

**INFLUENCE OF PROJECT APPRAISAL APPROACHES ON  
AN ORGANIZATION'S PERFORMANCE: A CASE OF AGA  
KHAN UNIVERSITY HOSPITAL, NAIROBI, A PRIVATE  
TEACHING AND REFERRAL HOSPITAL IN KENYA**

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**A RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL FULFILMENT  
OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER  
OF ARTS IN PROJECT PLANNING AND MANAGEMENT OF THE  
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## **DECLARATION**

This research project report is my original work and has not been submitted for any other degree at any other institution.

Signature.....

Date.....

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This research project report has been submitted for examination with my approval as the university Supervisor.

Signature.....

Date.....

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## **DEDICATION**

I would like to dedicate this project report to my wife Catherine Wanjiru, my children Sonia Wambui and Ryan Macharia for their limitless love and unwavering support. I wish to also dedicate this project report to my parents Mr and Mrs James Macharia Ngeru for their profound struggle in order to give me a good footing in my education.

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## TABLE OF CONTENTS

<b>DECLARATION.....</b>	<b>ii</b>
<b>DEDICATION.....</b>	<b>iii</b>
<b>ACKNOWLEDGEMENT.....</b>	<b>iv</b>
<b>LIST OF TABLES.....</b>	<b>viii</b>
<b>LIST OF FIGURES.....</b>	<b>ix</b>
<b>LIST OF ABBREVIATIONS AND ACRONYMS.....</b>	<b>x</b>
<b>ABSTRACT.....</b>	<b>xi</b>
<b>CHAPTER ONE.....</b>	<b>1</b>
<b>INTRODUCTION.....</b>	<b>1</b>
1.1 Background of the Study.....	1
1.2 Statement of the Problem.....	5
1.3 Purpose of the Study.....	6
1.4 Research Objectives.....	6
1.5 Research Questions.....	7
1.6 Significance of the Study.....	7
1.7 Delimitations of the Study.....	8
1.8 Limitations of the Study.....	8
1.9 Basic assumptions of the Study.....	9
1.10 Definitions of Significant Terms.....	9
1.11 Organization of the study.....	10
<b>CHAPTER TWO.....</b>	<b>11</b>
<b>LITERATURE REVIEW.....</b>	<b>11</b>
2.1 Introduction.....	11
2.2 Rationale for Organizational Performance.....	11
2.3 Concept of Project Appraisal in Project Management.....	12
2.4 Economic appraisal of projects and Organizational performance.....	13
2.5 Financial Appraisal of projects and Organizational performance.....	15
2.6 Market Appraisal and Organizational Performance.....	18
2.7 Technical Appraisal and Organizational Performance.....	19
2.8 Theoretical Framework.....	20
2.8.1 Project Management Framework.....	20
2.8.2 Project Cycle Theory.....	21
2.8.3 Project Appraisal Theory.....	22

2.9 Conceptual Framework .....	23
2.10 Knowledge Gap.....	24
<b>CHAPTER THREE .....</b>	<b>25</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>25</b>
3.1 Introduction .....	25
3.2 Research Design.....	25
3.3 Target Population .....	26
3.4 The Sample Size and Sampling Procedure .....	27
3.4.1 The Sample size.....	27
3.4.2 Sampling Procedure.....	28
3.5 Instruments used for Data Collection.....	28
3.5.1 Pilot Testing of the Instruments.....	29
3.5.2 Validity of the Instrument.....	29
3.5.3 Reliability of the Instrument.....	30
3.6 Data Collection Methods.....	30
3.7 Data Analysis Techniques .....	31
3.8 Operational definition of variables.....	31
3.9 Ethical Considerations.....	35
<b>CHAPTER FOUR.....</b>	<b>36</b>
<b>DATA ANALYSIS, PRESENTATION AND INTERPRETATION .....</b>	<b>36</b>
4.1 Introduction .....	36
4.2 Questionnaire Return Rate .....	36
4.3 Demographic data .....	36
4.3.1 Distribution of Respondents by Gender .....	36
4.3.2 Distribution of Respondents by Age .....	37
4.3.3 Distribution of Respondents by Level of Academic Qualification .....	38
4.3.4 Distribution of Respondents by Departments .....	38
4.3.5 Distribution of Respondents by Level of Management .....	39
4.4 Project Appraisal Approaches in the Organization .....	39
4.4.1 Financial Appraisal Approaches and its Influence on Performance .....	40
4.4.2 Economic Appraisal Approaches and its Influence on Performance .....	43
4.4.3 Market Appraisal Approaches and its Influence on Performance.....	46
4.4.4 Technical Appraisal Approaches and its Influence on Performance .....	49

4.4.5 Combination of the four appraisal approaches and its Influence on Performance.....	52
4.5 Regression and Correlation Analysis .....	53
4.6 Performance Indicators used in the organization .....	54
<b>CHAPTER FIVE .....</b>	<b>56</b>
<b>SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>56</b>
5.1 Introduction .....	56
5.2 Summary of Findings .....	56
5.2.1 Economic Appraisal Approaches and Organizational Performance .....	56
5.2.2 Market Appraisal Approaches and Organizational Performance.....	57
5.2.3 Financial Appraisal Approaches and Organizational Performance .....	57
5.2.4 Technical Appraisal Approaches and Organizational Performance .....	58
5.3 Discussion of Findings .....	58
5.4 Conclusion of the Study .....	63
5.5 Recommendations .....	64
5.6 Suggestion for future studies.....	65
<b>REFERENCES.....</b>	<b>67</b>
<b>APPENDICES.....</b>	<b>74</b>
<b>Appendix I: Introductory Letter .....</b>	<b>74</b>
<b>Appendix II: Consent Form.....</b>	<b>75</b>
<b>Appendix III: Questionnaires .....</b>	<b>76</b>
<b>Appendix IV: Data Collection Approval .....</b>	<b>84</b>

## LIST OF TABLES

Table 3.1: Target Population.....	26
Table 3.2: Sample Size .....	28
Table 3.3: Operationalization of the Variables1 .....	32
Table 4.1: Number of respondents by Gender .....	37
Table 4.2: Distribution of respondents by Age .....	37
Table 4.3: Level of Academic Qualification.....	38
Table 4.4: Department Categories .....	38
Table 4.5: Management Level .....	39
Table 4.6: Use of Financial Appraisal Approaches .....	40
Table 4.7: Extent of Use of Financial Appraisal Approaches .....	40
Table 4.8: Frequency of using Financial Appraisal Techniques.....	41
Table 4.9: Influence of Financial Appraisal Approaches on Performance .....	42
Table 4.10: Extent of Use of Economic Appraisal Approaches .....	43
Table 4.11: Frequency of using Economic Appraisal Techniques .....	44
Table 4.12: Influence of Economic Appraisal Approaches on Performance.....	45
Table 4.13: Use of Market Appraisal Approaches.....	46
Table 4.14: Extent of Using of Market Appraisal Approaches .....	46
Table 4.15: Frequency of using Market Appraisal Techniques.....	47
Table 4.16: Influence of Market Appraisal Approaches on Performance .....	48
Table 4.17: Extent of Using of Technical Appraisal Approaches .....	49
Table 4.18: Frequency of using Technical Appraisal Techniques.....	50
Table 4.19: Influence of Technical Appraisal Approaches on Performance .....	51
Table 4.20: Influence of Combination of the four appraisal approaches (financial, economic, market & technical) on Performance .....	52
Table 4.21: Performance Indicators used in the organization.....	54



**LIST OF FIGURES**

Figure 1: Conceptual Framework .....23

## **LIST OF ABBREVIATIONS AND ACRONYMS**

<b>AKUH</b>	-	Aga Khan University Hospital
<b>ANOVA</b>	-	Analysis of Variance
<b>IRR</b>	-	Internal rate of return
<b>NPV</b>	-	Net Present Value
<b>WHO</b>	-	World Health Organization
<b>GDP</b>	-	Gross Domestic Product
<b>OECD</b>	-	Organization for Economic Development
<b>MOH</b>	-	Ministry of Health
<b>IFC</b>	-	International Finance Corporation
<b>PMI</b>	-	Project Management Institute
<b>ROI</b>	-	Return on Investment
<b>CBA</b>	-	Cost Benefit Analysis
<b>CEA</b>	-	Cost Effectiveness Analysis
<b>CUA</b>	-	Cost Utility Analysis
<b>QALY</b>	-	Quality Adjusted Life Years
<b>DALY</b>	-	Disability Adjusted Life Years
<b>OMB</b>	-	Office of Management and Budget
<b>PI</b>	-	Profitability Index

## ABSTRACT

The role of project appraisal in the selection of the projects that an organization wishes to implement is very critical in order to determine if a project is worthy to be implemented. The link between project appraisal and performance of the project can therefore be said to be strong in pursuit of overall organizational performance. Project appraisal has been seen to take a central stage in any project cycle in order to establish the viability of the project with regards to its technical, market, institutional, financial and economic value in the organization. Ultimately, organizations want to receive good value for the funds it invests whilst meeting its objectives and reason for existence. Healthcare organizations are now increasingly becoming conscious that in order to remain competitive, careful selection and management of projects must be paramount. The study therefore aimed to determine the influence of project appraisal approaches on the performance of an organization with a distinct focus on a private teaching and referral healthcare institution. The study had four objectives: establish how economic appraisal approach influences the organizational performance, determine the extent to which financial appraisal approach influences the organizational performance, to assess how market appraisal approach influences the organizational performance and determine how the technical appraisal approach influences the organizational performance. The study was aimed at highlighting the benefits of using the holistic project appraisal approach in order to maximise organizational performance. This research study adopted a descriptive survey design in order to determine the influence of project appraisal approaches on the organizational performance of Aga Khan University Hospital in Kenya. The population of this study was 125 participants that were drawn from the management levels of Aga Khan University Hospital. Using Yamane's formula of sample determination, 95 respondents formed the sample size and the selection from the population was done through stratified random sampling. A total of 70 respondents completed the questionnaires which represented a response rate of 74%. Of these, 19 respondents were incomplete and therefore could not be considered for analysis. This left only 51 responses that could be considered for analysis which represented 54% of the total sample. The primary data for this study was collected using a self-administered questionnaire that was sent out to the respondents. The collected data was analysed by using descriptive statistics, multiple regression and inferential analysis through the statistical package for social science (SPSS). The findings revealed that 70.1% of the organizational performance could be accounted for by the use of the four project appraisal approaches- economic, financial, market and technical appraisal approaches. This finding therefore showed that there exists a positive relationship between the study variables. The findings revealed that project appraisal approaches would be beneficial to the organization in screening projects that would be the best fit for implementation and therefore achieving the desired performance and meeting its overall objectives. Further studies recommended included an in-depth analysis on the factors that influence the performance of projects in the healthcare set up may be conducted. This would give greater insights on the subsequent performance of the organization as a result of sustained success of individual or a group of projects. Further research on the determinants of organizational performance with specific focus on healthcare organizations may be conducted. This is because most healthcare organizations provide essential services without consideration for making profits or surpluses yet they require meet their expenses and surpass these expenses for future sustainability provision as well as expansion of services.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

In the global outlook today, organizations such as state agencies, corporate and not for profit organizations are increasingly aware of their very existence with regards to their mission, vision and objectives. In this context, delivery of products and services must be aligned to the organizational goals and objectives. Projects and programs instituted by these organizations are to be assessed to ascertain the progress made and whether they are aligned to the mission and the overall organizational objectives. Recent international studies have revealed the significance value organizations can derive from the projects they implement (Thomas & Mullaly, 2009). Organizations would like to receive good value for the funds it invests whilst meeting its objectives and reason for existence.

According to Dinsmore & Cooke-Davies, (2005), project management became the standard way of doing businesses in organizations. Organizations achieved their mandate and activities through projects that they instituted and projects therefore became tools of implementing business strategy of organisations. Ideally, each and every project in an organisation should be able to contribute to its strategic plan and should accomplish the set objectives of the organization. There has been a need to integrate projects within the strategic plan for accomplishment of the mission, vision and objectives of the organization. The integration of projects requires a process of prioritising the projects with their contribution to the strategic plan. It therefore follows that organizations have to identify a strategy that will maximise the achievement of its strategic plans, goals and objectives.

Project appraisals are necessary for the determination of the projects to be selected and implemented in an organization (Burg, 2012). In organizations, many are the competing issues in allocation of resources, the balance between different projects and the impacts of these projects and programmes on the company's performance. Project appraisal approaches may assist the organization in making decisions that may achieve a more efficient level of allocating resources in the organization. Project Appraisal has been described as a process in which review of different projects and their evaluation of their content to approve or reject the project is carried out by analysing the need to be addressed by the project. Thereafter, solutions are generated with options to address the problem and selection of the most practical option is done. According to Ribeiro, (2011) ,one also conducts a feasibility study of

those options, create a solution statement, and identify the persons and institutions that are concerned with the project and its anticipated outcomes. This can be said to be an endeavour to defend the project by carrying out studies that is a concerted way to determine a project's feasibility. Project appraisal has also been defined as an elaborate method of measuring and interrogating proposals before committing the organisation's resources. Burg, (2012) points out that project appraisal was an essential tool for effective determination of projects to be executed. This meant that organizations and communities could choose the best projects to help them achieve their mission, vision and objectives. Project appraisal management has been described as an integral phase of a project cycle, notwithstanding the size, type or its nature (Khatua, 2011). It has also been a widely held view that project appraisal is oriented towards the assessment of the project and if it can be worthy or not for the management to proceed with it. The main purpose of the appraisal stage in the cycle was to establish the viability of the project with regards to its technical, market, institutional, financial and economic value in the organization (McConnel, 2011).

Aligning an organization's projects and programs to get the most out of their benefits to its objectives takes a concerted effort (American Management Association, 2016). In many instances companies have a significant number of projects underway. These include projects to transform the operations of the organization, continuous improvement programs and expansions, upgrading or replacement of equipment, maintenance works, staff restructuring and resizing, outsourcing, and quality-of-life projects. Given that projects have been said to be the way in which organizational strategies are executed, it follows that it is critical for the benefits of investing in these projects be demonstrated and they are channelled by the organization's strategy, its corporate philosophy and management intention to implement them.

Organizational performance can be described as the actual outcomes of an organization as rated against its anticipated outcomes as well as the goals and objectives of the institution (Bedanand, Munir, & Blount, 2014). A well-crafted performance management program can potentially address performance of an individual or that of an organization necessary to establish a sustainable and effective results-oriented culture thereby increasing overall organizational effectiveness. The creation of an effective and a results-oriented organization requires linkage of the strategic plan with annual goals and objectives in order to derive maximum performance against planned activities and projects. Organizational performance is

important in assessing the delivery services against the goals and objectives of the organization.

Access to healthcare can vary across regions, countries and communities and is said to be generally inclined by socio-economic circumstances in addition to the health policies and practices. Countries can have diverse policies as well as structures in relation to their health care goals within their societies. Healthcare budgets for various nations make up a significant part in their national wide budgets. This can be directly linked to the fact that countries would like to provide healthcare services to its citizens in order attain universal healthcare coverage (World Bank, 2016). In 2013, the health care industry is said to have spent approximately 8.9 % (excluding investment) and 9.3% (including investment) of the gross domestic product (GDP) across the 34 members of the Organization for Economic Development (OECD) countries (OECD, 2015). In 2013, it was reported that the United States spent approximately 16.4% of its GDP on healthcare, which was significantly above the OECD average as well as above the other developed countries in the west including Germany, France, United Kingdom and the Scandinavian countries. Most of the OECD countries spend between 8 and 10% of GDP on healthcare service provision (OECD, 2015). OECD reports that most of the member countries have achieved universal health coverage (OECD, 2015).

According to a report by KPMG (2012), it observed that in Africa some governments are able to afford provision of good healthcare. Taking an example of Equatorial Guinea which is very rich in natural resources and is well-known for its oil and natural gas mining, generally the government health expenditure accounted for 76% of total healthcare spending in the country. This meant that the country's total health expenditure per capita per annum was at the highest level of any country on the African continent, at \$897 (KPMG, 2012). The report indicated that the situation was similar in Botswana and Libya. KPMG (2012) further noted that the model was worse off in poorer countries such as Mozambique, where even though government expenditure represented 72% of all spending on healthcare, the per capita annual spending on health barely exceeded \$20. This scenario according to KPMG was extremely low given that WHO expects an amount of approximately \$34 per person per year as the least amount required for allocation to provide a country's inhabitants with basic healthcare provision (WHO, 2015).

In the recent past and progressively, Kenya has been recognised as the gateway and the economic epicentre in East Africa. However, it has been said that most of its citizens have

limited access to quality healthcare as well as responsive social security. In 2010, the republic of Kenya passed a new constitution which outlines a structure to alleviate poverty, by improving governance and addressing inequities and inequalities in health, education, and economic growth. This constitution created a new reorganised and restructured mode of decentralised and devolved governance with two levels of elected government at national and county levels. Healthcare is now one of the services that have been devolved to the counties with the national government only retaining the national hospitals such as Kenyatta National Hospital. In Kenya, the per capita annual spending in healthcare in 2012 was \$65 (KPMG, 2012). This has continued to rise with the new constitution decentralising power from central government to county governments. As a result, the per capita annual spending on healthcare rose to \$78 in 2014 (WHO, 2015). The central government in close collaboration with the county governments launched a policy paper known as “The Kenya Health Policy 2014-2030” whose main aim is ‘to attain the highest possible health standards in a manner responsive to the population needs’ by targeting distribution of health at a level corresponding to that of a middle income country (MOH, 2014). It has commonly been assumed that a growing urban middle class is prepared to pay for better healthcare services (World Bank, 2016). This has opened the way for the private sector, which has begun to play a new part, frequently working in association with donors and governments to deliver better healthcare facilities and expanded access to medical services at a reasonable cost. The World Bank projects that the growth of private healthcare will carry on into the near future which will offer attractive opportunities to investors and governments. The World Bank’s International Finance Corporation (IFC) estimates that \$25bn to \$30bn could be invested in Africa’s healthcare infrastructure in the coming years with an estimated \$20bn of that potentially coming from the private sector (World Bank, 2016)

As healthcare organizations continue to grow with competing need for resources and quality service delivery, the compelling case for project management has become more ostensible. The grasp and application of the basics and tenets of a holistic project appraisal approach can be said to meaningfully improve the outcomes across healthcare delivery (Schwalbe & Furlong, 2013). In a healthcare organization, many diverse projects can be initiated. Some of the potential projects include quality, safety, or patient experience project, health records management project, facilities upgrading projects, construction projects, revenue cycle management or cost streamlining projects (Francesco, Giulio, & Fabio, 2015). Whatever it is, when composed in a health care setting, one cannot rely exclusively on classic financial

appraisal methodology to screen the projects in order to produce the organization's anticipated results, reason being that health care projects must always balance the interests of the patient with those of the organization (Schwalbe & Furlong, 2013). Patients demand faster service, but of highest standards of quality whilst management look for higher numbers in terms of volumes and profitability. This diverse yet unique situation requires project management skills that are special with different appraisal approaches employed. Patient quality has been said to be a key concern in the healthcare sector. Most healthcare projects are done to improve or deal with a health concerns amongst the communities. It has been observed that providers of healthcare trust they are making the best decision for patients, yet new innovations frequently change patient care (Aubry et al., 2014).

The healthcare sector has carried out projects for a long time, but not certainly using formal project appraisal techniques to vet the projects it chooses to implement (Gammie, Vogler, & Babar, 2016). Healthcare organizations have realized that in order to remain competitive, they must develop skills that are to be effectively used to select and manage the projects they undertake (Schwalbe & Furlong, 2013). Healthcare organizations are also apprehending that they need to gain and learn from different segments of other industries and utilise demonstrated practices to recognise and manage the many projects they face today and in the future.

The Aga Khan University Hospital (AKUH) has invested heavily in various programs but the performance still faces shortfalls (AKU, 2016). The organization purports to use the project appraisal approaches to determine the projects it will select. The extent to which managers and their respective departments employ the project appraisal approaches needs to be established to ascertain how it affects organizational performance. Aubry et al., (2014) argue that for a university hospital, it was imperative to use all appraisal techniques in the determination of the projects to be selected for implementation. They observed that given the nature of essential services of health that such an organization offers, by merely assessing and considering projects based on financial criterion, such organizations risk missing the big picture of the importance and impact of the service it offers to the communities.

## **1.2 Statement of the Problem**

In spite of the benefits that accrue to an organization in executing projects that are within its business mandate in an environment that links strategy and objectives, the achievement of better performance, customer satisfaction, market growth and better financial results depends



largely on project identification and appraisal (Kavadias & Loch, 2012). Larson, Honig, Gray, Baccarini, & Dantin, (2013) have pointed out that all organizations aspire to succeed in what they do. However, they continue to note that organizations can fail to achieve their objectives if the projects that they initiate do not have a water tight selection mechanism that identifies the best projects to implement and those that will ultimately lead to the achievement of the goals and objectives of the organization. Almeida & Duarte, (2011) in their journal article suggested that organizations aspiring to achieve their objectives and exceed stakeholders expectations must initiate project appraisal approaches in order to assess the projects that would best fit the organizational strategy to achieve its objectives.

At the Aga Khan University Hospital, more than a dozen projects have been initiated and implemented in the last five years albeit with undesirable outcomes and in some cases, projects not achieving their objectives. The organization has been grappling to identify the reasons for this mishap. Projects at the selection stage appear not to have been fully assessed and dissected to establish if they are suitable to be undertaken. The subsequent result has been unfavourable performance in terms of volume growth, surplus margins and customer satisfaction in a couple of departments and ultimately at the overall level of the organization (AKU, 2016). At the end of it all, the organization feels that no value for resources has been achieved. This is a status that the organization cannot afford to behold if the mission, vision and objectives of the organization are to be achieved.

It was at the backdrop of these that the study sought to establish the use of project appraisal approaches in determining and selecting the potential projects of the organization. The study focused on establishing the influence of project appraisal techniques that could contribute to the successful implementation of projects in a private teaching and referral healthcare institution in order to achieve good financial results, volume growth, customer satisfaction and a sustainable performance.

### **1.3 Purpose of the Study**

The main aim of this study was to build up a case of how implementation of project appraisal approaches influences the performance of an organization with a distinct focus on a private teaching and referral healthcare institution.

### **1.4 Research Objectives**

This research study was guided by the following objectives;

1. To establish how economic appraisal approach influences the organizational performance.
2. To determine how the financial appraisal approach influences the organizational performance.
3. To assess how market appraisal approach influences the organizational performance.
4. To determine how the technical appraisal approach influences the organizational performance.

### **1.5 Research Questions**

The following are the broad research questions that were addressed;

1. How does the economic appraisal of projects influence the organizational performance?
2. To what extent does the financial appraisal of projects influence the organizational performance?
3. How does the use of market appraisal approach influence the organizational performance?
4. To what extent does the use of technical appraisal approach on the projects influence the organizational performance?

### **1.6 Significance of the Study**

This research study was intended towards highlighting the benefits of using the holistic project appraisal approach in executing the organization's strategies with regards to its portfolio, programs and projects in enhancing its performance in the private health sector. There are considerable lessons to learn on the adaptability of the various appraisal approaches on projects identified in the organization. The findings may be beneficial in directing the implementation of the organization's strategies and how projects are selected, grouped and executed to achieve the overall objectives of the hospital. This research may contribute towards adding new knowledge in the context of project management with regards to achieving project effectiveness and efficiency as well as project deliverables in the health sector.

In addition, this research attempted to demystify non-financial appraisal techniques in the healthcare context and explored ways in which management and professionals in healthcare

can improve the rate of success for their projects. This means that new screening, selection models and tools for projects could be developed by organizations in form of the knowledge that will be generated by this research. This could in turn contribute to literature and also form a basis for future conversations, deliberations and research in the area.

### **1.7 Delimitations of the Study**

The study concentrated on determining the influence of project appraisal approaches in the implementation of the organization's projects. The research was conducted in Aga Khan University Hospital in Kenya. The hospital has relatively large projects and therefore it provided an ideal ground for studying how organizational project appraisal techniques can enhance performance of the organization's projects and subsequent delivery of quality services. In this study, the influence of project appraisal and screening in aligning projects with organizational objectives was examined. Information was sought from key resource persons involved in the appraisal and screening of projects which was used in this research. A questionnaire was developed and was for purposes of collecting data and analysis of the collected data.

### **1.8 Limitations of the Study**

The project appraisal techniques may not be applicable to all projects in the organization. This was because some of the projects implemented such as infection control projects and staff immunization projects are essential and cannot be restricted to the guidelines of the appraisal criteria given that the organization was a healthcare institution offering a sensitive and critical service to human life. This study therefore did not assess these projects since they would not contribute to any objective assessment of projects implemented.

This study also had a few challenges. The main challenge was in the collection of data. This is because of time limitations with the key resource persons as most of them are in the senior leadership team and had competing interests. This was overcome by scheduling appointments early with the respective persons. The researcher also kept with the calendar timings that were given by the resource persons.

Another challenge was from respondents who have participated in the organization's projects on their willingness to share the information sought. This was due to the fact that the organization runs and enforces a strict information sharing policy with regards to confidentiality which the respondents were concerned of. This challenge was overcome by

seeking the approval of the chief information officer's office and a non-disclosure form was developed to allay any information leakage and fears.

### **1.9 Basic assumptions of the Study**

The research was conducted on the assumption that project appraisal approaches are geared towards identifying the right projects enhancing agile organizational performance and thus accomplishing the mission, vision and objectives of the organization. It was assumed that respondents were aware of this notion and that they actively used the project appraisal approaches to screen and select the potential projects identified by the organization. The researcher also assumed that respondents answered questions truthfully and correctly without prejudice.

### **1.10 Definitions of Significant Terms**

There are technical and operational terms that have been used in this study. The value of defining these terms was to preserve uniformity in the meaning implied and alleviate ambiguity. The definitions are as itemized below;

**Economic Appraisal Approaches:** This is a decision criterion that is employed in a project by taking into account the range of costs and benefits, denominated in financial terms for which a monetary value can be predicted.

**Financial Appraisal Approaches:** This is a method used to measure and calculate the viability of a proposed project in terms of it being feasible and tenable by assessing the value of net cash flows and the financial gains that could potentially result from its implementation.

**Market Appraisal Approaches:** This is an application of forecasting techniques to the market factors that may influence the demand for a product or service identified as a market opportunity.

**Organizational Performance:** An analysis of a company's performance in relation to financial performance, increased productivity, customer satisfaction and competitive advantage as compared to its strategic goals and objectives.

**Project Appraisal Approaches:** This is defined as a methodology used to assess a proposed project's probable accomplishment and viability to justify its execution. These methods include economic appraisal, financial appraisal, market analysis and technical appraisal

which all check the appropriateness of a project considering things such as available funds and the economic climate.

**Technical Appraisal Approaches:** This is an assessment of inputs, infrastructure, capacity and human resources required for a product or service offering.

### **1.11 Organization of the study**

This report has been ordered in five chapters. The first chapter contains the background of the study undertaken, the problem statement the study is attempting to address, purpose of undertaking the study, the research objectives, the research questions that the study was seeking to address, delimitations and limitations of the study, basic assumptions of the study and definitions of significant terms. Chapter two gives a literature review of the study with theoretical and conceptual framework. The third chapter covers the research methodology which includes the research design, the target population of the study, the sampling procedure used in the research, the research instrument used for collecting data. Also covered in this chapter is the instrument's validity and reliability, the data collection procedures and data analysis techniques. The fourth chapter presents the data analysed and the interpretation of this data. To sum up, chapter five presents the summary of findings from the data collected and analysed, a broad discussion of these findings, conclusion of the study and key recommendations emanating from the results of the study undertaken.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The chapter covers contribution from other researchers and scholars on the justification of organizational performance, the concept of project appraisal in managing projects and adapting project appraisal approaches in a healthcare organization. The chapter has been organised into theoretical and empirical review, conceptual framework and a summary with review of literature and research gaps that the study targets to link.

#### **2.2 Rationale for Organizational Performance**

Organizations are formed for varied purposes that include attaining the set objectives of stakeholders who form them, an association of persons or a segment of the market. They could also be formed to interact or utilize collective capabilities. For profits organizations are formed to engage in activities which maximize profits while community-based organizations are formed to deliver empowerment to its members and the society as well (Bedanand et al., 2014). Organizations such as faith-based organizations could be formed to offer spiritual nourishment to the community while organizations such as human rights activist groups may exist to defend the rights of the public. Bedanand et al., (2014) notes that all these organizations have one thing in common: they are formed to achieve a particular mission. They also have a long term vision where they see themselves in future but most importantly they have goals and objectives that they set to get there.

It is therefore very important for organizations to perform and attain their aspirations of why they began. Progressively more, organizations are becoming concerned in finding out how best they are meeting the customers' needs, acclimatising to changes in the organization's external and internal environments, identify the organization's added-value or position in the competitive global environment and identify as well as address the risks and challenges which may potentially affect the organization's future efficacy, sustainability, and relevance (Winston, Stevens, Sherwood, & Dunn, 2013). These are the core pillars of performance that any organization must aim at achieving. Missoni & Alesani (2013), states that organizational performance can be achieved through its strategies, adaptive leadership, evidence-based practices and resource capacity. They further observed that strategies shape the optimal methods to achieving the organization's long-term impact while adaptive leadership encourages innovation. Evidence based practice helps an organization to make decisions

based on data and not intuition and the resource capacity enables it to function effectively and efficiently. The evidence based practice is a central link in project appraisal and therefore cannot be ignored by organizations in its pursuit of performance. It is this link that the study attempted to examine and how it enables an organization to perform highly.

Organizational performance entails increased growth and productivity, satisfied customers who are retained by the organization, a vibrant financial performance and most importantly the sustainability of performance in the long run. Bedanand et al., (2014), pointed out that customer satisfaction causes an organization to retain its customers whilst increasing growth and productivity which results in financial gains for the organization. Ultimately, an organization that maintains this model was able to have a sustainable performance.

### **2.3 Concept of Project Appraisal in Project Management**

Project management has been hailed as one of the most monumental and auspicious skills in recent and current times because of how organizations and management can use it to help in controlling costs, reducing the probable risks and improving set outcomes (Aubry et al., 2014). Project management has been defined as the activities involving the planning, organizing, and executing of a pre-established set of steps in order to maximize the use of resources and achieve specific objectives (PMI, 2013). The Project Management Institute (PMI), an organization created in 1969 to promote the discipline of project management, acclaims the process with helping businesses to save time and money, improve their Return on Investment (ROI) and reduce risk. It also highlights many benefits to an organization's staff members including improved collaboration and decreased stress as a result of teamwork.

When deciding which projects an organization intends to implement, an organization must institute an appraisal of the potential project to make sure the project was actually effective and that it supports the right solution and solves the problem that hampers the organization's performance. In this context, project appraisal management serves as the major process of analysing and approving the project. According to Harris (2012), projects to be implemented must undergo screening to determine their viability before being implemented. He further noted that by using the more common financial appraisal and ignoring non-financial criteria, organizations were bound to implement projects that are not aligned to their mission, vision and objectives. The organizations was also bound to experience market and competition risks, socio-economic risks as well as technical risks that may affect its performance, specifically in

growth aspects, customer satisfaction and sustainable competitive advantage (Almeida & Duarte, 2011).

## **2.4 Economic appraisal of projects and Organizational performance**

Economic appraisal can be defined as a judgmental technique that may be applied to a project, program or policy by taking into account its costs and benefits that are denominated in monetary terms or which a comparable monetary value can be estimated (Sloan & Hsieh, 2012). A more technical explanation was given by Rima (2012), who observed that economic appraisal as a logical process that examines alternative use of funds and resources assessing the needs, the objectives, the options, the costs, the benefits, the risks, the funding, the affordability and other factors relevant for decision making. Economic analysis aims to assess the desirability of a project from the societal perspective. The rationale behind economic appraisal was to analytically explore the justification for a project, its objectives, costs and benefits so as to find out if the project in was affordable and represented good value for money, given the risks involved (Lorna & Virginia, 2011). This type of appraisal differed from financial appraisal since financial appraisal is generally done from the perspective of a particular stakeholder such as an investor, a lender or a government agency (Burg, 2012). There are three methods employed in economic appraisal approach. These methods are; cost-benefit analysis (CBA), cost-effectiveness analysis (CEA) and cost-utility analysis (CUA) (Rima, 2012).

The norm of cost benefit analysis is used to gauge whether or not the social and economic benefits linked with a project are greater than its social and economic costs (Burg, 2012). All the pertinent costs and benefits are considered in evaluating the project cash flows, based on market prices of costs and benefits. Drummond et al (2015), observed that an activity should be accepted if the sum of the benefits was greater than the sum of the costs or if the net benefit was positive. Glied & Smith (2011) stressed that if only one single activity with a positive net benefit could be embarked on because there were limited funds, then the rule would be to choose the activity with the highest net benefit. CBA is highly used in public organizations especially in sectors such as infrastructure, health, education and social welfare (Goeree & Diaby, 2013). The public sector has a massive range of potential uses of resources and the proficient use of funds has a significant impact on the welfare of citizens. Kangethe (2013), noted that, a cost benefit analysis undertaken to compare the benefits and costs of introducing a diabetes prevention program in rural Kenya resulted to a negative social benefit



from a societal point of view. The CBA in relation to an organization's performance suggests that there could be an influence on the financial performance of an organization depending on the project or intervention selected (Gammie et al., 2016).

Cost effective analysis originates from the analysis of economic efficiency, where an alternative would be ideal if it provides greater benefit at similar or lower cost, or for greater benefit (Donaldson, Currie, & Mitton, 2002). Cost effective analysis measures the cash outflows but considers benefits in units rather than cash inflows (Glied & Smith, 2011). According to Kromm et al., (2012) cost effectiveness was concerned with the comparative costs of the a number of alternatives offered for achieving a certain objective and therefore would assist in the resolve of the least cost way of determining project to go for. The consequence of this was that costs and benefits were not weighed against each other. Drummond et al., (2015), observed that cost effective analysis was applicable when both the costs and benefits of the alternatives differed from each other. The author noted that one would ordinarily reject any alternative that was dominated by another alternative. This according to Ryder et al., (2009) in strictly observed was economic efficiency where the dominated substitute had a greater cost with no greater benefits or lower benefits with no lesser costs. Barasa & English (2011), argued that reallocation of 50% of the health budget from interventions which are less cost effective to those that are more cost effective could result in a 64% increase in years of lives saved in the East African region. CEA is believed to be most applicable to healthcare, scientific and educational projects where benefits can be difficult to evaluate (Rima, 2012). Many scholars therefore reported that cost effectiveness analysis was a potential indicator of an organizational performance with regards to community and customer satisfaction.

Cost utility analysis measures the relative effectiveness of alternative interventions in achieving two or more objectives (Lorna & Virginia, 2011). In a cost utility analysis, costs are expressed in monetary terms and benefits are expressed in utility terms (Gammie et al., 2016). The benefits are measured in terms of Quality-Adjusted-Life-Years (QALYs) and disability-adjusted life years (DALYs) (Barasa & English, 2011). The QALY is a measure of health outcomes which takes into consideration the combination of quantity and quality of life (Sassi, 2006). The DALY on the other hand is a measure that is derived by adding the years of life lost because of disease and the years of life lived with disability (Fox-Rushby & Hanson, 2001). QALYs and DALYs are therefore said to be composite measures of health outcomes (mortality and morbidity) which are preferred measures in economic evaluations

because of their comparability across interventions (Glied & Smith, 2011). CUA has been used only within the health care sector where health care costs are compared with the benefits of health interventions without necessarily placing a monetary value on health (Sloan & Hsieh, 2012). In Ghana, Dagbah (2012), observed that the antiretroviral treatment was more cost effective than the herbal medicine treatment given the QALY factor was below cost of production and treatment plan as compared to the benefits derived from more quality adjusted life years (QALY). Donaldson et al., (2002) hence observed that CUA could be assessed with regards to its effect on the customers' satisfaction seeking medical services in a healthcare facility.

Various scholars have however argued against the application of economic appraisal approaches in selecting projects. According to Mbothu (2012), using cost utility analysis mixed the use of monetary units in evaluating costs but benefits that were expressed in utility terms had a potential bias and subjectivity on the project measurement. He argued that financial appraisal was the only sure way of determining whether the project was viable or not. Savvides (1990) also argued that if projects were not assessed with regards to their market demand, then the cost benefit appraisal was most likely going to produce undesirable effects if the project was rejected by the market.

## **2.5 Financial Appraisal of projects and Organizational performance**

The financial analysis of a project helps to determine the financial viability and sustainability of the project. A financial appraisal can be said to be measureable but it can only be applied to benefits that produce financial returns (Burg, 2012).

The most simple financial appraisal technique is known as the payback method. The payback period is defined as the time it takes for net cash inflow and the net cash outflows to equal the cash investment in a project or investment (Brealey, et al., 2011). It is the period of time required to recoup the funds spent in an investment, or to reach the break-even point (Higgins, 2015). The payback period is expressed in years or yearly fractions such as months. The payback period is calculated by aggregating the yearly cash inflows and cash outflows of a project and comparing this with the initial investment to estimate how long the project will take to recover the initial investment (Cimasi, 2014). The payback period however does not consider the time value of money when applied to a set of cashflows. In fact, the time value of money is completely disregarded in the payback method and the cashflows are summed up to determine the point at which they become neutral or positive. The time value of money is

the idea that cash in hand today would be worth more than it would be in the future because it may be invested immediately and make some earnings due to that investment (Baker & Powell, 2009). Harris & Mongiello (2012) noted that, if one would pay an investor tomorrow, then the payment or the return it would ordinarily include the opportunity cost consideration for that period the investor has parted with his funds. The time value of money can therefore be described as a concept that therefore assigns a monetary value to this opportunity cost.

The other financial measures are more reliable as compared to the payback period method since they account for the time value of money (Baker & English, 2011). These measures include discounted cash flow method which measures the expected future cash flows to arrive at a present value and if the value is higher than the current cost of the project, then the opportunity was considered to be a good one (Baker & Powell, 2009). The discounted cash flow analysis uses future free cash flow projections and discounts them to arrive at a present value estimate, which is used to evaluate the potential for investment (Brealey et al., 2011).

The most common of the discounted cash flow techniques is known as the net present value (NPV) which is used to calculate the present value of cash flows associated with an investment and goes a step further to deduct these cash flows with the initial cost (Cimasi, 2014); the higher the NPV the better. This calculation uses a discount rate to show how the value of money decreases with time. A fundamental issue that is often quite contentious is the discount rate that is to be used when carrying out the cash flow analysis (Stoudt, 2013). In the private sector, many firms use their own cost of capital or weighted average cost of capital as the preferred discount rate (Baker & Powell, 2009). Government bodies typically prescribe a discount rate for use in the organization's planning and decision support calculations. In the United States, for instance, Brealey et al., (2011) noted that the Office of Management and Budget (OMB) published a quarterly circular with prescribed discount rates for Federal Government use. In Kenya, commercial banks continue to use the treasury bill rates as the discount rate since this is the risk free rate of putting their funds (Maingi, 2011). Mbothu (2012), noted that the adoption of capital budgeting practices such as the NPV in private hospitals in Nairobi County enhanced financial performance.

The Internal rate of return (IRR) is also a common measure which presents the discount rate that makes the present value of all future cash flow equal to the initial investment or, in other words, the rate at which an investment breaks even (Brealey et al., 2011). Where a project has a higher internal rate of return, then the management finds it more desirable it is to embark on

the project. According to Morris, Pinto, & Söderlund (2012), in ranking projects that are relatively even, the IRR could be used to consider the project with the highest rate since that project shows a potential of generating higher returns over time as compared to the others. IRR can also be compared against prevailing rates of return in the stock market. If an organization cannot find any projects with IRR that is greater than the returns that can be generated in the financial markets, then it may decide to choose and invest its money into the market (Baker & Powell, 2009). IRR however must be used carefully as it may misguide one in judging the project to be selected during an appraisal. Dayananda (2002) noted that a project may have a low IRR but a high NPV, meaning that while the pace at which the company sees returns on that project may be slow, the project may also be adding a higher monetary value to the company. Stoudt (2013) thus recommended that an organization should use both IRR and NPV valuations simultaneously to safeguard this anomaly.

Profitability Index (PI) is another common technique in financial appraisal and it denotes the present value of future cash flows of a project in relation to initial investment required for the project (Harris & Mongiello, 2012). A profitability index of “1” signifies a breakeven while a value lower than that shows that the project's present value is less than the initial investment. It follows that as the value of the profitability index increases, the financial allure of the proposed project is reflected and the desire to invest in such a project increases (Carayannis, Kwak, & Anbari, 2005). Combining the PI valuation with the NPV and IRR methods yields an even better appraisal as it covers the ranking of potential projects in a more precise manner (Baker & Powell, 2009).

These financial appraisal approaches have been used to evaluate numerous projects in public and private sectors (Ribeiro, 2011). Cimasi, (2014) noted that the financial appraisal of health enterprises played a central role in determining which projects to invest in given the competing interest of the heavily capital intensive projects. Stoudt (2013) had a similar observation and proposed that healthcare leaders should evaluate the financial impact of a project and consider alternative delivery methods before launching any project. Obuya (2008) observed that fiscal decentralisation of devolved funds under the constituency development fund (CDF) had promoted allocation efficiency and equity but at a cost of exporting operations and maintenance costs to the central government emanating from capital projects implemented at the local level without proper expenditure-benefit structure.

However, diverse contributions were noted from other scholars. According to Almeida & Duarte (2011), a multi-criteria decision model for selecting project portfolio with consideration being given to a new concept for synergies other than financial motivation needed to be pursued. They argued that other considerations such as quality, customer preferences and service delivery may potentially contribute to the successful performance of an organization. Dagbah (2012) also argued that if financial appraisal was to be used to evaluate public health, the communities in Ghana suffering the pandemic of HIV-Aids could not access medicine and live quality and productive lives since government would invest in industrialization and commercial ventures that have positive financial outcome.

## **2.6 Market Appraisal and Organizational Performance**

Organizations more often than not carry out market and demand studies for their product or services to ascertain if they are suitable and respond to the market needs (Mooi & Sarstedt, 2011). Market appraisal can be defined as the assessment of a market that identifies and assesses the size of the market in volume and value, the various customer segments and their buying patterns as well as the competition and the economic environment in terms of barriers to entry and regulation (Brown & Brown, 2008).

In the context of a project appraisal, a market analysis examines the dynamics that affect projected cash flows such as sales, volumes and prices as well as the sustained market performance in order for an organization to achieve its overall objectives and reason for existence (Winston et al., 2013). In a more concise manner, Savvides (1990) suggested that an organization ought to carry out demographics and segmentation studies to assess the market size, look at the target market of your product or service and assess the needs of the market in order to confirm the suitability of the project. Further, he noted that an analysis of the competition to determine their positioning and weaknesses was necessary in order to strategize on product and service differentiation. Mooi & Sarstedt (2011) observed that barriers to entry such as technology, brand and distribution channels must be assessed as they would greatly affect the project's expected results in relation to the organization's performance. They further noted that regulatory conditions such as licences and governing legislation need to be addressed as this could affect the project's expected implementation.

In healthcare, market dynamics keep changing especially technologies used in diagnosis and treatments, pharmaceutical drugs and market trends such as laser eye surgeries or contact lenses in place of the common spectacles (Gammie et al., 2016). Savvides (1990) observed

that the essence of a project appraisal was to identify market performance gaps against which the project can position itself and develop relevant market competencies so that it can be assessed in order to be capable of out-performing competitors in meeting market expectations in a sustainable manner. Mburu (2007) noted that private healthcare institutions in Mombasa had to identify and analyse their market competitiveness to respond to not only the needs of the market but also fend off the competition which offers similar services. She further noted that in order to protect its margin and sustainable existence, regular market analysis has to be conducted in appraising the different projects that a healthcare institution intends to implement.

## **2.7 Technical Appraisal and Organizational Performance**

Technical appraisal of projects was critical in project assessment. An organization could establish the cost benefit of a project, its financial viability and market demand but if the technical acumen was missing, the project has a potential of failing (Khatua, 2011).

Technical appraisal of a project involves assessing the availability of inputs for the project, the required infrastructure and technology, the human resources required and their technical skills and abilities as well as the capacity of the organization to implement the potential project (Nagarajan, 2004). In technical appraisal of an industrial project which is more common as compared to other sectors, a profound and detailed study is conducted to ascertain if the project is designed soundly, properly engineered and follows accepted criteria and laid out standards (Boddy, 2002). Such an appraisal ordinarily attempts to determine the technical soundness of a project with regards to raw materials requirement, capacity, technology, location and human capital.

Technical appraisal of projects does not vary as such in the different sectors (Ribeiro, 2011). He notes that an educational project would have a technical appraisal that considers the curriculum (inputs), the quantity and nature of educational establishment (capacity), their physical facilities (infrastructure) and personnel required as well as the skills (human resources). Scholz, Ngoli, & Flessa (2015) in their work on assessment of infrastructure of primary health care facilities in Tanga region of Tanzania noted that the maintenance and replacement of obsolete equipment does not undergo a comprehensive technical appraisal and therefore the healthcare facilities end up with equipment that it does not have the required personnel to operate or does not require at all. Kivuva (2012) noted that the adoption of electronic management records among healthcare workers in public hospitals in Nairobi was

low due to infrastructure challenges such as internet connectivity, manpower that was not trained and non-connectivity to all points of care in the hospitals. Further he observed that technical capability of investing in the electronic medical records system was not carried out before implementing the roll out in some of the public hospitals.

## **2.8 Theoretical Framework**

A theoretical framework helps the researcher to explain and demystify why observable facts or phenomena are the way they are so that one was able to use the knowledge and understand how the various interrelated concepts affect each other (Kothari, 2004). It also enables one to understand concepts and variables according to given definitions and builds new knowledge by challenging or validating theoretical assumptions (Kumar, 2002). In this study, the theory of project management, project cycle theory and project appraisal techniques has been considered to assess the relevance of project appraisal on the overall performance of an organization.

### **2.8.1 Project Management Framework**

In the past, organizations were grouped by areas of specialization within different functional areas such as finance, marketing and production (Larson et al., 2013). Each function would then work towards achieving its roles within its mandate. Communication would generally occur within a department. If information or project work was needed from another department, a request would be conveyed up to the head of the unit or department, who would in turn communicate the said bid to the other departmental manager. Else, communication stayed within the department. Members of the unit or department would be engaged to complete project work in addition to normal department work. This management theory and practice known as functional hierarchical line management meant departments and functions worked in silos to achieve organizational objectives and hopefully the set performance standards (Larson et al., 2013).

According to Carayannis et al., (2005), project management has been practiced for thousands of years since the development of pyramids in Egypt. However, organizations started applying project management tools, techniques and concepts in the 1950's. Carayannis et al., (2005) suggests that project management in the past concentrated on providing schedule and resource data to top management in just a few industries, such as the military and construction industries. They further note that project management today is concerned with much more and personnel in every industry manage projects. Hartley, (2009), mentioned that

the use of multidisciplinary and diverse global work teams has fundamentally changed the work environment. In the ensuing years, many distinctive project management tools, techniques and concepts have been developed - particularly as the areas of application of project-based management have been proliferating so widely (PMI, 2013).

### **2.8.2 Project Cycle Theory**

Project cycle is an illustration of the various stages a project proposal must go through before it is accepted and validated for implementation (Khatua, 2011). According to Hartley (2009) project cycle management provides an overall analytical and decision making framework which an organization can employ to identify and select the projects relevant to its mission, vision and objectives. According to PMI (2013) a project life cycle is a series of phases that a project passes through from initiation to its closure. Project cycle entails a series of management activities and decision making procedures during the life cycle of a project which are necessary to fulfil project goals or objectives (Westland, 2007).

Different projects have different approaches of how many stages the project cycle should have. All projects however big or small have a similar life cycle structure that involves; commencing the project, organizing and preparing for the project, executing the project work and closing the project (PMI, 2013). In non-governmental agencies, a six stage approach was considered (Missoni & Alesani, 2013). This involves; programming where an analysis of the situation at national and sector level is carried out to identify problems, constraints and opportunities which development cooperation could address, identification stage follows whereby the ideas for projects are identified and screened for further analysis. In the formulation stage which forms the third stage, relevant project ideas are now developed into operational project plans and subsequently presented to aid agencies where they are examined by the funding agencies and a decision taken on whether or not to fund the project forming the fourth stage known as the financing stage (Missoni & Alesani, 2013). The fifth and sixth stages are implementation and evaluation phase where the project is mobilised and executed, with an assessment of the project being conducted to identify what has been achieved, and to identify lessons learned.

In other organizations, a seven step approach is adopted. This involves project identification, preparation, appraisal, presentation for approval and financing, implementation, monitoring and the last stage being evaluation upon completion of the project (Morris et al., 2012). In project identification, ideas are formulated and one project chosen and defined giving way for



preparation of the project in terms of broad outcomes expected (Khatua, 2011). In the third stage, each and every dimension of the potential project is subjected to an elaborate logical and comprehensive assessment. Thereafter, a project plan is prepared for presentation to management for approval and funding (Burg, 2012). With the necessary approvals in place, the project is implemented and during the implementation monitoring and constant review of the progress of the project assessed against the original proposal. Upon completion of the project, a re-assessment of the performance and efficiency of the concluded project is conducted in order to determine the lessons learned and the improvement for future projects (Ribeiro, 2011).

### **2.8.3 Project Appraisal Theory**

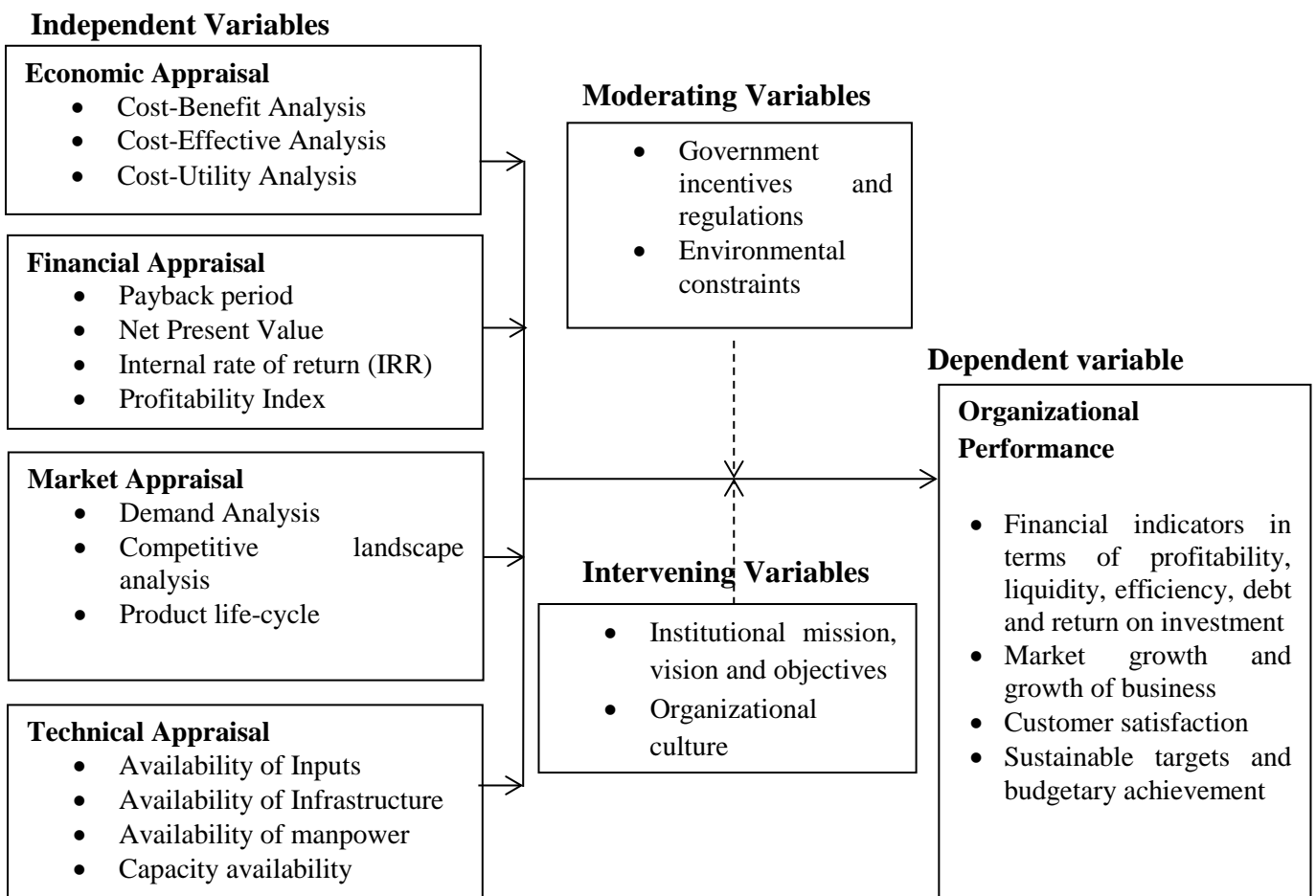
This is the most renowned stage of the project cycle management. The resolve of project appraisal is to mainly establish whether a project is meaningful and valuable in terms of resource commitments or costs and the projects expected benefits (Potts, 2002). Project appraisal is a very critical element in the decision as to whether or not to proceed with the project. It involves the consideration of alternative projects or options or alternatively comparing with the status quo of not doing any intervention.

The origins of project appraisal can be traced back into the 18<sup>th</sup> Century where (Smith, 2009) observes that the role of the government was judiciary, national defence and construction of public works which due to their nature cannot be of much interest to the private sector. He suggests that once public works are completed, the users should be charged an appropriate fee to cover the initial cost and subsequent maintenance. According to Rima (2012), Italian-born French civil engineer and economist Jules Dupuit, questions the real costs and benefits of public works. He asserts that all projects' costs and benefits including those which are not captured by operators should be assessed before implementation of public works. Harris (2012), points out that financial project appraisal is the most renowned approach that focuses on the financial viability of the project. Financial resource is one of the most important pre-requisites to establish an enterprise. It is the only resource that facilitates an entrepreneur to bring together other factors of production such as labour, machine and raw materials in order to combine them to produce goods and services (Mankiw, 2014). As such, the financial viability of a project needs to be carefully analysed. However, Donaldson et al. (2002) believed that in appraising healthcare projects, financial appraisal approach must go hand in hand with economic appraisal approach given the sensitive nature of health especially in a public utility. Brown & Brown (2008) also contributed in the debate by insisting that the

market appraisal of a project must be determined to avoid producing goods and services that do not respond to the market. According to Boddy (2002) ignoring technical appraisal of a project cripples the launch of the project itself since the implementation heavily relies on the technical aspects of the project.

## 2.9 Conceptual Framework

In order to interpret the influence of project appraisal approach in an organization's performance (dependent variable), the research focused on four independent variables as shown in figure 1.



**Figure 1: Conceptual Framework**

The independent variables of economic, financial, market analysis and technical appraisal techniques were examined to establish their influence in relation to an organization's performance with reference to financial performance of an organization, its market growth, customer satisfaction and competitive advantage over its competitors. In addition, government incentives and regulations such as tax incentives, and legal requirements were

taken into account as moderating variables while the organizational culture, its mission, vision and objectives were assessed as key intervening variables.

## **2.10 Knowledge Gap**

The need for organizations to perform and meet their objectives and reason for existence is vital on how they employ strategy in their activities (Dinsmore & Cooke - Davies, 2005) effect, how projects are instituted, appraised, selected, managed and implemented ultimately inform the success or failure of an organization (Larson et al., 2013). The literature reviewed above revealed that the appraisal approaches through which projects are taken through determine the projects that will be selected for consideration. If and when selected, the projects have a direct relation on the organizational performance with regards to its financial and market growth, customer satisfaction and retention as well as a sustainable competitive advantage against its peers and new entrants in the market. This consequently meant that departments and management need to have a vetting mechanism of the potential projects identified for consideration. Organizations that employ this approach have a higher success rate of achieving high performance (Gammie et al., 2016).

On the contrary, these studies focussed on the concept and approach of project appraisal techniques on a broad level but did not pay close attention to healthcare institutions. It is in the backdrop of this that the study made an attempt to seek an understanding of the influence of project appraisal approaches on the performance of Aga Khan University hospital. In the view that Aga Khan University hospital is expanding its programmes in the academic as well as health services sector (AKU, 2016) it is fundamental for the institution to prioritise its project appraisal approaches so as to meet its mission, vision and objectives through successful projects and subsequently meeting customer satisfaction, financial performance, market growth and sustainable performance. This study was aimed at making a contribution on the procedural approach of project appraisal with regards to the field of project management in a private teaching and referral hospital by studying project appraisal approaches employed in the institution and its relevance to an ostentatious organizational performance.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The chapter offers an outline on the research methodology. This chapter essentially covers the research design of the study, the target population studied, details of the sample size and the sampling procedure, the research instrument used, measures of validity and reliability, data collection procedure, data analysis technique and ethical consideration.

#### **3.2 Research Design**

The research design is defined as the general strategy that is used to incorporate the different parts of a study in a sound and consistent mode thus ensuring the research problem is effectively outlined (Vaus, 2001). Marczyk, DeMatteo, & Festinger (2010) pointed out that a research design should constitute an outline for the gathering, measurement, and examination of data that substantively explain the study under investigation. In order to describe the project appraisal approaches relevant and available in the institution, the research design required must collect quantifiable information from the employees by asking questions that can clearly describe the problem and objectively analyse it.

In the view of this, the study used a descriptive survey research design to engage the respondents. Myers, Well, & Lorch (2013) point out that a survey involves selecting a characteristic and impartial sample to be studied and subsequently collecting quantifiable information from the group. The survey research involves asking questions either through a physical questionnaire completed by the person interviewed, an electronically generated questionnaire, a face-to-face interview, or a telephonic interview to obtain objective data (Kothari, 2004). Yet, Kumar (2002) asserted that survey research seeks to gather information that describes a particular existing phenomena and therefore taking the shape of a descriptive research. Descriptive research designs helps address the questions of who, what, when, where, and how associated with a particular research problem and can be used in the description of what exists with regards to variables that are under a particular examination.

Even though quantitative approach was employed in the study to determine the project appraisal approaches available in the organization, this may not be adequate to clearly understand whether there is an impact on effectiveness of the project appraisal approaches on the organization's performance given that this cannot be observed directly. Kumar (2002)

notes that certain phenomena that cannot be examined by direct observation only such as experiences, effectiveness or technical skills and as such are best studied using the qualitative approach. The study therefore used open ended questions to gain further insight on the research problem. A combination of both quantitative and qualitative approach was beneficial to this study as both methods complement each other. This is because quantitative data was used to generate solid data in numerical format needed to achieve the set objectives while the qualitative method produced data in expressive form providing in-depth explanations.

### 3.3 Target Population

The population targeted for the study was obtained from the project teams of various departments in the organization. The organization’s project teams are mostly selected from supervisory level, team leaders, middle management and senior executives (AKU, 2016). Myers et al. (2013) classifies population into target population and accessible population. Mugenda & Mugenda (2003), describes the target population as the whole group of individuals or of objects under which a researcher is keen on making and generalizing conclusions. The target population usually has varying characteristics and it is also known as the theoretical population. Further, Myers et al. (2013) defined accessible population as a subset of target population in research to which the researcher can apply their conclusions in a study and is also known as the study population.

The target population which is also equal to the accessible population of the study was 125 which consisted of the management staff in the categories of senior executives, middle managers, team leaders and supervisors of various units and departments as shown in Table 3.1

**Table 3.1: Target Population**

<b>Staff Categories</b>	<b>Numbers</b>
Senior Executives	7
Middle Management	18
Team Leaders	42
Supervisory level	58
<b>Total</b>	<b>125</b>

### 3.4 The Sample Size and Sampling Procedure

The segment presents the style and methods used for sampling the data, the sampling procedure employed, how the sample size was obtained, processed and analysed from the target population.

#### 3.4.1 The Sample size

A sample is a set of objects or data on which information is obtained (Kothari, 2004). Kothari, (2004) further noted that a sample is a lesser cluster that may be studied from the accessible population. Usually, a population is quite a large unit for making a tally, a survey or a complete account of all the values in the population which can be said to be unrealistic, impractical and difficult. According to Kumar (2002), a sample therefore represents a manageable subset of the population under a particular study where statistics are calculated in order for one to make inferences or conclusions from the sample with the population. With this in mind, a larger sample size was desired to minimise the sampling error. According to Mugenda & Mugenda (2003) sampling error occurs when there is inconsistency between the characteristics of the sample and those of the population. The study therefore sampled 95 respondents from the population of 125 in order to eliminate sampling error. The sample size was arrived at by using Yamane's formula recommended by Kumar, (2002).

$$n = \frac{N}{1 + N(e)^2}$$

Where "n" is the sample size determined for the study, N being the population size while  $e$  is the level of precision.

Using Yamane's formula to determine the sample size of the target population, a confidence level of 95% and a confidence interval of 5% has been considered yielding 95 participants. Mugenda & Mugenda (2003) also emphasised that a large sample is necessary to reduce the standard error of any statistic in research given that small samples could potentially lead to a large standard error.

### 3.4.2 Sampling Procedure

A sample can be said to be representative if the analysis made using the identified sampling units produce comparable results that could be similar to those that would ordinarily be obtained if the entire population is analysed (Gordon & Marian, 2006). Sampling is applied in order to obtain a characteristic sample that is representative to the population where the population is not made up of a homogenous set. The various categories of the institution were identified using stratified random sampling technique. A systematic random sampling without replacement has been used to determine the respondents in each stratum. Table 3.2 shows the strata and the sample that was considered

**Table 3.2: Sample Size**

<b>Staff Categories</b>	<b>Target Population</b>	<b>Sample Size</b>
Senior Executives	7	5
Middle Management	18	14
Team Leaders	42	32
Supervisory level	58	44
<b>Total</b>	<b>125</b>	<b>95</b>

### 3.5 Instruments used for Data Collection

The primary data of this study was collected using the questionnaire. The questionnaire ensured that relevant information was collected from the sampled staff of the organization. The questionnaire comprised open ended and close ended questions that assisted in addressing the specific objectives of the research as well as answering the research questions of the study. According to Kothari (2004) questionnaires are useful in obtaining data in an objective manner because the participants of the study are not manipulated in any way by the study. Mugenda & Mugenda (2003) also concurred and added that questionnaires have upper hand given that they are cost effective and possess the ability to collect large amounts of data.

The study used the questionnaire because of its flexibility and cost effectiveness as well as its ability to collect large and varying data that was useful in the study. Further, the questionnaire was highly convenient to the participants of the study as they could fill them during their free time or when workloads were manageable.

### **3.5.1 Pilot Testing of the Instruments**

Pilot testing was done before the study's data collection begins. According to Kumar (2002), piloting or pretesting the questionnaire is advisable before one begins collecting data with the instrument. The questionnaire was piloted using a different selected sample with similar characteristics to the subjects in the actual sample. This aided in the assessment of adequacy of the research design and of the questionnaire to be used such as to determine whether the anticipated respondents comprehend the questions asked in the instrument. The procedure used was similar to the actual data collection procedure. This allowed the researcher to make meaningful observations and highlight the weaknesses of the questionnaire and of the survey techniques. Mugenda & Mugenda (2003) propose that a sample to be piloted ought to be a range of between 1% and 10% of study sample dependent on the size of the sample in the study being undertaken. Given the study sample of 95, the study selected 10 respondents for piloting the questionnaire from the target population. This was representative of 10% of the sample.

This pilot survey sought to ascertain if the questions were easy to understand and whether they would elicit relevant information from the respondents to answer the research questions. After the pilot testing necessary adjustments were made on the questionnaire to enhance its accuracy in data collection. Pre-testing assisted the study to identify problems that could have arisen and affected the research due to unclear directions, insufficient space to write the responses and clustered questions. The pilot study helped the study to evolve a series of questions that maximized opportunities for securing the views of the respondents. The pilot data and respondents were not included in the actual study.

### **3.5.2 Validity of the Instrument**

Validity of the instrument is critical in undertaking a study. Validity can be described as an attempt to authenticate the data collection instrument by checking if it achieves what it is supposed to measure and accomplishes what it is designed to do. As described by Mugenda & Mugenda (2003) validity represents the level to which results that are attained from an investigation and analysis of the data denote the phenomenon being studied. To establish the validity of the questionnaire, the researcher undertook content validity test to ascertain whether the instrument covered accurately what was being researched. Further, content validity was verified through expert opinions. Face validity of the instrument on the other hand was subjected to expert analysis and supervisor opinions.



### **3.5.3 Reliability of the Instrument**

Reliability of a research work specifies the extent to which the study is without bias. According to Kumar (2002) reliability denotes the degree to which the data collection method employed yields consistent findings if the same was to be repeated by other researchers. A reliable data collection instrument should not be influenced by chance or the environment under which it is being administered but should have consistent results if repeated over time on the same respondent or if used by two or more investigators.

Reliability of the data collected was highly dependent on the design of the questionnaire which the researcher ensured that it provided consistent, stable and repeatable results. For purposes of testing reliability of the data collection instrument, a pilot study was undertaken prior to commencement of the actual study in order to ascertain the reliability of the questionnaires in the process of collecting the requisite data. A pilot group of 8 respondents was selected from the target population and a parallel form reliability done by using the questionnaire and conducting in-depth interviews to assess whether the results were comparable.

### **3.6 Data Collection Methods**

The data collection method employed helped in capturing relevant points that were used for analysis to address the research questions. Before commencing the collection of required data the researcher sought an introduction letter from the University to the National Commission for Science Technology and Innovation (NACOSTI) so as to be allowed to conduct the research. The researcher then sought permission from the Aga Khan University's Research and Ethics Committee which is mandated by NACOSTI to approve scientific research in the institution. This authorization was granted as seen in Appendix IV.

Data collection involved the use of a self-administered questionnaire by the participants of the survey circulated in the intranet through individual email addresses. An introductory note to the respondents was also attached in the email detailing the objectives of the research, accompanied with directions for filling out the questionnaire. A sum total of 95 questionnaires were disseminated to management and supervisors of the Aga Khan University Hospital, Nairobi to fill in. Follow ups using polite reminder emails and phone calls to remind potential participants to take part in the study were also made to ensure maximum participation.

### **3.7 Data Analysis Techniques**

The data collected was checked and reviewed for completeness and comprehension before being considered for onward analysis. Kothari (2004) observes that for data analysis to be agreeable, making sense of data and interpreting the same must first involve processing the data, editing and classification, coding and tabulating the collected data. Responses for each question were recorded and checked for inconsistencies. This was done by checking completeness of responses in each question and incomplete data was removed before analysis commenced. Data presentation was done through use of frequency tables and percentages. The study used descriptive statistics such as means, standard deviation and frequency distribution to analyse the data collected. These measures were used to analyse the influence of the project appraisal approaches on an organization's performance. Qualitative data collected using open ended questions has been analysed using content analysis in a thematic approach and presented in continuous prose form. Quantitative data has further been analysed using inferential statistics, regression and correlation analysis. Correlation analysis has been used to ascertain if there exists an association amongst economic appraisal, financial appraisal, technical appraisal, market analysis of projects and organizational performance. Regression studies sought to establish if there exists a significant connection between economic appraisal, financial appraisal, technical appraisal, market analysis of projects undertaken by an organization and its performance. The research correlation and relationship has been tested at significant level of 0.05. The response on economic appraisal, financial appraisal, technical appraisal, market analysis of projects and organizational performance was measured by deducing indices based on the responses derived from the Likert-Scaled questions.

### **3.8 Operational definition of variables**

A variable is a quantifiable characteristic that adopts different assessments among the subject matter (Mugenda & Mugenda, 2003). It is said that a variable could take one or more values depending on how it is manipulated. Obtaining the diverse valuations for each variable's theme is identified as operational definition of the variable. An independent variable can be described as an attribute which a researcher may manipulate in order to determine its bearing on another variable. The dependent variable denotes the overall effect arising from the influence of the independent variable (Mugenda & Mugenda, 2003). In this study, "project appraisal approaches" is the independent variable whilst "organizational performance" is the dependent variable. Table 3.3 shows how the variables were operationalised.

*Table 3.3: Operationalization of the Variables*

Objectives	Operational Definition of Variables					
	Variables	Indicators	Measurement	Data Collection Method	Scale	Data analysis Techniques
To establish how economic appraisal approach influences the organizational performance	<u>Independent Variable</u> <b>Economic appraisal approaches</b>	- Use of economic appraisal approach - Use of the various components of economic appraisal approaches	Extent to which economic appraisal approaches are used in assessing projects in the organization and organizational performance	Questionnaire	Ordinal	Frequencies and Percentages
To determine the extent to which financial appraisal approach influences the organizational performance	<u>Independent Variable</u> <b>Financial appraisal approaches</b>	- Managers using financial appraisal approach of projects - Ranking of projects is being done using the various components of financial appraisal approaches.	Extent to which financial appraisal approaches are used in the determination and selection of projects in the organization and the organizational performance	Questionnaire	Ordinal	Frequencies and Percentages

To assess how market appraisal approach influences the organizational performance	<u>Independent Variable</u> <b>Market Analysis</b>	<ul style="list-style-type: none"> <li>- Number of clinical products and services are tabulated</li> <li>- Number of new services introduced is enumerated</li> <li>- Number of new customers</li> </ul>	Extent to which market appraisal approach is used and how it influences the organizational performance	Questionnaire	Ordinal	Frequencies and Percentages
To determine how the technical appraisal approach influences the organizational performance	<u>Independent Variable</u> <b>Technical Appraisal</b>	<ul style="list-style-type: none"> <li>- Use of technical appraisal approaches</li> <li>- Number of managers using the components of technical appraisal approaches in determination and selection of projects</li> </ul>	Extent to which technical appraisal approaches are used and how they influence the organizational performance?	Questionnaire	Ordinal	Frequencies and Percentages
The purpose of this study is to investigate the influence of project appraisal approaches on the performance of an organization with a distinct focus on a private teaching and referral healthcare institution	<u>Dependent variable</u> <b>Organizational Performance</b>	<ul style="list-style-type: none"> <li>- Positive Cashflows</li> <li>- Surplus Margins</li> <li>- Market growth</li> <li>- Customer satisfaction</li> <li>- Target achievement</li> </ul>	Significance level of organizational performance	Questionnaire	Ordinal	Frequencies, Standard deviation, Percentages, Spearman's Rank Correlation, Regression

### **3.9 Ethical Considerations**

In research, ethics is a key consideration. In dealing with human subjects, one has to be sensitive in the manner in which the interactions are made and the conduct of the researcher should be above board. Some of the ethical issues touch on deception and invasion of privacy and therefore calls for an increased awareness and consciousness in observing ethical guidelines. It is therefore important that ethical considerations have to be incorporated when conducting research.

At the outset, the researcher obtained written permission from the Aga Khan University's Research and Ethics Committee, an Institutional Review Board (IRB) accredited by the National Commission for Science, Technology and Innovation (NACOSTI) before conducting the research. Afterwards, consent was obtained from the respondents to willingly take part in the research. The study also attempted not to encroach on the respondents rights by cautiously and fairly engaging them. The researcher also gave a brief account to the respondents on the study and explained to them how the information they gave was to be used. Emphasis was laid to the respondents that the information provided was intended for research purposes only and with no prejudice. Any personal information has been kept strictly confidential. Respondents were also informed of their right to decline to fill the questionnaire and that it would be respected.

## **CHAPTER FOUR**

### **DATA ANALYSIS, PRESENTATION AND INTERPRETATION**

#### **4.1 Introduction**

This chapter enumerates the findings of the study which have been analysed and deliberated based on study objectives in line with the following themes and sub thematic areas; questionnaire return rate, demographic information, project appraisal approaches used in the organization and their influence on the performance of the organization.

#### **4.2 Questionnaire Return Rate**

The study had a sample size of 95 respondents who comprised project teams of various departments in the organization. The organization's project teams are mostly selected from supervisory level, team leaders, middle-management and senior executives. A total of 70 respondents filled the questionnaires which represented a response rate of 74%. This is acknowledged to have been adequate to analyse the data collected as observed by Vaus, (2001) who stipulated that a response rate of 50% and above was adequate for an analysis to be undertaken.

Further, data from 19 respondents was incomplete and therefore could not be considered for analysis. This left only 51 responses that could be considered for analysis which represented 54% response rate

#### **4.3 Demographic data**

The demographic data was collected in relation to the age, gender and the level of education, department category in which the respondent worked in and their level in the management structure. This segmentation was important in order to determine the respondents' needs and feelings about the appraisal of the projects they were to undertake in the organization. This enabled the researcher to determine how closely the sample replicated the population.

##### **4.3.1 Distribution of Respondents by Gender**

The purpose of the gender distribution was to compare demographic relative to the totality of the population. Table 4.1 illustrates the distribution of gender amongst the respondents.

**Table 4.1: Number of respondents by Gender**

<b>Gender of respondent</b>	<b>Frequency</b>	<b>Percentage</b>
Female	27	52.9
Male	24	47.1
<b>Total</b>	<b>51</b>	<b>100.0</b>

Table 4.1 reveals that the gender of respondents, majority of whom were female (52.9%) and male (47.1%) was within the acceptable 1/3 majority an indication that the conclusions from the study can be generalizable to an entity with either of the genders as the majority of the employees.

#### **4.3.2 Distribution of Respondents by Age**

The study sought to identify the distribution of the respondents by their ages as demonstrated in Table 4.2. The age of the respondents was treated as a factor in relation to experience and skills of project appraisal approaches.

**Table 4.2: Distribution of respondents by Age**

<b>Age Bracket of respondent</b>	<b>Frequency</b>	<b>Percentage</b>
(20-30) years	3	5.9
(31-40) years	31	60.8
(41-50) Years	11	21.6
Above 51 years	6	11.8
<b>Total</b>	<b>51</b>	<b>100.0</b>

The findings in Table 4.2 shows that the largest group of respondents was aged between 31 and 40 years (31 respondents) representing 60.8%. This is followed by the age bracket of 41 to 50 years (11 respondents) which represented 21.6%, above 51 years was 6 respondents (11.8%) while only 3 participants in the study were in aged between 20 and 30 years representing 5.9% of the respondents. This distribution indicates that most of the team members involved in the projects appraisal are relatively experienced given their ages as alluded by Larson et al., (2013) who describes project management as a managerial process that requires experienced staff. These staff would ordinarily be much older than the entry level staff.

### 4.3.3 Distribution of Respondents by Level of Academic Qualification

The study aimed to find out the academic qualification of the participants of the study as shown in Table 4.3. The level of education was necessary in the study to ascertain whether the respondents had the understanding of concepts that relate to project management on a broad level.

*Table 4.3: Level of Academic Qualification*

<b>Level of Education Attained</b>	<b>Frequency</b>	<b>Percent</b>
College Diploma	6	11.8
Bachelor's Degree	15	29.4
Post Graduate	30	58.8
<b>Total</b>	<b>51</b>	<b>100.0</b>

Table 4.3 illustrates the level of education attained by the respondent. The study aimed at finding out the highest level of education that the respondents have attained. The study showed that 29.4% of the respondents (15 respondents) had a bachelor's degree while college diploma qualification accounted for 6 respondents (11.8%). The study findings showed that of the respondents who participated in the survey, 30 (58.8%) had a post graduate qualification which showed that majority of the respondents were academically endowed and well equipped with the special skills required to execute their respective duties.

### 4.3.4 Distribution of Respondents by Departments

In order to establish the distribution of the respondents by main departments in the organization, Table 4.4 has been used to summarise the respondents by their respective departments. This was important in order to obtain a representative sample since the population did not constitute a homogeneous group.

*Table 4.4: Department Categories*

<b>Department</b>	<b>Frequency</b>	<b>Percent</b>
Administration	12	23.5
Support Services	12	23.5
Clinical department	19	37.3
Education & Research	5	9.8
Others	3	5.9
<b>Total</b>	<b>51</b>	<b>100.0</b>



Of the 51 respondents who participated in the study, 19 (37.3%) were from the Clinical department, 12 (23.5%) a piece were from Administration and Support Services department, 5 (9.8%) were from the Education & Research department while 3 (5.9%) were from departments other than the aforementioned main departments. This represented a representative sample for the analysis made and thus the results could be generalised to those from entire population Gordon & Marian, (2006).

#### 4.3.5 Distribution of Respondents by Level of Management

The research pursued to describe the different categorization of the management level in the organization. The project teams in the organization are predominantly drawn from the supervisory level, team leaders, middle management and senior executives AKU, (2016). Table 4.5 therefore shows the distribution of respondents by management level within the institution. This was important in order to obtain a representative sample since the population is drawn from various heterogeneous groups.

*Table 4.5: Management Level*

Management level	Frequency	Percent
Senior Executive	4	7.8
Middle Management	12	23.5
Team Leader	17	33.3
Supervisory	18	35.3
<b>Total</b>	<b>51</b>	<b>100.0</b>

From the findings, it has been established that 18 respondents (35.3%) were supervisory level staff, 17 (33.3%) were team leaders, 12 (23.5%) were middle-management staff and 4 (7.8%) were senior executives of the organization. This distribution was found to be representative given that the population is not made of homogenous set and the systematic sampling that is applied yielded a good distribution of the sample.

#### 4.4 Project Appraisal Approaches in the Organization

This study sought to establish how the organization used its own prescribed project appraisal and how the project teams the frequency of how they were used in the assessment of potential projects that the organization would have desired to carry out. This information is essential for the purposes of determining the project appraisal approaches mostly utilised in the organization and whether they were utilised in equal scope. Further, the study wanted to establish whether the project appraisal approaches used to select the projects did eventually

influence the performance of the organization given that the success of the projects implemented by an organization is dependent on the best fit projects that were selected using the project appraisal approaches Kavadias & Loch, (2012).

#### **4.4.1 Financial Appraisal Approaches and its Influence on Performance**

The study also sought to establish whether the respondents used the financial appraisal approaches to consider the projects to carry out. This was important in order to establish whether the prescribed appraisal was being used in assessing the potential projects which the organization envisaged to engage in. Table 4.6 illustrates the respondents' use of financial appraisal approaches in the organization

*Table 4.6: Use of Financial Appraisal Approaches*

<b>Use financial appraisal approaches</b>	<b>Frequency</b>	<b>Percent</b>
Yes	45	88.2
No	6	11.8
<b>Total</b>	<b>51</b>	<b>100.0</b>

Table 4.6 reveals that of the 51 respondents, 45 (88.2%) of them used the financial appraisal approach in determining the projects to be selected for implementation against 6 (11.8%) who did not use the financial appraisal approaches.

Further findings showed that the bulk of respondents were fond of using the financial appraisal approaches in their determination of the projects to be selected.

Table 4.7 demonstrates that 18 (35.3%) used the financial appraisal approaches at all times with 16 (31.4%) commonly used the approaches in determining the viability of the projects to be selected. Of the 51 respondents, 6 (11.8%) stated that they did not use the financial appraisal approaches while 11 (21.6%) stated that they often used the approaches.

*Table 4.7: Extent of Use of Financial Appraisal Approaches*

<b>Extent of using financial appraisal</b>	<b>Frequency</b>	<b>Percent</b>
Not used at all	6	11.8
Often used	11	21.6
Commonly used	16	31.4
Used at all times	18	35.3
<b>Total</b>	<b>51</b>	<b>100.0</b>

The study went further to seek more distinction on the specific techniques that are used in the financial appraisal approaches in determining the projects to be taken up. This was important to determine to what extent they were used in selection of the projects as illustrated in Table 4.8.

**Table 4.8: Frequency of using Financial Appraisal Techniques**

<b>Financial Appraisal Approaches</b>	<b>No Extent</b>	<b>Small Extent</b>	<b>Moderate Extent</b>	<b>Large Extent</b>	<b>Very large Extent</b>
1) Payback period is used to assess projects	8	3	12	13	15
2) Net Present Value is used to assess projects	8	3	16	13	11
3) Internal Rate of Return used to assess projects	6	3	18	6	18
4) Profitability Index is used to assess projects	6	8	15	10	12

Table 4.8, shows the use of various financial appraisal techniques available in the organization for assessing the projects intended for implementation. When asked about the extent to which the respondents used payback period technique, 28 of the 51 respondents (13, to a large extent and 15 to a very large extent) affirmatively said that they used this technique. Net Present Value (NPV) technique had more respondents with lukewarm use of it whereby 16 respondents expressed the use of this technique to a moderate extent and 13 to a large extent. Similar responses were found in the use of Profitability Index technique with 15 out of the 51 respondents admitting to using this technique moderately. It is however important to note that the NPV and the Profitability Index technique had a significant use to a large extent (13 respondents for NPV and 10 for Profitability Index) and a very large extent (11 for NPV and 12 for Profitability Index). However, mixed feelings were elicited in the use of Internal Rate of Return (IRR) technique where 18 respondents out of 51 stated that they moderately used it and another 18 of the 51 saying they used it to a large extent. It is a widely held view that use of IRR is a better approach since it takes into account the time value of money Baker & English, (2011). However other critics believed that the use of IRR is quite complicated and subjective given that the rate varies from one organization to another Dayananda, (2002).

In an attempt to further understand the use of financial appraisal approaches in determining the projects to be selected, the study expounded by using open ended questions where the respondents explained their choices more. According to their responses, the participants acknowledged that the use of financial appraisal approaches were critical in determining the potential projects which the organization would take up for implementation. A number of respondents pointed out that the success of attaining future financial goals of the organization is dependent on the overt use of the techniques that were in place to carry out the financial appraisal. Other respondents agreed to the use of the financial appraisal approaches in assessing the project and opined that the maximization of returns and surpluses is guaranteed when the organization used this approach to determine the projects it was interested in undertaking. Another respondent stated that there was a need to appraise the project with regards to them attaining a financial threshold in order for the organization to be assured of a steady return that would assure the achievement of its objectives. Other reasons attributed to the use of the financial appraisal approaches included, the making of a case for financial viability given the constraint of budgets in the organization, the ease of understanding by management when a project will recoup its initial investment and some stated the ability of the organization to validate the project's value and associated risk.

To determine the influence of financial appraisal approaches on an organization's performance, the participants were asked to state to what extent the financial appraisal approaches had influenced the performance of the projects selected and implemented in their respective departments. Table 4.9 illustrate the responses gathered.

***Table 4.9: Influence of Financial Appraisal Approaches on Performance***

<b>Extent of using financial appraisal</b>	<b>Frequency</b>	<b>Percent</b>
No influence on performance	6	11.8
Low influence on performance	0	0.0
Moderate influence on performance	7	13.7
High influence on performance	14	27.5
Very High influence on performance	24	47.1
<b>Total</b>	<b>51</b>	<b>100.0</b>

As demonstrated on Table 4.9, with regards to the influence of financial appraisal approaches on the performance of selected projects, 24 respondents were of the opinion that this

approach had a very high influence on the performance of the selected projects and department at large, 14 respondents stated that the approach had a high influence on the performance of the projects selected with 6 and 7 respondents who stated that the approach had no influence and had moderate influence respectively on the performance of the projects selected.

#### **4.4.2 Economic Appraisal Approaches and its Influence on Performance**

In an attempt to find out whether the economic appraisal approach had any influence in the performance of the organization, the respondents were requested to indicate if they had used the approach and how often they had used it. In a very interesting turn of events, all 51 respondents admitted to have used the economic appraisal approaches. Tasked to explain further how often they had used this approach, the respondents expressed mixed responses to this question. Table 4.10 indicates the result of whether the respondents had used the economic appraisal approaches in the assessment of projects.

***Table 4.10: Extent of Use of Economic Appraisal Approaches***

<b>Extent of using economic appraisal</b>	<b>Frequency</b>	<b>Percent</b>
Not used at all	0	0.0
Hardly	5	9.8
Sometimes	17	33.3
Often	18	35.3
At all times	11	21.6
<b>Total</b>	<b>51</b>	<b>100.0</b>

From the findings of Table 4.10, in order of chronology, 18 (35.3%) of the respondents indicated that they often used the economic appraisal approach, 17 (33.3%) said that they used the appraisal sometimes, 11 (21.6%) used the appraisal at all times while 5 (9.8%) hardly used the economic appraisal approach.

In order to determine use of the prescribed practices used by the organization in assessing the economic viability of a project, the participants were asked to define the extent to which they used these practices. It is important to note that the organization had opted to use three practices in assessing the projects that could be implemented by the organization. The specific practices were, cost benefit analysis, cost effective analysis and cost utility analysis. Table 4.11 demonstrated the extent to which the economic appraisal approach practices were used

**Table 4.11: Frequency of using Economic Appraisal Techniques**

<b>Economic Appraisal Approaches</b>	<b>No Extent</b>	<b>Small Extent</b>	<b>Moderate Extent</b>	<b>Large Extent</b>	<b>Very large Extent</b>
1) Cost Benefit Analysis is used to assess projects	2	4	12	21	12
2) Cost Effectiveness Analysis is used to assess projects	2	9	10	21	9
3) Cost Utility Analysis is used to assess projects	3	9	14	19	6

From the findings as shown in Table 4.11, the cost benefit analysis technique was used to a large extent, with 21 respondents, a majority from the 51 respondents indicating so. Similarly, 21 respondents out of 51 stated that the cost effectiveness analysis was used to assess the projects, which again represents the majority of the respondents. In the case of cost utility analysis, 19 out of the 51 respondents specified that they involved cost utility assessment of projects. The results in Table 4.11 did therefore suggest that the use of economic appraisal approaches as designed by the management of the organization is engaged in assessing the potential projects. In their journal article, Gammie et al., (2016) had observed that before a project can be undertaken in a healthcare setting, a precise economic analysis is necessary to determine whether the projects meets the threshold of benefits accruing from it vis-à-vis the estimated cost of the project. Drummond et al., (2015) stated that the effectiveness of the project or intervention should be demonstrated before embarking on a project in order to justify the alternative with the best outlook. The respondents seemed to have similar sentiments going by their responses. Further Gammie et al., (2016) suggested that in the case of healthcare institutions, the cost utility analysis was best placed to justify the engagement of a project. They argued that it is better to manage proactively, infectious diseases before they can transform into pandemics and singled out the vaccination campaigns which ordinarily were very costly but had reduced greatly the chances of cross infection of diseases such as measles, tuberculosis and meningitis.

The study sought to enquire more on economic appraisal approaches and used open ended questions to establish more information. The respondents acknowledged that the use of

economic appraisal approaches presented a better case on better utilization of resources and not necessarily focused on the financial gain. Other respondents argued that the use of economic appraisal approaches had promoted transparency on resource allocation. One of the respondents claimed that the use of economic appraisal approaches had supported the department's projects which bordered closely on promoting quality and infection control. Some respondents stated that the use of economic appraisal approaches did not necessarily safeguard the assessment of projects. They argued that the techniques used were subjective and no specific means of verification was at hand to help in assessing the viability of the projects.

On the case of influence of economic appraisal approaches on organizational performance, the participants of the survey were asked to point out the extent to which the economic appraisal approaches influenced performance of the projects selected for implementation. Table 4.12 enumerates the responses collected.

***Table 4.12: Influence of Economic Appraisal Approaches on Performance***

<b>Extent of using financial appraisal</b>	<b>Frequency</b>	<b>Percent</b>
No influence on performance	0	0.0
Low influence on performance	7	13.7
Moderate influence on performance	22	43.1
High influence on performance	15	29.4
Very High influence on performance	7	13.7
<b>Total</b>	<b>51</b>	<b>100.0</b>

From the results shown in Table 4.12, it can be observed that of the 51 respondents, when asked to rate the influence that economic appraisal approaches have had on their performance, 22 respondents claimed that the approach had a moderate influence to their projects and departmental performance, 15 stated the appraisal approach had a high influence, while 7 a piece stated the appraisal approach had a very high influence and a low influence respectively. None of the respondents felt that the approach had no influence in the performance of the selected projects. This view concurs with the earlier observation where all the 51 respondents stated that they had used the economic appraisal approach to assess their projects. Worth noting is the fact that 29 respondents had low emphasis of the influence of

economic appraisal approach on performance as compared to 38 who had high emphasis on influence of financial appraisal approaches on performance as shown in Table 4.9.

#### 4.4.3 Market Appraisal Approaches and its Influence on Performance

The study sought to find out whether market appraisal approaches were used in assessing projects that were yet to be undertaken in the organization. The respondents were queried on whether the market appraisal approaches were used and their responses were as illustrated in Table 4.13.

**Table 4.13: Use of Market Appraisal Approaches**

Using market appraisal approaches	Frequency	Percent
Yes	48	94.1
No	3	5.9
<b>Total</b>	<b>51</b>	<b>100.0</b>

Table 4.13 shows that of the 51 respondents surveyed, 48 (94.1%) of them used the market appraisal approach in determining the projects to be selected for implementation against 3 (5.9%) who did not use the market appraisal approaches. On further enquiry into the use of market appraisal approach in determining the projects to be selected, it is apparent that a good number of respondents were fond of using this approach as shown on Table 4.14.

**Table 4.14: Extent of Using of Market Appraisal Approaches**

Extent of using market appraisal approaches	Frequency	Percent
Not used at all	3	5.9
Often used	11	21.6
Commonly used	27	52.9
Used at all times	10	19.6
<b>Total</b>	<b>51</b>	<b>100.0</b>

In order of priority, Table 4.14 reveals that 27 (52.9%) of the respondents commonly used the market appraisal approach in the determination of projects available for selection, 11 (21.6%) often used the approach while 10 (19.6%) used the market appraisal approach at all times when assessing the potential projects that the organization had wanted to engage in. A partly



3 (5.9%) of the respondents stated that they had not used the market appraisal approach in judging the projects to be selected.

The study proceeded further to explore the specific techniques that were used in market appraisal approach in determining the projects to be selected. The respondents were asked to describe the extent to which they used three market appraisal approaches which the organization had prescribed for assessing any given project. The results were itemized in Table 4.15.

**Table 4.15: Frequency of using Market Appraisal Techniques**

<b>Market Appraisal Approaches</b>	<b>No Extent</b>	<b>Small Extent</b>	<b>Moderate Extent</b>	<b>Large Extent</b>	<b>Very large Extent</b>
1) Demand Analysis is used to assess projects	3	0	16	19	13
2) Competitive Landscape Analysis is used to assess projects	6	3	10	21	11
3) Product Life Cycle analysis is used to assess projects	6	5	17	12	11

The findings summarised in Table 4.15 show that in demand analysis, 19 of the 51 respondents indicated that they had used it to a large extent as part of the market appraisal approach with 16 expressing that they had moderate use of the demand analysis technique. With regards to competitive landscape analysis, 21 respondents stated that they had used this technique to a large extent, 11 had used it to a large extent while 10 had used it in moderate terms. The product life cycle technique had moderate use with 17 respondents indicating so, 12 had used it to a large extent while 11 had used the technique to a very large extent. From this findings, there seemed to be a collective understanding as mentioned by Brown & Brown, (2008) whereby demand analysis and competitive analysis were very vital techniques in assessing and analysing product portfolio of an organization before getting into selection for product development. This they explained is the key success factor of the product in the market with regards to customer satisfaction and eventually the financial success of the organization.

To further understand the use of market appraisal approaches in determining the projects to be selected, the study sought to get more information by using open ended questions where

the respondents expounded on their choices. According to some respondents, the identification of unique service offerings that differentiated the organization from its competitors was revealed when one carried out the competitive landscape and this could easily identify unique selling points for products and services. Another set of respondents stated that competitive advantage would be gained in the case where products that were developed would meet and surpass costumers' requirements. One respondent indicated that using the product life cycle analysis, the organization was able to identify the stage at which the services were at and this led to re-engineering of products to customise them according to the market needs. The respondent went further to state that this approach also saved the organization a huge budget that would have otherwise been used to launch new products whose benefits and customer satisfaction was not well demonstrated. Yet, some of the respondents claimed that the market appraisal approach was not relevant to their assessment of projects to be selected. One of the respondents explained that the market appraisal was not relevant in determining the selection of services such as emergency medicine which is cited as a necessity especially in disaster management in case of patient's influx from all walks of life. This is backed by the Constitution of Kenya, (2010) Article 43 which states that: "A person shall not be denied emergency medical treatment".

On conclusion of market appraisal approaches and its influence on the organizational performance, the respondents were asked to state to what extent the market appraisal approaches had influenced the performance of projects selected and implement in their respective departments. Table 4.16 illustrate the responses collected.

***Table 4.16: Influence of Market Appraisal Approaches on Performance***

<b>Extent of using financial appraisal</b>	<b>Frequency</b>	<b>Percent</b>
No influence on performance	3	5.9
Low influence on performance	2	3.9
Moderate influence on performance	16	31.4
High influence on performance	20	39.2
Very High influence on performance	10	19.6
<b>Total</b>	<b>51</b>	<b>100.0</b>

As seen in Table 4.16, on the influence of market appraisal approaches on the performance of the projects selected, 20 respondents stated that the appraisal approach had a high influence

on the performance of the projects, 16 felt that the approach had a moderate influence on the performance of the projects while 10 stated that the appraisal approach had a very high influence on the performance of the projects selected. On the other hand 3 respondents claimed that the approach did not influence the performance of the projects and 2 respondents felt that the approach had a low influence in terms of performance of selected projects in the department.

#### 4.4.4 Technical Appraisal Approaches and its Influence on Performance

In order to establish the influence of technical appraisal approach on an organization's performance, the respondents were asked to state if they had used the approach and how often they had used it to assess projects that were to be initiated in the organization. This was necessary in order to establish if the prescribed technical appraisal approach was used and to what extent technical appraisal techniques were used to determine the project selection. All 51 respondents stated that they had used the technical appraisal approach in the assessment of potential projects. On further enquiry on the extent of the use of the technical appraisal approach, the respondents gave varying responses. Table 4.17 indicates the result of whether the respondents had used the technical appraisal approaches in the assessment of projects

*Table 4.17: Extent of Using of Technical Appraisal Approaches*

<b>Extent of using technical appraisal approaches</b>	<b>Frequency</b>	<b>Percent</b>
Not used at all	0	0.0
Hardly used	3	5.9
Often used	13	25.5
Commonly used	21	41.2
Used at all times	14	27.5
<b>Total</b>	<b>51</b>	<b>100.0</b>

From the findings described in Table 4.17, in order of chronology, 21 (41.2%) of the respondents mentioned that they commonly used the technical appraisal approaches, 14 (27.5%) stated that they used the approach at all times, 13 (25.5%) stated that they used the technical appraisal approach often while 3 (5.9%) stated that they hardly used the approach in determining the projects to be selected.

Further, the respondents were asked to indicate the extent to which they had used the technical appraisal techniques in determination of projects for selection. This was important in order to find out the use of the various technical appraisal techniques that were available in the organization and how they were used in gauging the projects to be selected. Table 4.18 details the results on the extent to which the technical appraisal is used.

**Table 4.18: Frequency of using Technical Appraisal Techniques**

<b>Technical Appraisal Approaches</b>	<b>No Extent</b>	<b>Small Extent</b>	<b>Moderate Extent</b>	<b>Large Extent</b>	<b>Very large Extent</b>
1) Availability of inputs/supplies is used to assess projects	0	3	12	20	16
2) Availability of infrastructure is used to assess projects	0	3	6	26	16
3) Manpower availability and skill set is used to assess projects	3	3	10	13	22
4) Capacity consideration is used to assess projects	0	6	3	24	18

From the findings in Table 4.18, assessment of projects through appraising the availability of inputs is used to a large extent with 20 respondents stating so while 16 respondents agreed to a very large extent on assessing the availability of inputs. The respondents were also asked to what extent they had assessed the potential projects with regards to availability of infrastructure. 26 of the 51 respondents stated that they had assessed projects on this basis while 16 said they had assessed the projects to a very large extent based on the infrastructure available. In terms of assessing projects based on the manpower availability and skills, 22 respondents out of 51 stated that they had used this criterion to a very large extent to assess the potential projects with 13 stating they used this criterion to a large extent. Finally, the participants of the survey were asked to state the degree to which they had assessed projects on the basis of capacity considerations. Of the 51 respondents, 24 indicated to using this criterion to assess their projects on a large extent with 18 respondents stated that they had used this criterion to a very large extent to assess the projects available for selection.

The study went further to gather some detailed information by asking the respondents whether the technical appraisal approaches had helped them in identifying and selecting the

projects to be implemented. According to some respondents, they believed that using the technical appraisal approach had helped them determine the competencies required in order to engage in the project. Another set of respondents highlighted that indeed the technical appraisal approach had informed them of the necessary infrastructure to have been put in place in order to engage in certain projects. This had helped them to evaluate the gaps in the infrastructure that would have informed the organization on the requirement in the infrastructure which would in turn be used to determine the resource allocation of the project. One respondent stated that the technical appraisal was important in order to demonstrate the sustainability of particular services. The respondent highlighted the neurosurgery services whereby manpower assessment was carried out to inform the organization on the ability to sustain the program given the low number of specialists available in the country and indeed globally. Investing in the said program would be risky without running it through the manpower and capacity assessment.

On the influence of technical appraisal approaches on an organization’s performance, the study participants were requested to state the extent to which the technical appraisal approaches had influenced the performance of the projects selected and further, the department’s performance. Table 4.19 illustrates the results.

***Table 4.19: Influence of Technical Appraisal Approaches on Performance***

<b>Extent of using financial appraisal</b>	<b>Frequency</b>	<b>Percent</b>
No influence on performance	3	5.9
Low influence on performance	3	5.9
Moderate influence on performance	13	25.5
High influence on performance	20	39.2
Very High influence on performance	12	23.5
<b>Total</b>	<b>51</b>	<b>100.0</b>

As seen on Table 4.19, when asked the extent to which technical appraisal approaches had influenced the performance of projects selected in their departments, 20 respondents held the view that the approach had a high influence on the performance, 13 stated that the approach had a moderate influence while 12 claimed that the approach had a very high influence on the performance of the projects in their departments. On the other hand, 3 respondents a piece held the view that the technical appraisal approach had no influence and had a low influence

respectively on the performance of the selected projects. This response did not however reflect the fact that all 51 respondents had indicated that they had used technical appraisal approach in assessing the projects to be selected. This can be implied from the fact that a number of respondents had indicated that they used the technical appraisal approach mainly to ensure they had the required inputs and technical capacity as well as manpower to implement the projects but not necessarily to drive performance of the projects.

#### **4.4.5 Combination of the four appraisal approaches and its Influence on Performance**

Finally, the study participants were asked to provide their view on whether a combination of the four appraisal approaches had influenced the performance of the selected projects. Table 4.20 shows the results gathered from the responses given.

*Table 4.20: Influence of Combination of the four appraisal approaches (financial, economic, market & technical) on Performance*

<b>Extent of using financial appraisal</b>	<b>Frequency</b>	<b>Percent</b>
No influence on performance	0	0.0
Low influence on performance	0	0.0
Moderate influence on performance	22	43.1
High influence on performance	24	47.1
Very High influence on performance	5	9.8
<b>Total</b>	<b>51</b>	<b>100.0</b>

Table 4.20 shows 24 of the 51 respondents indicated that by combining all the four approaches in determining the projects to be selected, there was a high influence on the subsequent performance of the projects and ultimately the department as a whole. In the same breadth, 22 respondents claimed that the combination of the four approaches in assessing the projects to be selected for implementation had a moderate influence on the performance of the projects while 5 respondents claimed that the combination had a very high influence on the performance of the projects that were earmarked for selection.

It could therefore be concluded that the use of project appraisal approaches had an apparent influence on the performance of the organization. The scale and level of influence on the organizational performance did not seem to be huge given the mixed responses gathered from the participants. In addition, the results from Table 4.20 cemented the perception from the participants on the influence of the combination of the four project appraisal approaches

(financial, economic, market & technical) on performance. Further insights on the relationship of the variables were analysed through spearman's correlation and regression analysis.

#### **4.5 Regression and Correlation Analysis**

In order to establish the relationship amongst the variables, regression analysis is used as a measure to determine the co-variation of the variables with regards to their change and direction. This is based on the assumption that for every measurement (value) in one variable (y) there is a corresponding value for the second variable (x) as observed by Mugenda & Mugenda, (2003). Correlation analysis is also conducted to establish the level of association between the independent and dependent variables. According to Myers et al., (2013), the association between two variables, the cause and effect and the strength as well as the direction of these variables were best established by conducting correlation analysis. As the study sought to establish these dimensions, it became apparent that both regression and correlation analysis had to be conducted in order to draw inferences and conclusions on the data thereof collected.

The study used the statistical package for social sciences to code, tabulate and compute the measurements of the multiple regressions. In this study, regression analysis was conducted to test the influence among the predictor/independent variables. Correlation analysis was also carried out with regards to the data collected and analysed in order to establish the association between the independent variables of project appraisal approaches and the organizational performance. The coefficient of determination denoted by the adjusted R squared was calculated in order to determine the variation of dependent variable as a result of changes in the independent variables. From the findings the value of adjusted R squared was 0.701. This indicated that there was a variation of 70.1% on the organizational performance due to carrying out project appraisal approaches using economic appraisal, financial appraisal, market appraisal and technical appraisal approaches at a 95% confidence interval. This showed therefore that 70.1% of the organizational performance could be accounted for by the use of the four project appraisal approaches- economic, financial, market and technical appraisal approaches. This finding therefore showed that a positive relationship between the study variables was evident.

#### 4.6 Performance Indicators used in the organization

The performance of the Aga Khan University Hospital in Nairobi is stated as a major stimulant in achieving the objectives of the organization AKU, (2016). The organization purported to use specific indicators to measure performance which included financial indicators, market growth indicators, customer satisfaction indices and annual target indicators AKU, (2016). In order to establish the extent to which the organization used the performance indicators to measure performance in various departments, the respondents were asked to rate them.

*Table 4.21: Performance Indicators used in the organization*

<b>Performance Indicators used in the Organization</b>	<b>No Extent</b>	<b>Small Extent</b>	<b>Moderate Extent</b>	<b>Large Extent</b>	<b>Very large Extent</b>
Financial indicators	3	3	9	10	26
Market growth	0	0	11	20	20
Customer satisfaction indices	0	3	8	25	15
Sustainable target achievement	0	0	10	25	16

From the data analysed as per Table 4.21, financial indicators were used to measure performance with 26 out of 51 respondents indicating that they had used them to a very large extent, 10 responded to have used financial indicators to a large extent with 9 stating to have used them moderately. Some of the respondents did not identify with the financial indicators as a means to measure performance with 3 respondents claiming not to have used this indicator to measure their performance and 3 stating that they had used them to a small extent. This could likely be linked to some of the responses received when respondents were asked if they had used financial appraisal approaches to assess their projects. As shown in Table 4.7, there were 6 respondents who stated that they did not use the financial appraisal approaches in assessing their projects. However, the results seemed to indicate the importance of meeting the financial goals of the organization given the large number of respondents who placed prominence on the use of the financial indicators as a means to measure performance in their departments and subsequently the organization at large.

The market growth indicator seemed to have been popular across board as a measure to gauge performance. On the market growth indices as a means to measure performance, 20 respondents indicated to have used this measure to a very large extent and another 20 respondents held that they had used this measure to a large extent. Of the 51 respondents, 11



suggested that they had used the measure in a moderate extent while none of the respondents claimed not to have used this measure in their performance measurement. Customer satisfaction was also said to have been used to measure performance with 25 of the 51 respondents stating that they had used the measure to gauge their performance to a large extent, 15 respondents said they had used it to a very large extent, 8 had used it in a moderate way and 3 had used it in a small extent. None of the respondents indicated non usage of this measure. These results implied that the organization had put emphasis on the customer satisfaction and market growth to measure the performance of departments and broadly the organization.

On the sustainable achievement of targets, 25 respondents held that the measure was used to a large extent to gauge their performance, 16 stated that the measure was used to a very large extent while 10 respondents held that the measure is used to a moderate extent. None of the respondents held the view that the measure is used to a small extent or that the measure is not used at all. This could be associated with the widely held view by most respondents who affirmatively stated that they had been evaluated based on financial indices as well as market growth indices. Given that targets are set around achievement of financial and volumetric (market) growth, it was apparent that the organization had put emphasis on the achievement of these indices and to a large extent tied them to the overall sustainable achievement of targets.

According to Aubry et al., (2014), in their journal article, they placed paramount importance to initiating projects that had an ability to transform an organization in a major way. They went on to state that in a complex organization, assessing projects in an environment where performance is critical, the organization ought to have had strict measures that evaluated this performance and assured the achievement of set objectives.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

The aim of this study was to establish the influence of project appraisal approaches on an organization's performance with a focus on the Aga Khan University Hospital. This chapter offers insights on the data findings, conclusions drawn from the summary of key findings and recommendations made. The data collected was summarised into tables and figures. Various statistical measures were conducted in order to draw inferences from the data collected and eventually summarised.

#### 5.2 Summary of Findings

From the findings of the primary research, it was revealed that majority of the staff who form project teams were between the age of 31 and 40 years (60.8%). It was also noted that there existed a near equal split in gender with female respondents at 52.9% while male respondents were 47.1% with majority of the respondents turning out to be educated at a post-graduate level (58.8%). Also worth noting is that most of the respondents were drawn from the clinical department (37.3%), although a normal distribution is noted on the representation of other departments in the data collected.

##### 5.2.1 Economic Appraisal Approaches and Organizational Performance

In terms of economic appraisal approaches used at the Aga Khan University Hospital, it was noted that the approach was used by all the respondents to assess the potential projects to engage in. Further probing highlighted that in order of chronology, 18 (35.3%) of the respondents indicated that they often used the economic appraisal approach, 17 (33.3%) said that they used the appraisal sometimes, 11 (21.6%) used the appraisal at all times while 5 (9.8%) hardly used the economic appraisal approach. When asked whether the use of economic appraisal approaches had influenced the organizational performance, 22 respondents claimed that the approach had a moderate influence to their projects and departmental performance, 15 stated the appraisal approach had a high influence, while 7 a piece stated the appraisal approach had a very high influence and a low influence respectively. These responses appeared to suggest that there was a low emphasis on the organizational performance given that 29 of the respondents did not experience better

performance as a result of using this appraisal approach and only 7 had noted significant performance as a result of using the economic appraisal approach.

### **5.2.2 Market Appraisal Approaches and Organizational Performance**

Market appraisal approaches had been used by 48 of the 51 respondents with 27 (52.9%) of the respondents stating that they commonly used the market appraisal approach in the determination of projects available for selection, 11 (21.6%) often used the approach while 10 (19.6%) used the market appraisal approach at all times when assessing the potential projects that the organization had wanted to engage in. A partly 3 (5.9%) of the respondents stated that they had not used the market appraisal approach in assessing the projects to be selected. In terms of the influence that the market appraisal approaches had on the organizational performance, 20 respondents indicated that the appraisal approach had a high influence on the performance of the projects, 16 stated that the approach had a moderate influence on the performance of the projects while 10 identified that the appraisal approach had a very high influence on the performance of the projects selected. On the other hand 3 respondents claimed that the approach did not influence the performance of the projects and 2 respondents felt that the approach had a low influence in terms of performance of selected projects in the department.

### **5.2.3 Financial Appraisal Approaches and Organizational Performance**

With regards to financial appraisal approaches, 45 of the 51 respondents specified that they had used the financial appraisal approaches in vetting the potential projects. Further findings revealed that a significant number of respondents were fond of using the financial appraisal approaches in their determination of the projects to be selected with 18 (35.3%) saying they had used the financial appraisal approaches at all times, 16 (31.4%) had commonly used the approaches in determining the viability of the projects to be selected, 11 (21.6%) stated that they often used the approaches and 6 (11.8%) stated that they did not use the financial appraisal approaches. With regards to the influence of financial appraisal approaches on the performance of selected projects, 24 respondents were of the opinion that this approach had a very high influence on the performance of the selected projects and department at large, 14 respondents stated that the approach had a high influence on the performance of the projects selected with 6 and 7 respondents who stated that the approach has no influence and had moderate influence respectively on the performance of the projects selected and subsequently on the organizational performance.

#### **5.2.4 Technical Appraisal Approaches and Organizational Performance**

On the use of technical appraisal approaches in determining the projects to be selected, it was observed in chronological order that 21 (41.2%) of the respondents commonly used the technical appraisal approaches, 14 (27.5%) stated that they used the approach at all times, 13 (25.5%) stated that they used the technical appraisal approach often while 3 (5.9%) stated that they hardly used the approach in determining the projects to be selected. When asked the extent to which technical appraisal approaches had influenced the performance of projects selected in their departments, 20 respondents held the view that the approach had a high influence on the performance, 13 stated that the approach had a moderate influence while 12 claimed that the approach had a very high influence on the performance of the projects in their departments. On the other hand, 3 respondents held that view that the technical appraisal approach had no influence whilst another 3 respondents said it had a low influence on the performance of the selected projects and by this means the organizational performance.

It was therefore observed that the organization did actually employ the project appraisal approaches when assessing their projects. It could also be concluded that the four project appraisal approaches had an influence on the organizational performance although with a varied extent. Further analysis suggested that on the combination of the four approaches, there was a greater effect on the organizational performance. This was because 24 of the 51 respondents indicated that by combining all the four approaches in determining the projects to be selected, there is a high influence on the subsequent performance of the projects and ultimately the department as a whole. In the same breadth, 22 respondents claimed that the combination of the four approaches in assessing the projects to be selected for implementation had a moderate influence on the performance of the projects while 5 respondents claimed that the combination had a very high influence on the performance of the projects that were earmarked for selection. None of the respondents claimed either a low or no influence on the organizational performance by combining the four approaches.

#### **5.3 Discussion of Findings**

The study sought to establish the influence of project appraisal approaches on an organization's performance by specifically carrying out the research on Aga Khan University Hospital. The study analysed four project appraisal approaches namely; financial appraisal approaches, economic appraisal approaches, market analysis appraisal approaches and

technical appraisal approaches. Further the study sought to establish the organizational performance given the projects selected for implementation that are assessed on these four appraisal approaches. In order to establish the influence of project appraisal approaches on an organization's performance, empirical studies were conducted through literature review while primary data is collected through a survey. The literature review opened different interpretations from various scholars on project appraisal approaches with the survey providing an in-depth understanding on how project appraisal approaches can influence the performance on the organization based on selected projects

Starting off with organizational performance and its critical place in the success of an organization, Bedanand et al., (2014), observed that organizational performance is critical in achieving the mission, vision and objectives for which they were formed. This, they observed spanned from business oriented organizations, community based organizations to human rights organization. Dinsmore & Cooke-Davies, (2005), appeared to agree with this notion and went further to claim that the success of organization's rested in the execution of business strategies as well as successful selection and implementation of projects. This seems to have been factual as observed from the data collected in this study. When asked the extent to which organizational performance indicators were used to measure their department's performance, an average of 39 of the 51 respondents agreed that the performance indicators namely; financial, market growth, customer satisfaction and sustainable target achievement were used to a great extent. This could then be interpreted to mean that the organization had put great emphasis on the departments to achieve the highest level of performance in order to contribute to the overall performance of the organization. From this observations based on review of scholarly articles and research as well as from the data collected and analysed in this study, it appears that organizational performance is largely an integral part of the success and continuity of an organization.

In order for organizations to achieve their set performance, various scholars pointed out that project initiation and implementation is the way to go. Dinsmore & Cooke-Davies, (2005) were of the opinion that project management had become the way of doing business in organisations. They further noted that organizations accomplished a considerable portion of their typical effort through projects and that projects had become the tools of implementing business strategies of an organisation. Burg, (2012) went further to observe that project appraisal is a necessary step for the determination of the projects to be selected and

implemented in an organization. He had arrived at this conclusion after reflecting on the many competing issues with regards to allocation of strained resources the alternatives between different projects and the impact of these projects and programmes on the company's performance. He therefore suggested that project appraisal techniques could help in the decision process and obtain a more efficient allocation of resources. The management of the organization had also argued for the use of project appraisal approaches in the determination of the projects to be selected for implementation (AKU, 2016). They stated that in their operations and management charter, four appraisal approaches were essential in determining the stature of the projects to be selected. These included economic, financial, market and technical appraisal of any project that is to be formulated.

The respondents were affirmative on the use of these appraisal approaches in the determination of projects to be selected. Of the 51 respondents, 46 indicated to have used the economic appraisal approaches to a substantive extent, 48 of the 51 respondents stating that they had used the technical appraisal approaches and market appraisal approaches to a great extent. With respect to financial appraisal approaches, 45 of the 51 respondents indicated that they had used these approaches to assess projects. Additionally, from the study conducted, the respondents were asked to identify the project appraisal approaches that had influenced the performance of selected projects in their departments. Of the 51 respondents polled, all the respondents seemed to agree that the use project appraisal approaches to assess their potential projects had a considerable influence on the subsequent performance of the projects selected. This is as demonstrated in Table 4.17 where the respondents were reacting to the statement that the combination of the four appraisal approaches had influenced performance in their departments.

In order to have more in-depth insights on the influence of project appraisal approaches on organizational performance, the respondents gave detailed perceptions through their responses in the open ended questions. It is a widely held view that project appraisal approaches were being used in the organization to determine the projects to be selected. When probed further, the respondents had given various observations with regards to the specific project appraisal approaches and their opinion on how these project appraisal approaches had influenced organizational performance.

With regards to financial appraisal approaches, in responding to the open ended questions, the participants acknowledged that the use of financial appraisal approaches was critical in

determining the potential projects the organization would take up for implementation. A group of respondents observed that the realization of financial goals of the organization is dependent on the carrying out of the financial appraisal. Other respondents highlighted the use of the financial appraisal approaches and suggested that the maximization of returns and surpluses is guaranteed when the organization used this approach to determine the projects it wanted to undertake. Some respondents indicated that there is a need to appraise the project with regards to attaining a financial pedestal in order for the organization to be assured of a steady return that would assure the achievement of its objectives. Other reasons given by the respondents attributed to the use of the financial appraisal approaches included financial viability given the constraint of budgets in the organization, the ease of understanding by management when a project will recoup its initial investment and some stated the ability of the organization to validate the project's value and associated risk. These views seemed to be supported by many scholars. According to Dayananda, (2002), organizational that wanted to invest in significant capital projects should have put in place an appraisal mechanism that would have been used to evaluate and rank the projects in order of their returns. Additionally Higgins, (2015) was of the view that for an organization to meet its strategic objectives organizations required financial resources which were limited in nature to be applied into various programmes and projects that would eventually achieve these objectives. He therefore suggested adopting a tool to assess the various competing projects that would adequately and efficiently distribute the financial resources. Other scholars who have contributed to these debate and appeared to validate the observations of the respondents include (Baker & English, 2011) who advocated for the use of financial appraisal to assess viability of projects before they began; Brealey et al., (2011) who also threw their weight behind financial appraisal approach in assessing the project returns and selecting the very best projects with greater returns.

On the use of economic appraisal approaches, various observations were noted. The respondents recognised that the use of economic appraisal approaches presented a better case on better utilization of resources and not necessarily focused on the financial gain. Some respondents argued that the use of economic appraisal approaches had promoted transparency on resource allocation in the organization that is not only dependent on financial returns but also the cost benefit that would inform the administration on the best use of their resources. One respondent observed that the use of economic appraisal approaches had supported the department's projects which bordered closely on promoting quality and infection control. It

had been reported by the respondents that the economic appraisal approach is a preference to them specifically because of the Cost Utility Analysis which is one of the methodology used in economic appraisal approaches. Cost utility analysis is used only within the health care sector where health care costs are compared with the benefits of health interventions without placing a financial value. This preference of economic appraisal approaches appeared to hold true as all 51 respondents admitted to have used the economic appraisal approaches. According to a recent report by Gammie et al., (2016) before a project can be undertaken in a healthcare setting, a precise economic analysis is necessary to determine whether the projects meets the threshold of benefits accruing from it vis-à-vis the estimated cost of the project. They further went on to suggest that in the case of healthcare institutions, the cost utility analysis is best placed to justify the engagement of a project. Interestingly when asked of their opinions on the extent to which the various project appraisal approaches had actually influenced their performance, only 7 respondents appeared to think that economic appraisal approach had a very high influence on their performance. The other three project appraisal approaches namely financial appraisal approach, market appraisal approach and technical appraisal approach had more than 10 respondents who held the view that these appraisal approaches had a very high influence on their performance. Some respondents stated that the use of economic appraisal approaches did not necessarily safeguard the assessment of projects. They argued that the techniques used were subjective and no specific means of verification is at hand to help in assessing the viability of the projects. However, Goeree & Diaby, (2013) reported that use of economic appraisal was vital for decision making. They argued that delivery of services in a healthcare institution is tied to efficiency and effectiveness of interventions. Additionally, they believed that healthcare organizations that used the economic appraisal approaches had a better chance of achieving their mission, vision and objectives.

With regards to the market appraisal approach, the respondents made key observations when responding to the use of these project appraisal approaches. Most of them agreed that the market appraisal approaches helped in identifying unique products that could respond to the market needs. This they observed is necessary in order to address products and service diversification. Yet other respondents believed that the use of market appraisal approaches would enable the organization to achieve competitive advantage by profiling their competitors and tailor making products and services that could place the organization on a competitive edge. Overall, most of the respondents observed that the use of market appraisal



approaches helped the organization in addressing the customers' needs and preferences which would ultimately lead to customer satisfaction. Most scholars appeared to have similar views. Brown & Brown, (2008) in their work on market research and analysis indicated that the market appraisal approaches must be designed to address the customers' tastes and preferences before embarking on any product development project. They further noted that market analysis would have the aim of identifying who were the competitors of the organization and outline the organization's competitive edge against that of the competitors. Other scholars such as Winston et al., (2013) pointed out that market analysis is critical in assessing the viability of products that were to be put in the market. They suggested that organization periodically carry out product life cycle studies to determine at what level their products were and if they required any intervention.

Finally, with regards to technical appraisal approaches, the participants had various observations. Some respondents believed that using the technical appraisal approach had helped them determine the skills and competencies required in order to engage in the project. This would help them in gauging the level of staff that they had and whether they had the requisite skills mix to implement a project. Another set of respondents highlighted that the use of technical appraisal approach had informed them of the necessary infrastructure to have been put in place in order to engage in certain projects. This had helped them to evaluate the gaps in the infrastructure that would have informed the organization on the requirement in the infrastructure which would in turn be used to determine the resource allocation of the project. One respondent stated that the technical appraisal is important in order to demonstrate the sustainability of particular services. The respondent is of the opinion that without the necessary inputs and outputs combined with the right staff, the sustainability and continuity of services would be in jeopardy.

#### **5.4 Conclusion of the Study**

The study had sought to establish the influence of project appraisal approaches on an organization's performance. The project cycle theory suggested that projects must be appraised for the purpose of measuring alternatives and options of projects that could be implemented.

The study established that AKUH indeed used the project appraisal approaches to assess and determine the projects it envisaged to engage in. The study also established the specific project appraisal approaches that AKUH used namely, financial appraisal approaches,

economic appraisal approaches, market appraisal approaches and technical appraisal approaches. Moreover, the study findings revealed a substantial use of these appraisal approaches with a high approval of use noted specifically for economic and technical appraisal approaches where all respondents alluded to the fact that they had used these two appraisal approaches to vet their projects. However, it is the significant importance that financial appraisal approaches that is used by the respondents that revealed how deeply important this approach had on the project selection. Although only 45 respondents stated that they had used the financial appraisal approaches to vet projects, 38 of these respondents claimed that using this approach had a very high influence on their performance. This as compared to 22 respondents, who observed the likelihood of high influence on performance using economic appraisal approaches, 30 who observed that market appraisal approach had a high influence on performance and 32 who indicated that technical appraisal approach had a high influence on performance.

These mixed opinions had a bearing in the results of the study. The findings revealed that 70.1% of the organizational performance could be accounted for by the use of the four project appraisal approaches- economic, financial, market and technical appraisal approaches. This finding therefore showed that there is a positive relationship between the study variables. However, the evidence of a strong positive relationship could not be established given the fact that only 70.1% variation to performance could be accounted for through the use of project appraisal approaches. It could therefore be concluded that the use of project appraisal approaches in vetting the projects to be selected is evidenced but there is no strong relationship to the variation of the organizational performance. A strong relationship could only be said to be evident had the variation been closer to 100% (Mugenda & Mugenda, 2003).

### **5.5 Recommendations**

This study recommends reflection by the stakeholders of the project appraisal approaches available to the organization and how they individually and collectively influence organizational performance. The findings of this study are relevant to healthcare organizations and referral hospitals that have diverse projects as it highlights the significance of using project appraisal approaches on potential projects for achievement of organizational performance.

Firstly, from the key findings and conclusion, it is apparent that organizational performance and project appraisal approaches have a positive correlation. Nevertheless, the correlation between project appraisal approaches and organizational performance does not seem to be strong. The organization therefore needs to determine how the project appraisal approaches had been used and to what extent they could have been varied to achieve the highest performance. A combination of project appraisal approaches needs to be determined for individual projects based on their profiles and expectations as opposed to a generic methodology of using all the four project appraisal approaches in vetting different projects. The use of a standard fixed methodology of project appraisal may lose the purpose of appraising projects given that different projects have different objectives; some may want to achieve some financial achievement yet others may have a quality, customer service or research agenda.

Secondly, the organization needs to establish what components would make up for organizational performance and their relationship to measure a project's success before being implemented. This is because from the data collected, the respondents pointed out that the organization placed a high preference on financial performance as a performance indicator followed by market growth, then sustainable target achievement and lastly on customer satisfaction. The organization should therefore find a way of balancing off and determining trade-offs as various projects could have different performance expectations.

The third recommendation is that the organization needs to develop a tool that can be used to evaluate the potential project's specific results and compare these with the anticipated results that were derived at the project appraisal stage. This tool would be important to the organization as it would highlight where the variations are and could draw lessons learnt by the various project managers and stakeholders. It should however be clarified that this tool should be used as a measure of the project achievements and successes but should not be used to measure and rate individual employees performance. This is to avoid manipulation by project managers and teams to tailor make expected results that would boost their individual performances.

### **5.6 Suggestion for future studies**

Based on the findings and observation made from the study, a number of opportunities for further studies were identified.

First, an in-depth analysis on the factors that influence the performance of projects in the healthcare set up may be conducted. This would give greater insights on the subsequent performance of the organization as a result of sustained success of individual or a group of projects.

Secondly, further research on the determinants of organizational performance with specific focus on healthcare organizations may be conducted. This is because most healthcare organizations provide essential services without consideration for making profits or surpluses yet they require to recover and stay above their expenses for future sustainability provision as well as expansion of services.

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## APPENDICES

### Appendix I: Introductory Letter

David Macharia

P.O. Box 60448 - 00200

Nairobi, Kenya

Tel; +254 722 987182

Dear Sir/Madam,

#### **RE: INTRODUCTORY LETTER – RESEARCH PROJECT**

I am a graduate student in the School of Continuing and Distance Education at the University of Nairobi. In partial fulfillment of the requirements of the degree of Master of Arts in Project Planning and Management, I is conducting a research on *“Influence of project appraisal approaches on an organization’s performance: A case of Aga Khan University Hospital in Kenya”*

Kindly take a few minutes to complete this questionnaire. Please note that your honest responses will be strictly confidential and purely for academic purpose. Your acceptance to complete this questionnaire is greatly appreciated.

Thanking you in advance for your co-operation

Yours Faithfully,

David N. Macharia

**Reg No: L50/76293/2014**

## Appendix II: Consent Form

Dear Respondent,

I is undertaking a study with the title: **Influence of Project Appraisal Approaches on an Organization's Performance: A Case of a Private Teaching and Referral Hospital in Kenya**. This study is aimed at establishing how implementation of project appraisal approaches influences organizational performance.

You are hereby requested to read through this consent form before undertaking to answer the questionnaire

1. The participation of this research study is completely voluntary. You have the option to stop your participation at any time prior to the completion of the study
2. Other than having an insight of the best practices of project appraisal approaches to the respondent, there are no immediate benefits in monetary or non-monetary terms. However, the findings may contribute towards adding new knowledge in the context of project management with regards to achieving project effectiveness and efficiency as well as project deliverables in the health sector
3. The data from this study may be published at a later date but the information will not contain any identity detail on the person/respondent or the organization.

Any complains or clarifications are welcome and can be channelled to the Research Ethics Committee of the Aga Khan University on 020-3662148/1136 or at [research.support@aku.edu](mailto:research.support@aku.edu)

I accept to participate.

Sign: \_\_\_\_\_

I Decline Participation

Sign: \_\_\_\_\_

### Appendix III: Questionnaires

Dear Respondent,

My name is David Macharia, a postgraduate student at the School of Continuing and Distance Education, University of Nairobi undertaking a study on the influence of project appraisal approaches on an organization's performance.

#### Section A: General Information

1. Kindly indicate your gender

Female [ ]

Male [ ]

2. Please indicate your age bracket

20-30 yrs [ ]

31-40 yrs [ ]

41-50 yrs [ ]

51 and above [ ]

3. Indicate your highest level of education

Secondary level [ ]

College Diploma [ ]

Bachelor's Degree [ ]

Postgraduate [ ]

Other Specification [ ]

4. Please indicate the department category

- Administration [ ]
- Support Services [ ]
- Clinical Department [ ]
- Education & Research [ ]
- Others [ ]

5. Please indicate your level of management in Aga Khan University Hospital?

- Senior Executive [ ]
- Middle Management [ ]
- Team Leaders [ ]
- Supervisory [ ]

## **SECTION B: Project Appraisal Approaches in Aga Khan University Hospital**

This section seeks to generate data on the current project appraisal approaches being used in Aga Khan University Hospital in Kenya.

### **PART A: Financial Appraisal Approaches**

6. Are you using financial appraisal approaches in assessing the potential projects in your department?

Yes [ ]

No [ ]

7. To what extent do you use the financial appraisal approach in selecting the projects to engage in?

- i. Not used at all [ ]
- ii. Hardly used [ ]
- iii. Often used [ ]
- iv. Commonly used [ ]
- v. Used at all times [ ]

8. Please indicate the extent to which the financial appraisal approaches are used to assess the projects to be implemented in the organization.

Using a scale of 1-5, where (1-No Extent, 2- Small extent, 3-Moderate extent, 4-Large extent and 5- very large extent)

<b>Financial Appraisal Approaches</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Payback period of the projects is used to determine viability of the projects to be selected					
Net Present Value is used to determine the viability of the projects to be selected					
A higher Internal Rate of Return is used to determine the projects to be selected					
Ranking of projects using the Profitability Index of various projects is used to determine projects to be selected					

9. In your opinion, do you think using financial appraisal approach assists you and the department in identifying the projects you would like to implement? Give at least two reasons.

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

**PART B: Economic Appraisal Approaches**

10. Do you and your department use economic appraisal approach to assess your projects?

Yes [ ]

No [ ]



11. Please indicate the extent to which the department uses the economic appraisal approach in developing project options by ticking the appropriate box.

Never [ ] Hardly [ ] Often [ ] Sometimes [ ] Most times [ ]

12. Please indicate the extent to which the economic appraisal approaches are used to assess the projects to be implemented in the hospital.

Using a scale of 1-5, where (1-No Extent, 2- Small extent, 3-Moderate extent, 4-Large extent and 5- very large extent)

<b>Economic Appraisal Approaches</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Cost Benefit Analysis approach is used to assess projects					
Cost Effectiveness Analysis approach is used to assess projects					
Cost Utility Analysis approach is used to assess projects					

13. In your opinion, do you think using economic appraisal approach assists you and the department in identifying the projects you would like to implement? Give at least two reasons.

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

**PART C: Market Appraisal Approaches**

14. Are products and services appraised to determine their viability in the market?

Yes [ ] No [ ]

15. Kindly indicate in your own views the extent to which market appraisal approach is used in determination of the projects through which products and services are identified.

- i. Not used at all [ ]
- ii. Hardly used [ ]
- iii. Often used [ ]
- iv. Commonly used [ ]
- v. Used at all times [ ]

16. Please indicate the extent to which the market appraisal approaches are used to assess the projects to be implemented in the organization

Use a scale of 1-5, where (1-No Extent, 2- Small extent, 3-Moderate extent, 4-Large extent and 5- very large extent)

<b>Market Appraisal Approaches</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Demand Analysis is conducted to determine the projects to be selected					
Competitive landscape analysis is conducted to determine the projects to be selected					
Product life-cycle analysis is assessed to determine the projects to be selected					

17. In your opinion, do you think using market appraisal approach assists you and the department in identifying the projects you would like to implement? Give at least two reasons.

.....

.....

.....

**PART D: Technical Appraisal Approaches**

18. Does the department assess its technical capability to handle projects?

Yes [ ]

No [ ]

19. To what extent does the department use the technical appraisal approach to identify the projects that it wishes to initiate?

i. Not used at all [ ]

ii. Hardly used [ ]

iii. Often used [ ]

iv. Commonly used [ ]

v. Used at all times [ ]

20. Please indicate the extent to which the technical appraisal approaches are used to assess the projects to be implemented in the organization

Use a scale of 1-5, where (1-No Extent, 2- Small extent, 3-Moderate extent, 4-Large extent and 5- very large extent)

<b>Technical Appraisal Approaches</b>	1	2	3	4	5
Availability of supplies and inputs is determined in the selection of projects to be implemented					
Availability of infrastructure is assessed to determine the projects to be selected for implementation					
Assessment of manpower and their skills is conducted to determine the selection of projects to be implemented					
Capacity assessment is conducted to determine the ability of the organization to implement the projects to be selected					

21. In your opinion, do you think using technical appraisal approach assists you and the department in identifying the projects you would like to implement? Give at least two reasons.

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

**PART E: Performance of the Organization**

The questions in this sub-section will seek to establish the performance indicators that the organization uses to measure performance in various departments. The questions will also attempt to identify the influence of project appraisal approaches on the organization’s performance.

22. Please indicate the extent to which the organizational performance indicators are used to measure your department’s performance. Use a scale of 1-5, where (1-No Extent, 2- Small extent, 3-Moderate extent, 4-Large extent and 5- very large extent)

Statement	1	2	3	4	5
Financial indicators such as surplus margins and positive cash flows are used to measure performance					
Market growth and increase in volumes is used to measure performance					
Customer satisfaction indices are used to measure performance					
Sustainable performance where the department surpasses the targets is used to measure performance					

23. As the department head, using a scale of 1 to 5 (where 1 is the lowest and 5 is the highest magnitude), please indicate the project appraisal approaches that have influenced the performance of selected projects in your department?

<b>Statement</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Use of economic appraisal approaches in project selection has influenced the performance of the department.					
Use of financial appraisal approaches in project selection has influenced the performance of the department.					
Use of market appraisal approaches in project selection has influenced performance of the department.					
Use of technical appraisal approaches in project selection has influenced the performance of the department					
The department is operating efficiently and effectively meeting its key performance indicators because of using the four project appraisal approaches in determining the projects to be selected for implementation.					

**THANK YOU FOR YOUR TIME IN COMPLETING THIS QUESTIONNAIRE**

## Appendix IV: Data Collection Approval



THE AGA KHAN UNIVERSITY

Ref: 2017/REC-57 (v1)  
June 16<sup>th</sup>, 2017

Mr David Macharia  
Principal Investigator  
Aga Khan University, Kenya

Dear Mr. Macharia and team,

**Re: INFLUENCE OF PROJECT APPRAISAL APPROACHES ON AN ORGANIZATION'S PERFORMANCE: A CASE OF A PRIVATE TEACHING AND REFERRAL HOSPITAL IN KENYA**

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The Aga Khan University, Research Ethics Committee (REC) is in receipt of your proposal submitted to the Research Office on 12<sup>th</sup> May 2017. In a meeting held on 12<sup>th</sup> June 2017, the committee recorded that this is a low risk study. Further, it is recommended that:

1. Include a section on proposed results dissemination plans
2. Participant information sheet is missing. This should include information about the study, expectations from the respondents, potential benefits/risk, complaints procedure, etc.
3. Also, the Consent Form needs to have a provision for participants to register complains and seek clarifications i.e. contact information
4. See further in-text recommendations for your consideration

Kindly address the above and resubmit. If you have any questions, please contact Research Office at [research.support@aku.edu](mailto:research.support@aku.edu) or call 020-366 2148/1136.

With best wishes,

Dr. Ameen Lakhani, Chairman  
**Research Ethics Committee, AKU (Kenya)**