05. Since the p-value < the p-critical, the model was confirmed significant at 5 percent significance level. Hence, for project performance, independent variables are good joint predictors.

Table 4.26: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.572	.056		64.088	.000
	Social-Cultural	.061	.019	.109	3.176	.002
	Economic	-.114	.018	-.253	-6.256	.000
	Technological	.010	.019	.022	.553	.580
	Political	.031	.019	.067	2.620	.016
a. Dependent Variable: Project Performance						

Source: Survey data (2019)

Results presented in Table 4.26 give the coefficients of the regression analysis, the t values and significance levels of variables under study. The beta values for the study were $\beta_0 = 3.572$, $\beta_1 = 0.061$, $\beta_2 = -0.114$, $\beta_3 = 0.010$ and $\beta_4 = 0.031$. The constant (β_0) had a coefficient of 3.572 which at 5 percent significance level was significant (p value = 0.000 < 0.05). Therefore, holding all predictor variables at zero level, the performance of donor funded health projects was explained by the constant of 3.572 in this study. This is the expected mean value of the predicted variable Y.β_1, β_2, β_3 and β_4 explain the relationship direction between the predicted and the predictor variables (Nathans,Oswald & Nimon, 2012). Nathans et al. further argued that beta weights for independent variables indicates the expected gain or fall in the predicted variable value given a gain or fall in the predictor variable. Table 4.26 indicates that the economic variable had the highest beta weight , $\beta_2 = -0.114$, indicating that it had the highest input to the regression equation, while keeping all the other independent variables uninterrupted, and technology with a $\beta_2 = 0.010$ contributed the least (Nathans et al, 2012).

This study's direct regression model was;

$$Per = \beta_0 + \beta_1 Soc + \beta_2 Eco + \beta_3 Tech + \beta_4 Pol + \mu_i$$

Therefore, based on the significant variables, the regression equation was;

$$Per = 3.572 + 0.061Soc - 0.114Eco + 0.031Pol$$

4.6.3.1 Social-Cultural Environment and Performance of Donor Funded Health Projects

The impact of the social-cultural environment on the performance of donor funded health projects was tested by use of the hypothesis $H_{01.}$The β coefficient ($\beta_1 = 0.061$) for the social-cultural environment indicates that the social-cultural environment and the performance of donor funded health projects in Kenya are positively related, implying that an improvement in the social-cultural environment will enhance the performance of donor funded health projects in Kenya. A decline in the social – cultural environment will lead to a decline in the performance of the donor funded health projects. At 5 percent significance level (p value = 0.002<0.05), the environment was found to be significant. From the results of the analysis, the study failed to accept the null hypothesis that, the social-cultural environment has no significant effect on the performance of donor funded health projects and instead, accepted the alternative hypothesis that the social-cultural environment has a significant effect on the performance of donor funded health projects in Kenya. These findings concur with Akanni et al., (2014) and Musa et al., (2015) argument that that social-cultural environment has a significant effect on the performance of building projects in the Delta Estate, Nigeria and that the social-cultural factors are significantly related to public housing project success.

4.6.3.2 Economic Environment and Performance of Donor Funded Health Projects

The effect of economic environment on the performance of donor funded health projects in Kenya was tested by use of the hypothesis H_{02}.The β value for the economic environment (β_2 = -0.114) presents a negative relationship of the economic variable with the performance of donor funded health projects in Kenya. This effect was found significant at 0.05 significance level (p value = 0.00 < 0.05). Therefore, an upward adjustment of economic factors such as exchange rates, tax rates and interest rates affects project performance negatively. The economic factors have an inverse relationship with the performance of the donor funded health projects in Kenya. According to Maina and Gathenya (2014), the economic feasibility of a project, including the adjustments in the local economic conditions of the receiving country, or the imprecise project development plan due to the erratic economic conditions is influenced by the economic environment. The findings of this study concur with Akanni et al (2014) and Musa et al. (2015) observation that economic factors have significant effect on the performance of projects.

From the study results, the researcher failed to accept the null hypothesis that the economic environment has no significant effect on the performance of donor funded health projects in Kenya and instead accepted the alternative hypothesis

that economic factors have a significant effect on the performance of donor funded health projects in Kenya.

4.6.3.3 Technological Environment and Performance of Donor Funded Health Projects

The effect of the technological environment on the performance of donor funded health projects in Kenya was tested by use of the hypothesis $H_{03.}$ A beta value of (β_3 = 0.01) on the technological factors established that the environment relates positively with the performance of donor funded health projects in Kenya. This finding agrees with those by Akanni et al (2014) and Santos et al (2014). This relationship was however not significant as p value (0.580) was greater than p critical (0.05). Thus, the study accepted the null hypothesis that the technological factors have no significant effect on the performance of donor funded health projects in Kenya and the alternative hypothesis was rejected.

4.6.3.4 Political Environment and Performance of Donor Funded Health Projects

The effect of political environment on the performance of donor funded health projects in Kenya was tested by use of the hypothesis $H_{04.}$The political environment was found to positively relate with the performance of donor funded

health projects (β_4= 0.031, P value = 0.016<0.05). The political environment was found significant at 95 confidence level. If the political environment factors were adjusted to unfavourable levels, the performance of donor funded health projects declined, while if the changes were favourable, the performance of the donor funded health projects improved. Based on the β and p values obtained, the study failed to accept the null hypothesis that the political environment has no significant effect on the performance of donor funded health projects and instead accepted the alternative hypothesis that the political environment has a significant effect on the performance of donor funded health projects in Kenya.

The Political environment is acknowledged to influence the performance of donor funded projects. According to Ishtiaq and JahanZaib (2017), one of the most significant factors which affect the performance of projects is the political environment. This study confirmed the findings by Ishtiaq and JahanZaib that the political environment has a significant effect on the performance of projects.

4.6.4 Moderating Effect

This study further investigated project top management support as a moderating variable. The researcher sought to establish how project top management support affected the strength of the relationship between the macro environment and the performance of donor funded health projects in Kenya. The researcher used the

hypothesis H_{05} to evaluate the moderating effect. The findings are as shown in Table 4.27.

Table 4.27: Moderating Effect

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	2.848	1.431		1.991	.001			
	Macro Environment Factors (X)	.130	.503	.213	.258	.03	.020	.042	.039
	XZ	.022	.117	.196	.190	.00	.185	.031	.029
	Top Management (Z)	.196	.342	.285	.575	.00	.362	.093	.087
a. Dependent Variable: Performance of Donor Funded Health Projects									

Source: Survey data (2019)

The effect of top management support moderation on the relationship between the macro environment factors and the performance of donor funded health projects in Kenya was determined using a regression model as recommended by Fairchild and Mackinnon (2010). According to Andersson, Cuervo-Cazurra and Nielsen (2014), moderation variables modify the theoretical mechanisms between the independent and the dependent variables. Moderation is confirmed when the influence of a predictor variable (X) on a predicted variable (Y) changes across levels of a moderating variable (Z) (Andersson et al, 2014).

The coefficients of all the variables based on the moderating model were found positive and significant at 5 percent significance level as summarized in Table 4.27. From the table, the direct effect of the macro environment on the performance of donor funded health projects had a coefficient of 0.130, while the combined effect of the macro environment and top management support on the performance of donor funded health projects had a reduced coefficient of 0.022. This was found significant at 5 percent significance level (p value = 0.00<0.050). According to Anderson et al. (2014), a moderator variable changes the nature or strength of the relationship between a predictor variable and a predicted variable. Thus, the impact of the macro environment on the performance of donor funded health projects is weakened when top management support is introduced (Andersson et al., 2014).

The fitted model after the moderating effect was;

$$Per = 2.848 + 0.13X + 0.196Z + 0.022XZ$$

Per = Performance of donor funded health projects

Z = Top management support

X = Composite index representing the macro environment factors

From the research results, the null hypothesis that top management support has no significant effect on the relationship between the macro environment and the performance of donor funded health projects was not accepted. Instead, the

alternate hypothesis that top management support has a significant effect on the performance of donor funded health projects was accepted. This is in line with the suggestions by Ahmed, Mohamed and Ahmed, (2014) and Ahmed (2016) that top management support is a key success factor that adversely affects the performance of projects in organizations.

4.6.5 Mediation Effect

Project risk management was tested as a mediating factor between macro environment and the performance of donor funded health projects. To test the hypothesis that project risk management has a mediation effect on the relationship between macro environment and the performance of donor funded health projects, the researcher applied the Baron and Kenny (1986) approach. The approach involves conducting four regression analysis and determining the significance of each coefficient at each step.

Model 1: $PER = \beta_0 + \beta_1 MEF + \mu_i$

Where,

PER = Performance of Donor funded health projects

β_0 = Constant term

β_1 = Regression coefficient

MEF = Macro environment factors

μ_i = Error term

Table 4. 28: MEF Predicting Performance of Donor Funded Health Projects

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	3.461	.299		11.570	.000			
	Macro Environment Factors	.012	.096	.020	.126	.001	.020	.020	.020
a. Dependent Variable: Performance of Donor Funded Health Projects									

Source: Survey data (2019)

The first step undertaken was to establish the presence of zero order when macro environment factors predict performance of donor funded projects. The results tabulated on Table 4.28 indicate a positive coefficient of 0.012 significant at 5 percent significance level (*P= 0.001 <0.05)*. The results also confirm the presence of zero order (0.020). Having established a positive relationship between macro environment factors and performance of donor funded health projects, there is possibility of mediation. The direct relationship between macro environment and donor funded health projects in Kenya was expressed by equation 4.1

$$PER = 3.461 + 0.012\ MEF \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots . 4.1$$

Model 2: $PR = \beta_0 + \beta_1 MEF + \mu_i$

The second model was undertaken with independent variable predicting the mediating variable (project risk management).

Table 4.29: MEF Predicting Project Risk (PR)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	2.623	.613		4.282	.000			
	Macro Environment Factors	.228	.087	.180	1.155	.036	.180	.180	.180
a. Dependent Variable: Project Risk									

Source: Survey data (2019)

The relationship between macro environment factors and project risk (mediating variable) was found significant at 5 percent significance level (*P value = 0.036<0.05*), with a positive effect of 0.228. Zero order was confirmed present at 0.18. The significance of the macro environment factors indicates possibility of mediation effect. The relationship is as provided in equation 4.2

$$PR = 2.623 + 0.228\,MEF \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad 4.2$$

Model 3: PER = $\beta_0 + \beta_1$ PR + μ_i

The third step was to find out how project risk management (mediating variable) affected the performance of donor funded heath projects.

Table 4.30: Project Risk Management and Performance of Donor Funded Heath Projects

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	3.049	.256		11.889	.000			
	Project Risk	.136	.043	.283	1.867	.049	.283	.283	.283
a. Dependent Variable: Performance of Donor Funded Health Projects									

Source: Survey data (2019)

The regression analysis between project risk management and performance of donor funded health projects established a significant effect (P value = 0.049<0.05) with a coefficient of 0.136. The significance of the mediating variable denotes possibility of mediation effect. Equation 4.3 indicates how project risk management relates with the performance of donor funded health projects.

$$PER = 3.049 + 0.136PR \quad \ldots\ldots 4.3$$

Step 4: $\boldsymbol{PER = \beta_0 + \beta_1 MEF + \beta_2 PR + \mu_i}$

Having established that steps 1-3 produced significant effects, there was need to undertake multiple regression analysis to determine if project risk management provides full mediation or partial mediation. To establish this, both macro

environment factors and project risk management were regressed against the performance of donor funded health projects in Kenya.

Table 4.31: MEF & PR Predicting Performance of Donor Funded Heath Projects

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	3.097	.351		8.829	.000			
	Project Risk	.139	.075	.289	1.851	.032	.283	.284	.284
	Macro Environment Factors	-.020	.095	-.032	-.205	.048	.020	-.033	-.032
a. Dependent Variable: Performance of Donor Funded Health Projects									

Source: Survey data (2019)

The results in Table 4.31 indicate a significant effect between macro environment factors and performance of donor funded health projects when controlling for project risk management. The coefficient of MEF against performance for step 4 compared to coefficient in step 1 is smaller. Further, project risk management and the performance of donor funded health projects were found to be positively related and significant at 5 percent significance level. Based on the findings of the mediating effect where all regression analyses were found significant and that, the coefficient of the macro environment diminished but continued to be significant with the addition of the mediating variable, the study concluded that project risk

management has a partial mediating effect. The overall mediation effect is as expressed in equation 4.4.

$$PER = 3.097 - 0.020MEF + 0.139PR \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 4.4$$

4.6.5.1. Testing the Significance of the Mediation Effect

The study established that project risk provides partial mediation between the macro environment and the performance of donor funded health projects. However, there was need to ascertain if this mediation was significant. A Sobel test was conducted and the results reported as in Table 4.32.

Table 4.32: Sobel Test

	Input:		Test statistic:	Std. Error:	*p*-value:
a	0.228	Sobel test:	2.01795881	0.01536602	0.04359555
b	0.136	Aroian test:	1.9606879	0.01581486	0.04991544
s_a	0.087	Goodman test:	2.08056052	0.01490368	0.03747415
s_b	0.043	Reset all	Calculate		

Source: Survey data (2019)

Using the coefficients and standard error values for MEF predicting PR and PR predicting performance, the Sobel test indicated a statistic of 2.017 and p value of 0.0435. Therefore, PR was confirmed a significant mediator between macro environment factors and performance of donor funded health projects. Based on this, the null hypothesis that project risk management has no significant effect on

the relationship between the macro environment and the performance of donor funded health projects was not accepted. The alternative hypothesis that the project risk management has a significant effect on the relationship between the macro environment and the performance of donor funded health projects was accepted. These findings were in line with those by Junior (2013) and Carvalho (2015) that project risk management has an effect on the performance of projects.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings, conclusion and recommendations as well as suggestion for further research.

5.2 Summary of the Findings

This study was carried out to determine the effect of the macro environment on the performance of donor funded health projects in Kenya. The following research objectives advised the study: to establish the effect of social- cultural factors on the performance of donor funded health projects in Kenya; to find out the effect of economic factors on the performance of donor funded health projects in Kenya; to investigate the effect of the technological factors on the performance of donor funded health projects in Kenya; to determine the effect of political factors on the performance of donor funded health projects in Kenya; to determine the moderating effect of the top management support on the relationship between the macro environment factors and the performance of donor funded health projects in Kenya and to determine the mediating effect of project risk management on the relationship between the macro environment factors and the performance of donor funded health projects in Kenya .A Census study was applied whose target

population was 75 comprising of 69 ongoing projects initiated between 2008 and 2018 and 6 officials from the ministry of health.

The influence of the social-cultural environment on the performance of donor funded health projects was tested using the level of literacy of local community, support of the local community, language barriers and presence of corruption on the project as variables. The findings indicated that the social-cultural environment has a low effect on the performance of donor funded health projects as shown by means of less than 3 in all the aspects. The reasons for the low effect as provided by the responses received were that the communities were very receptive and participative in the projects, majority of the community members were literate and aware of development issues and there was a low and indirect association between the donors and the community members. The regression analysis indicated that there was a positive and significant relationship between the socio-cultural environment and the performance of donor funded health projects in Kenya.

The economic factors were found to affect the performance of donor funded health projects. However, the results indicated that the economic factors such as change in tax rates, change in currency exchange rates and change in interest rates had a medium to low effect. The reason provided for the low and very low rating

on economic environment as explained by the respondents is that, funding is provided in Kenya shillings which minimize the effect of exchange rates. Others held that, the donor funded health projects were not affected by changes in interest rates because they do not borrow for their projects. Further, it was also found out that, most of the grants are tax exempt thus minimizing the effect of taxation. A weak negative but significant correlation was established between the economic environment and the performance of donor funded health projects in Kenya. The regression analysis also confirmed that, the economic environment is a significant factor that has a negative effect on the performance of donor funded health projects in Kenya.

Further, the results indicated that the technological environment has an influence on the performance of donor funded health projects in Kenya. The findings showed that, the need for new skills to run the projects had a medium effect. The availability of technology required to run the project was found to have a medium to low effect on the performance of donor funded health projects. Further, the respondents suggested that the lack of internet and access to data, skill gaps to implement the projects and the lack of technology in data collection, reporting, and monitoring and evaluation affected the performance of donor funded health projects in Kenya negatively. Technological factors were found to have a weak positive correlation with project performance. Regression analysis also found a positive effect of technological environment on project performance. However, it

was established that this relationship was not significant; at 5 percent significance level.

Political factors were found to have an effect on the performance of donor funded health projects. Most of the respondents claimed that the three variables; changes in government policy, changes in the political leadership and changes in legislation have a medium effect on the performance of the donor funded health projects. Correlation analysis established that the political environment had a weak and positive effect on the performance of the donor funded health projects in Kenya. These findings were confirmed by the regression analysis which established a significant positive relationship between the political environment and the performance of donor funded health projects in Kenya; at 5 percent significance level.

The top management support was found to have a moderating effect on the relationship between the macro environment and the performance of donor funded health projects. Majority of the respondents acknowledged that the project top management were involved in project initiation. A small portion of the respondents were neutral, disagreed or strongly disagreed that the project top management were involved in the project initiation. The study further established that project top management were involved in project planning and

implementation to a great degree. It was also revealed that, project top management provided adequate human resources, support in the execution of project plans as well as adequate support in the implementation of donor funded health projects.

All respondents agreed that project risk management influenced how the macro environment factors and the performance of donor funded health projects in Kenya related. The study further established that the political environment posed the highest risk to the performance of donor funded health projects. The economic and technological environments caused moderate project risks while social-cultural factors were found to have low level of causing project risk. On the specific project risk management factors, risk management personnel and risk control planning were the highest project risk management factors considered to affect the performance of donor funded health projects. It was also established that having a dedicated risk management personnel had a high effect on the performance of projects. Presence of a risk register affects the performance of donor funded projects moderately.

The performance of projects was estimated by use of cost, schedule and quality. The study found out that most of the projects had well-planned schedules. Further, majority of the respondents held that the current projects commenced on time and

that time schedule review followed laid down procedures. However, many projects were still lagging behind schedule. The findings of this study also established that, an average number of the donor funded health projects' expenditure was as budgeted while in some, it was above the budget. Therefore, an average number of the projects were not completed within the budget. In case of budget revision, almost all respondents agreed that the revision was undertaken as per the laid down procedures. Similarly, many respondents acknowledged that the projects had appropriate budgetary allocation.

On quality, many respondents confirmed that project quality specifications were clearly outlined in the project plan. The findings also indicated that most of the projects would achieve the expected quality expectations and that the level of the project quality was good as compared to the user specifications. The study found out that deficient communication within the project organization, inadequate tools and equipment, lack of skills, hostility from local community, low literacy levels and lack of technology were causes of unsatisfactory project quality in donor funded health projects in Kenya. A composite measure of time, cost and quality confirmed that donor funded health projects in Kenya are experiencing poor performance.

5.3 Conclusion

The regression analysis undertaken in this study indicated that the social-cultural environment had a significant positive relationship with the performance of donor funded health projects. This implies that an increase in the support accorded to projects by the local community would increase the performance of donor funded health projects. Therefore, this study concluded that the social-cultural environment is a significant macro environment variable that has a significant effect on the performance of donor funded health projects.

The economic environment comprising of changes in interest rates, changes in exchange rates and changes in tax rates affects the cost of implementing the donor funded health projects hence affecting their performance. The regression analysis established that the economic environment had a significant negative influence on the performance of donor funded health projects. This implies that an increase in taxes, interest rates and exchange rates will increase the project expenditure causing budget overrun. Therefore, economic environment was confirmed to be a significant macro environment factor that negatively affects the performance of donor funded health projects.

The technological environment was found to have a medium effect on the performance of donor funded health projects. A significant positive correlation

was established between the technological environment and the performance of the donor funded health projects. However, the regression analysis found that, even though technological factors have a positive effect, they are not significant. Thus, the technological environment is not a significant factor in the performance of donor funded health projects.

Inferential statistics of the political environment found out that the variable has a significant positive effect on the performance of donor funded health projects in Kenya. This implies that changes in government policy, changes in political leadership and new legislations are likely to have a positive effect on the donor funding and the implementation of the donor funded health projects. Therefore, the political environment was confirmed as a significant factor in the performance of donor funded health projects.

Top management involvement in project initiation, planning and implementation has an influence on the relationship between the macro environment and the performance of donor funded health projects in Kenya. From this study, all respondents held that top management support has an effect on the performance of donor funded health projects in Kenya. Majority of the respondents indicated that the top management was committed to ensure the projects were completed as scheduled. The study findings confirmed that top management support is a

significant moderating variable when it is rated very good and excellent. Thus, this study concludes that top management support is a significant moderator of the relationship between the macro environment and the performance of the donor funded health projects.

Projects have inherent risks that must be taken care of during the project planning and implementation if the project is to be successful. Some of these risks are caused by the macro environment. These risk factors affect the project budget, quality and time. This study found out that project risk management is a significant mediating factor. This implies that, when project risk management is factored into the project planning and implementation, desirable outcomes of project performance will be achieved.

5.4 Contribution to Knowledge

Though the performance of donor funded health projects has been of concern world over in the recent years, most of the researches carried out are on the performance of software and construction projects and not on donor funded health projects in Kenya. Besides, most studies have been on the project success and sustainability. This study found out that the macro environment factors investigated had significant effects on the donor funded health projects with the exception of the technological environment factors. This study has therefore shed

light on how the macro environment factors have affected the performance of donor funded health projects which the previous studies did not.

While some studies have been carried out to determine the factors that influence the performance of building, housing and software projects, none looked at the top management support as moderating factor on the performance of projects. This study found out that the moderating effect of top management support on the performance of donor funded health projects was significant. This is an addition on the existing body of knowledge. In addition, the researcher evaluated the mediating effect of project risk management on the performance of the donor funded health projects and found it significant. None of the earlier studies had investigated this relationship.

Of the macro environment variables investigated, the technological variable was found not to have a significant effect on the performance of donor funded health projects. This is contrary to what earlier studies found out on the performance of other projects. This thus sheds light on how the technological variable particularly affects the performance of donor funded health projects.

In addition to the determination of the influence of the macro environment on the performance of donor funded health projects, this study has also developed a conceptual framework that will help academicians interested in undertaking studies on the performance of donor funded projects in other sectors of the economy. The study also developed a research instrument that can be used for establishing the effect of donor funded projects across the world. Furthermore, the study demonstrated the efficacy of combining both the descriptive and explanatory research designs. The two designs complimented each other in the description and explanation of the influence of the macro environment on the performance of donor funded health projects in Kenya.

5.5 Recommendations

This study provides the donor funded health projects' stakeholders with a clear picture of the performance of the projects against time. Quite a good number of respondents observed that their projects were not going to be delivered within schedule. This was due to delayed financing from the donor, limited funding from the partners, and a wide scope of the project, slow implementation pace and late start. This study recommends that, the project management team should strategize to have a considerable scope that can be completed with the available resources, monitor and have mitigation mechanism in case the project timelines are unattainable.

This study found out that the project budget was adjusted upwards. Reasons attached to the upward adjustment of the budgets included; changes in commodity prices, increased taxation and inadequate skills in the running of donor funded projects as well as diverting some funds to other activities. This study suggests that, resources allocated for project implementation should be strictly budgeted for and utilized in the project and no other uses outside the project scope. Secondly, there must be proper accounting and audit of donor funds to ensure the successful completion of these projects.

This study, determined that project risk management was a significant mediating factor while top management support was a significant moderating variable. Therefore, the study recommends that; all donor funded health projects should implement project risk management practices to enhance their performance. Further, top management should fully participate in project planning and implementation, developing appropriate policies and strategies and providing adequate resources for the project.

To ensure quality is achieved in donor funded health projects, this study recommends that; effective communication, team work and coordination must be embraced in project implementation. Similarly, the top management should

ensure that it hires employees with the right skills to ensure successful completion of the project.

5.6 Policy Implications

The results of this study have implications for the government of Kenya as well as the project managers in as far as the management of donor funded health projects is concerned. The study found out that the macro environment has effects on the performance of donor funded health projects. The results of the study will therefore enable the government of Kenya to come up with policies that would minimize the effects of the macro environment on the performance of donor funded health projects. The improved performance of the donor funded health projects will lead to better health for the people of Kenya which is in line with MDG 4, 5, and the Vision 2030.The findings also provide a good basis to the project managers in the development of project approaches that could enable the donor funded health projects to improve their performance.

The study found out that social-cultural, economic and political factors had significant effects on the performance of the donor funded health projects in Kenya. The findings of this study will inform the management practices of government agencies on donor funded health projects. This applies to the initiation, planning and execution of the donor funded health projects.

The findings from this study also indicated that top management support had a significant effect on the performance of donor funded health projects. This will motivate the top management of the health agencies in Kenya and the implementing agencies of the donor funded health projects to enhance their support to further improve on the performance of the donor funded health projects. The study revealed areas in the top management support that requires improvement. With this in view, the top management of the health agencies are better guided and, thus will be guided in seeking for ways of improving on those particular areas so as to enhance their level of support.

Further, the study found out that project risk management had a significant effect on the performance of donor funded health projects. This finding will go a long way in encouraging the government agencies as well as the project management agencies to put in place mechanisms for managing project risks. This include, developing and updating project risk registers, having dedicated project risk management personnel as well as putting in place risk monitoring and control plans.

5.7 Suggestion for Further Research

The researcher in this study sought to determine the effect of the macro environment on the performance of donor funded health projects in Kenya. A

similar study should be done on government funded projects to validate the findings of this study.

This study also established that the technological factor was not significant in affecting the performance of projects. Further research should be undertaken with a target of many respondents as well as a wide area and a longer period. Moreover, further study could also be undertaken to establish the challenges faced by donor funded health projects in Kenya.

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Appendix I: Questionnaire

Introduction

Dear Respondent

This questionnaire aims at collecting data on **macro environment and the performance of donor funded health projects in Kenya**. The macro environment factors to study are Social – cultural, Economic, Technological and political. The data collected from you will solely be used to accomplish academic goals and will be kept confidential. Kindly provide the requested data as per the instructions given.

Part A: Background Information

Provide your responses to each of the questions by either ticking in the boxes or by writing in the provided spaces.

1. a) Project name ……...…….

   b) Project location ……..……..

2. Select your gender by ticking in the provided boxes

   [ ] Male

   [ ] Female

3. Indicate your age bracket in years by ticking an appropriate box.

   [ ] 18 - 27 [ ] 28 - 37

   [ ] 38 - 47 [ ] 48 - 57

   [ ] Above 58

4. Indicate your academic qualification

   [ ] Secondary school level [ ] Tertiary college

   [ ] Bachelors degree [ ] Masters Degree

   [ ] Doctorate [ ] Others (Specify) ……

5. Indicate the duration in years that you have worked in the current organization by ticking in the appropriate box.

   [ ] Less than 1 [ ] 1 – 3 [ ] 4 – 6 [ ] Over 6

PART B: Performance of Donor Funded Health Projects

The following questions relate to the performance of health projects funded by donors which were initiated between 2008 and 2018.

6. When did the project mentioned above commence? .....

7. Please tick in the boxes below to indicate the areas that are covered in this project's plan

   [ ] Expenditure estimates [ ] Human resource requirements

   [ ] Time schedules [ ] Outcome specifications

   [ ] Scope changes [ ] Risk management plans

   [ ] Others……

8. What is the planned duration of the project?

   [ ] Less than 2 years [ ] 2-3 years

   [ ] 3-5 years [ ] Over 5 years

9. In your view, what percentage of the project is completed?.....

For questions 10 - 14 provide your response on the project timelines by ticking in the appropriate box

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
10. The project had a well-planned schedule					
11. The project commenced on time					
12. Progress of the project against time is good					
13. The project will be completed within the planned time					
14. The initial project completion time has been reviewed					
15. Time schedule review followed laid down procedures					

16. At the rate the project is progressing, will it be completed on time? ……
If no, what are the causes of the delay?

……

17. What is the estimated cost of the project in dollars? ……

18. In your view, what percentage of your budget has been utilized as at the current level of the project?.....

For questions 19 - 24 provide your response by ticking in the appropriate box

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
19.The project had an appropriate budgetary allocation					
20. The project expenditure is as budgeted					
21. The project expenditure is higher than planned					
22. The project will be completed within budget					
23. The project budget was revised upwards					
24. The budget revision followed the laid down procedures and it was approved					

25. If the project expenditure exceeds budget, what do you consider to be the causes of the budget overrun?

[ ] Changes in commodity prices [ ] Increased taxation

[ ] Unfavourable exchange rates

[ ] Lack of adequate skills in the management of donor funded projects

[ ] Lack of appropriate tools [ ] Lack of government support

Other reasons……

For questions 26 - 28 provide your response by ticking in the appropriate box

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
26.Project quality specifications are clearly outlined in the project plan					
27. The Level of the project quality is good as compared to the user specifications					
28. The project will achieve the expected quality expectations					

29. What do you consider to be the causes of unsatisfactory project quality?

[ ] Poor communication within the project team

[ ] Lack of tools and equipment

[ ] Lack of skills [ ] availability of technology

[ ] Hostility from local community [ ] Low literacy levels

Part C: Social - cultural environment and the performance of donor funded health projects in Kenya

30**.** Tick (√) where appropriate to indicate the effect of social – cultural environment factors on the performance of donor funded health projects (The scale: 1- Very low, 2 - low, 3 - medium, 4 - high, and 5- very high)

	Variables description	Please tick as appropriate				
		1	2	3	4	5
Social - cultural	Local community literacy levels					
	Community support					
	Language					
	Corruption practices					

31. Briefly explain your response to question 30 above.

……

……

Part D: E**conomic environment and the performance of donor funded health projects in Kenya**

32. Tick (√) where appropriate to indicate the effect of economic environment factors on the performance of donor funded health projects (The scale is: 1 - Very low, 2 - low, 3 - medium, 4 - high, and 5- very high)

	Variables description	Please tick as appropriate				
		1	2	3	4	5
Economic	Tax rates					
	Currency exchange rates					
	Interest rates					

33. Kindly provide more details to your response in question 32.

……

……

Part E: T**echnological environment and the performance of donor funded health projects in Kenya**

34**.** Tick (√) where appropriate to indicate the effect of the technological environment factors on the performance of donor funded health projects (The scale: 1- Very low, 2 - low, 3 - medium, 4 - high, and 5 - very high)

	Variables description	Please tick as appropriate				
		1	2	3	4	5
Technological	New skills					
	Technology					

35. Please provide any additional details to question 34 here.

……

……

Part F: Political environment and the performance of donor funded health projects in Kenya

36**.** Tick (√) where appropriate to indicate the effect of the political environment factors on the performance of donor funded health projects. (The scale: 1 - Very low, 2 - low, 3 - medium, 4 - high, and 5 - very high)

	Variables description	Please tick as appropriate				
		1	2	3	4	5
Political factors	Government policy					
	Political leadership					
	Legislation on donor funding					

37. Please provide more details to the responses given on question 36 above.

……

……

38. For this question provide your overall view on the effect of the macro environment factors on the performance of the donor funded project (The scale: 1 - Very small, 2 - small, 3 - moderate, 4 - large, and 5 - very large)

Environmental factor	Extent of effect				
	1	2	3	4	5
Social – cultural					
Economic					
Technological					
Political					

Part G: Top management support and the relationship between the macro environment and project performance

39. In your view, does the top management support have an effect on the relationship between the macro environment factors and the performance of donor funded health projects? [ ] Yes

[ ] No

40. Rate the top management support by ticking the relevant box.

Scale: 1 – Very poor, 2 – Poor, 3 – Good, 4 – Very good, 5 – Excellent

Top Management Support	Top management support Rating				
	1	2	3	4	5
Involvement					
Policies and Strategies					
Provision of resources					

41. To what extent do you agree or disagree with the statements below?

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Project top management are involved in project initiation					
Project top management are involved in project planning and implementation					
Project top management provide adequate human resources to the project					
Project top management provide adequate support in the execution of project plans					
Project top management policies adequately support project implementation					
Project top management					

develops workable project strategies					
Project top management plays well their liaison roles with donors					
Project top management fully support Monitoring and evaluation activities					
Project top management adequately motivates project team members					

42. In your views indicate the effect of the top management support on the relationship between the macro environment factors and the performance of donor funded health projects in Kenya by ticking the appropriate box.
The scale: 5 - Very high, 4 - Moderately high, 3 - Moderate, 2 - low, 1- none (**Tick appropriately**)

Top Management Support	Effect on the relationship				
	1	2	3	4	5
Provision of adequate resources for the project					
Involvement in project planning and implementation					
Development of appropriate policies and strategies					

Part H: Project risk management and the relationship between the macro environment and the performance of donor funded health projects

43**.** In your view, does the project risk management have an effect on the relationship between the macro environment factors and the performance of donor funded health projects?

[ ] Yes [ ] No

44. Macro environment factors are known to cause project risks. Tick (√) the level of risk caused by the factors in the table below

Scale: 1 – Very low, 2 – Low, 3 – Medium, 4 – High, 5 – Very high

Source of project risk	Risk level				
	1	2	3	4	5
Social - cultural					
Economic					
Technological					
Political					

45. In a scale of 1 – 5, rate the project risk management effect on the performance of donor funded health projects in Kenya by ticking the relevant box.

Project risk management	Effect on the performance of donor funded health projects				
	1	2	3	4	5
Risk monitoring & Control planning					
Risk management personnel					
Risk register					

THANKS FOR YOUR PARTICIPATION

Appendix II: Total official flows by country and region (ODA + OOF)

				2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Donor				DAC Countries, Total									
Aid type				Total Official, Net									
Part				1 : Part I - Developing Countries									
Unit				US Dollar, Millions									
Recipient													
Developing Countries, Total				86058.6	68009.7	67741.1	86470.3	91995.14	96168.94	102400	99173.8	100548	99388
	Africa, Total			24162.8	19865.2	22169.9	27762.3	29422.32	28597.46	30828	28880.5	30921.8	30693
		South of Sahara, Total		22649.7	20420.3	19359.7	24477.2	26155.1	25742.02	27185	25457.6	27035	26388
			Kenya	538.54	796.25	828.64	1008.1	1319.58	1133.54	1563.5	1702.2	2105.89	1785

Source: *Data extracted on 27 Sep 2016 14:29 UTC (GMT) from OECD.Stat*

Appendix III: Donor Funded Health Projects in Kenya

Project	Project Title	Project Cost (KES)	Funding Source	Start Date (Planned)	Start Date (Actual)	Duration (Months)	MTEF Sector	Implementing Agency
Building & Construction Projects								
1081104000	Clinical Laboratory and Radiology services improvement	656,700,000		01/01/2018		24 months	Health	1081 - Ministry of Health
1081102500	East Africa's Centre of Excellence for skills & Tertiary Education	3,310,000,000		01/01/2017		26 months	Health	1081 - Ministry of Health
2010/051560	Wajir District Hospital Construction	800,000,000	018 - Kuwait Fund for Arab Development	30/06/2008	30/06/2008	119 months	Health	1081 - Ministry of Health
1081101600	Upgrading Of Kigumo Hospital	497,621,664	021 - Government of Japan	7/6/2017		48 months	Health	1081 - Ministry of Health
2010/052054	Rehabilitation Of Ahero Sub District Hospital (K.I.D.D.P)	18,000,000	011 - Government of Italy	26/07/2010	26/07/2010	83 months	Health	1081 - Ministry of Health
2010/052069	Rehabilitation Of Tharaka District Hospital (K.I.D.D.P)	17,067,170	011 - Government of Italy	14/07/2010		36 months	Health	1081 - Ministry of Health
	KNH Burns & Pediatrics Centre	1,488,000,000	032 - US Embassy	10/11/2017		48 Months	Health	1081 - Ministry of Health
	Construction of Sample Management and Receiving Facility (SMRF) and Renovation of Laboratories	227,000,000	038 - Government of Israel	01/03/2018		24 Months	Health	1081 - Ministry of Health
2011/053138	Kenyatta National Hospital Upgrading Project	20,400,000	019 - Saudi Fund for Development; 512 - Arab Bank for Economic Development in Africa (BADEA); 513 - Organization of Petroleum	1/9/2011		73 months	Health	1081 - Ministry of Health

			Exporting Countries (OPEC)					
2012/053897	Rehabilitation Of The Ngong Sub District Hospital (KIDDP)	43,109,000	011 - Government of Italy	2/7/2012		59 months	Health	1081 - Ministry of Health
2012/053899	Rehabilitation Of Muhoroni Sub District Hospital (Kiddp)	38,500,000	011 - Government of Italy	2/7/2012		50 months	Health	1081 - Ministry of Health
2012/053900	Rehabilitation Of Likoni Sub District Hospital (Kiddp)	18,959,947	011 - Government of Italy	2/7/2012		49 months	Health	1081 - Ministry of Health
1081109500	Construction of a cancer centre at Kisii Level 5 Hospital	510,728,000	021 - Government of Japan	2/7/2012		72 Months	Health	1081 - Ministry of Health
2012/053951	Rongai Hospital Project	1,678,571,429	512 - Arab Bank for Economic Development in Africa (BADEA)	31/01/2013		59 months	Health	1081 - Ministry of Health
1081104100	Expansion of Ileho Health Centre (KIDDP)	35,000,000	011 - Government of Italy; Government of Kenya	01/01/2018	01/01/2018	24 months	Health	1081 - Ministry of Health
2013/054216	Integrated Focused School And Maternal, Newborn Child Health Project	191,850,000		1/4/2011	1/6/2011	65 months	Health	Ministry of Health
2013/054191	Moi Teaching And Referral Hospital : Academic Model Providing Access To Healthcare	1,456,087,584	031 - Government of United States of America (USAID)	17/03/2012	17/03/2012	75 months	Health	1081 - Ministry of Health; 116 - MOMS - Moi Teaching & Referral Hospital; 1062 - State Department for Science and

								Technology
2010/052504	East Africa Public Health Laboratory Network Project (EAPLHP)	1,900,000,000	501 - International Development Association (IDA)	1/10/2010	1/10/2010	59 months	Health	1081 - Ministry of Health
2012/053913	Kenyatta University Teaching and Referral Hospital Project	3,386,822,966	025 - Government of China	2/7/2013		47 months		106 - Ministry of Education; 1061 - State department for Education; 1081 - Ministry of Health
Capacity Development								
2010/051554	Strengthening of 17 District and 6 Provincial General Hospitals (SIMED)	2,000,000,000	003 - Government of Netherlands	30/06/2010	30/06/2010	78 months	Health	1081 - Ministry of Health; 1111 - Ministry of Land Housing and Urban Developme nt
1081101500	Program for Basic Health Insurance for Poor & Informally Employed	2,100,000,000		30/04/2016	30/04/2016	50 Months	Unspecif ied	1081 - Ministry of Health
1081103700	Clinical Waste Disposal System Project	350,000,000		07/07/2017	07/07/2017	29 months	Health	1081 - Ministry of Health
2010/051613	Strengthen Obstretric Fistula Management	7,000,000	519 - United Nations Fund for Population Activities (UNFPA)	30/06/2010	30/06/2011	66 months	Health	1081 - Ministry of Health

2010/051627	Development Of The Health Sector (Health Swap) 2007 65 131	2,819,148,936	014 - Government of Germany (KFW-GERMANY)	21/05/2010	1/4/2011	79 months	Health	1081 - Ministry of Health
1081101400	Health Sector Development (Rep.Health & HIV/AIDS)	720,500,000		14/07/2016	8/8/2017	35 months	Energy, Infrastructure and ICT; Health	106 - Ministry of Education; 106 - MOES&T - Chepkoilel University College
2010/052108	Training Of Health Personnel (K.I.D.D.P)	0	011 - Government of Italy	24/02/2014		50 months	Health	1081 - Ministry of Health
1081103500	Health System Management (Procurement of Vaccines & Sera)	7,800,000,000	GAVI	9/7/2017		40 Months		1081 - Ministry of Health
1081109400	Roll out of universal Health Coverage	1,251,400,000		10/9/2016	10/9/2016	60 Months	Health	1081 - Ministry of Health
2011/052939	Advancement Of Public Health Practices Programme In Kenya	3,699,424,706	032 - US Embassy	15/09/2011	15/09/2012	60 months	Health	1081 - Ministry of Health
	Pandemic Preparedness Initiative (Phase 2 - Environmental Health And Sanitation In Schools)	43,900,000	015 - Government of Germany (GIZ-GERMANY)	10/9/2017		20 months	Health	1081 - Ministry of Health
2011/052965	Strengthening Of People & Empowerment Against Hive/Aids In Kenya (S.P.E.A.K)	77,200,000	021 - Government of Japan	3/7/2011	3/7/2012	72 months	Health	1081 - Ministry of Health
2015/052967	Strengthening Management Of Health	102,100,000	021 - Government of Japan	5/7/2015		36 months	Health	1081 - Ministry of Health

2011/052973	Health Systems Management	313,554,000	524 - Global Alliance Vaccine Initiative	5/8/2011	5/8/2011	112 months	Health	1081 - Ministry of Health
2011/053186	Kenya Health Sector Support Project (KHSSP)	8,064,516,129	501 - International Development Association (IDA)	5/10/2010	5/10/2010	77 months	Health	1081 - Ministry of Health
2011/053188	Development Of The Health Sector (Rep. Health And Hiv Aids) (2004 65 245)	937,500,000	014 - Government of Germany (KFW-GERMANY)	1/3/2007		135 months	Health	1081 - Ministry of Health
2011/053192	Health Sector Programme Support Phase III	6,475,903,614	001 - Government of Denmark	2/1/2012	2/1/2012	59 months	Health	1081 - Ministry of Health
2012/053960	Communication For Development	2,500,000	522 - United Nations International Children Education Fund (UNICEF)	26/01/2009		83 months	Public Administration and International Relations (PAIR)	1081 - Ministry of Health; 1121 - Ministry of Information and Communications and Technology; 1131 - Ministry of Sports Culture and Arts
2014/054694	Ksms Training,Pandemic Preparednes Initiative	8,000,000	015 - Government of Germany (GIZ-GERMANY)	10/3/2014	11/3/2014	56 months	Health	1081 - Ministry of Health
2013/054295	Programme Development Of The Health Sector Support To Health Financing Phase 3 (2010 65 853)	2,530,000,000	014 - Government of Germany (KFW-GERMANY)	1/7/2013		55 months	Health	1081 - Ministry of Health
2013/054297	Development Of The Health Sector (Reproductive Health And Hiv/Aids	825,000,000	014 - Government of Germany (KFW-GERMANY)	1/7/2010		95 months	Health	1081 - Ministry of Health

2014/055411	National AIDS Control Council	29,889,690	519 - United Nations Fund for Population Activities (UNFPA)	1/9/2017		15 months	Health	1081 - Ministry of Health
2012/054034	Building Naccs Capacity To Ensure Srh/Aids Integration	100,000,000	519 - United Nations Fund for Population Activities (UNFPA)	1/4/2009	12/12/2012	82 months	Public Administration and International Relations (PAIR)	103 - Ministry of Devolution and Planning; 1081 - Ministry of Health; 1032 - State Department for Devolution
Nutrition and Care								
2010/051918	Nutrition And Care For Hiv/Aids Affected People	113,101,726	523 - World Food Programme	1/1/2009	1/1/2009	95 months	Health	103 - Ministry of Devolution and Planning; 1081 - Ministry of Health
2012/053989	Nutrition	4,078,000	522 - United Nations International Children Education Fund (UNICEF)	26/01/2009		83 months	Health	1081 - Ministry of Health
1081103400	Food and Nutrition support for vulnerable populations affected by HIV	648,600,000		03/02/2018		36 months	Health	1081 - Ministry of Health
Treatment and Prevention								
2010/052223	Special Global Fund-Malaria Rd 4	12,973,846,800	503 - Global Fund	1/5/2011	1/5/2011	79 months	Health	1071 - The National Treasury; 1081 - Ministry of Health
	Special Global Fund Round 10 Tb	3,226,000,000	503 - Global Fund	1/9/2017		35 months	Unspecified	1071 - The National Treasury; 1081 - Ministry of Health

2010/052232	Water And Sanitation Services (WASH)	575,000,000	522 - United Nations International Children Education Fund (UNICEF)	1/1/2008		95 months	Educatio n	522 - United Nations Internationa l Children Education Fund (UNICEF); 110 - Ministry of Environme nt Water and Natural Resources; 1081 - Ministry of Health; 106 - Ministry of Education; 1061 - State Department for Education; 1102 - State Department for Water and Regional Authorities.
2010/052250	Special Global Fund Rd 7 Hiv	2,452,459,920	503 - Global Fund	1/6/2009	1/6/2009	108 months	Health	103 - Ministry of Devolution and Planning; 1071 - The National Treasury; 1081 - Ministry of Health
2010/052258	Special Global Fund Round 6 Tb	336,508,560	503 - Global Fund	1/4/2008	1/4/2008	116 months	Health	1071 - The National Treasury; 1081 - Ministry of Health

2010/052285	Water And Sanitation Programme	4,960,000,000	001 - Government of Denmark; 004 - Government of Sweden; Government of Kenya	1/1/2008		143 months	Environmental Protection, Water and Natural Resources	110 - Ministry of Environment Water and Natural Resources; 1102 - State Department for Water and Regional Authorities.
2010/052299	Center For Disease Control(Cdc) And Prevention Of The Department Of Health And Human Services (Hhs) between The USA And Gok	5,656,000,000	031 - Government of United States of America (USAID)	11/12/2008	09/08/2010	60 months	Health	1081 - Ministry of Health
2010/052427	Reproductive Health Output Based Approach Phase 1 (2002 66 338)	1,558,531,180	014 - Government of Germany (KFW-GERMANY)	3/10/2010	3/10/2010	72 months	Unspecified	125 - MOPND - National Coordinating Agency for Population and Dev. (NCAPD)
2010/052506	IGAD Regional HIV & AIDS Partnership Program (IRAPP)	72,000,000	501 - International Development Association (IDA)	1/1/2010		71 months	Unspecified	103 - Ministry of Devolution and Planning; 1081 - Ministry of Health; 111 - NACC - National Aids Control Council
1081110200	Support of Universal Health care in devolved system	2,412,000,000		5/12/2017		40 months	Health	1081 - Ministry of Health
2013/052938	Access To Maternal And Newborn Health Services	90,400,000	519 - United Nations Fund for Population Activities (UNFPA)	10/1/2013	10/1/2013	59 months	Health	1081 - Ministry of Health

2011/052964	Rural Health III	1,718,000,000	510 - African Development Bank/ Fund; 513 - Organization of Petroleum Exporting Countries (OPEC)	15/03/2008		150 months	Health	1081 - Ministry of Health
2014/052966	Reproductive Health - Output Based Approach (O.B.A) Project	1,600,000,000	014 - Government of Germany (KFW-GERMANY)	2/11/2014		47 months	Health	1081 - Ministry of Health
2011/053198	Total War Against Hiv & Aids Project (TOWA)	7,583,892,617	501 - International Development Association (IDA)	18/10/2013	18/10/2013	74 months	Health	103 - Ministry of Devolution and Planning; 1081 - Ministry of Health; 111 - NACC - National Aids Control Council
1081110300	Transfering Health Systems for Universal Health care (THS)	11,220,100,000		1/5/2015	1/5/2015	60 Months	Unspecified	103 - Ministry of Devolution and Planning; 116 - Ministry of Agriculture, Livestock and Fisheries; 1081 - Ministry of Health
2012/053946	Special Global Fund Malaria Round 10	8,498,640,555	503 - Global Fund	1/10/2011	1/1/2012	83 months	Health	1071 - The National Treasury; 1081 - Ministry of Health
2012/053990	Environmental Health Services	6,741,000	522 - United Nations International Children Education Fund (UNICEF)	26/01/2009	20/02/2012	83 months	Health	1081 - Ministry of Health

2013/054091	Kenya Health Programme	13,805,194,805	040 - United Kingdom DFID (UK)	1/8/2013		76 months	Health	POPULATION SERVICES INTERNATIONAL (P.S.I)
2013/054092	Delivering Increased Family Planning Across Rural Kenya	9,995,286	040 - United Kingdom DFID (UK)	24/09/2012		66 months	Health	POPULATION SERVICES INTERNATIONAL (P.S.I)
2013/054190	Kenya Medical Supplies Agency (KEMSA): Commodity Procurement And Distribution	5,142,846,744	031 - Government of United States of America (USAID)	10/5/2011	10/5/2011	85 months	Health	1081 - Ministry of Health; 113 - MOMS - Kenya Medical Supplies Agency (KEMSA)
2013/054296	Reproductive And Sexual Health (2010 66 943)	880,000,000	014 - Government of Germany (KFW-GERMANY)	1/7/2013		47 months	Health	1081 - Ministry of Health
1081103300	Environmental Health Services	150,800,000		1/9/2017		25 months	Health	1081 - Ministry of Health
2015/055533	THE IGAD REGIONAL HIV AND AIDS PARTNERSHIP PROGRAMME (IRAPP)	8,010,000	507 - Intergovernmental Authority on Development	30/10/2010		101 months	Health	1081 - Ministry of Health

Source: *Open Africa data.org*

Appendix IV: Research Permit

THIS IS TO CERTIFY THAT:
MR. JONES ONGERA MOBEGI
of KENYATTA UNIVERSITY, 0-100
Nairobi,has been permitted to conduct
research in *All Counties*

on the topic: *MACRO ENVIRONMENT AND PERFORMANCE OF DONOR FUNDED HEALTH PROJECTS IN KENYA*

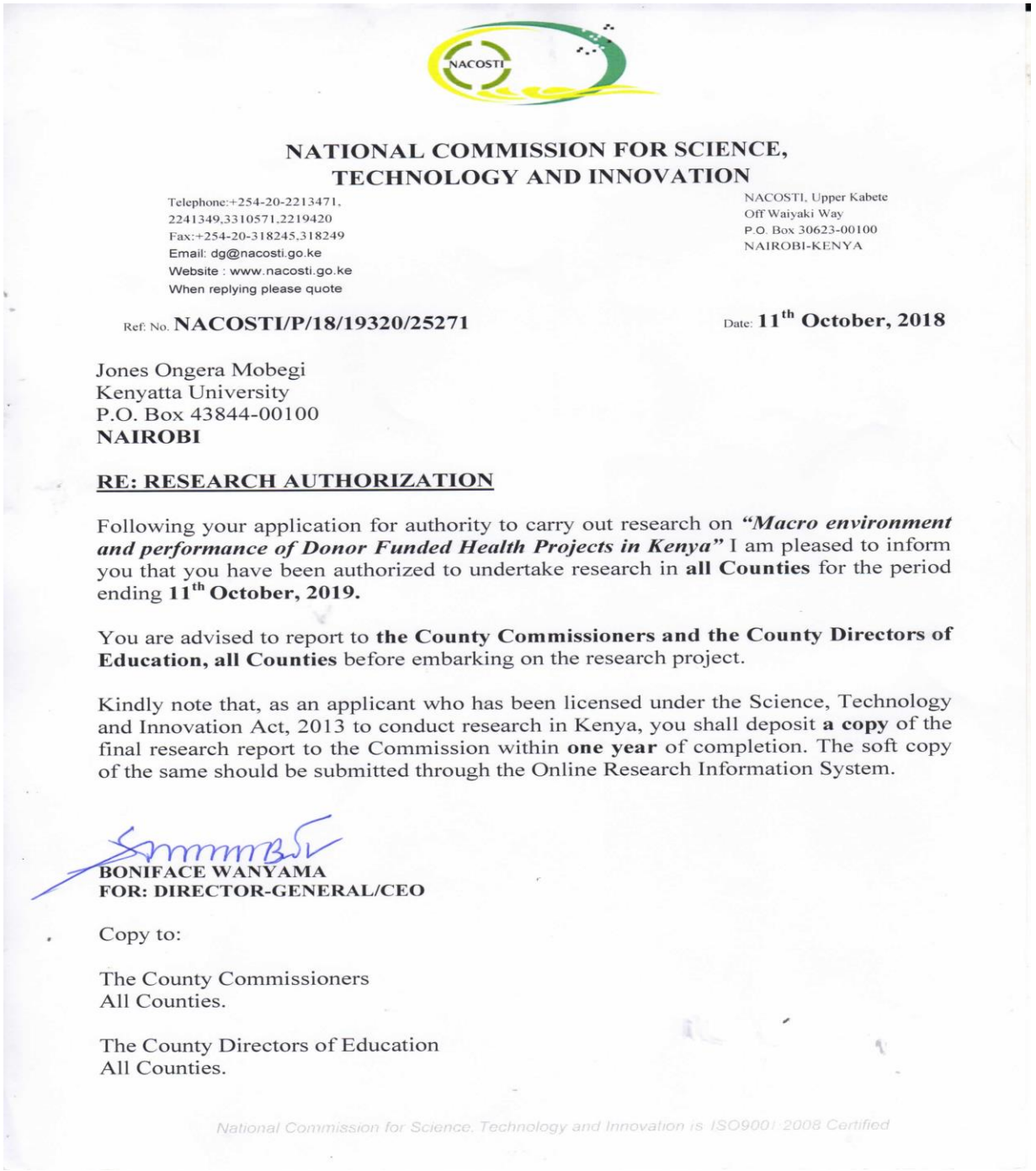
for the period ending:
11th October,2019

Permit No : NACOSTI/P/18/19320/25271
Date Of Issue : 11th October,2018
Fee Recieved :Ksh 2000

.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation

Appendix V: Research Authorization



NACOSTI

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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Email: dg@nacosti.go.ke
Website : www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/18/19320/25271**

Date: **11th October, 2018**

Jones Ongera Mobegi
Kenyatta University
P.O. Box 43844-00100
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Macro environment and performance of Donor Funded Health Projects in Kenya"*** I am pleased to inform you that you have been authorized to undertake research in **all Counties** for the period ending **11th October, 2019.**

You are advised to report to **the County Commissioners and the County Directors of Education, all Counties** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioners
All Counties.

The County Directors of Education
All Counties.

National Commission for Science, Technology and Innovation is ISO9001: 2008 Certified