DETERMINANTS OF SUSTAINABILITY OF COMMUNITY BASED PROJECTS IN KENYA: THE CASE OF CAROLINA FOR KIBERA PROJECTS

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A Research Project report Submitted in Partial Fulfilment of the Requirement for the Award of the Degree of Master of Arts in Project Planning and Management of University of Nairobi

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DECLARATION

This research project report is my original work and has not been presented for examination in any other University.

Signed

…….Date…….

Linet Onkoba

L50/71928/2014

This research project report has been presented for examination with my approval as the University supervisor.

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DEDICATION

This project is dedicated to my family especially my husband Nicholas Lumbasi and my dear son Nesta Kweyu

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Profound appreciation Dorothy Kyalo, my research supervisor for her continued invaluable guidance during the period of this study. Her timely response to queries and feedback is a pillar of motivation.

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LIST OF ABBREVIATION AND ACRONYMS

CFK:	Carolina for Kibera
CBRHP:	Community Based Reproductive Health Project
ERR:	Economic Rate of Return
HIV & AIDS:	Human Immunodeficiency Virus & Acquired Immunodeficiency Syndrome
IFAD:	International Fund for Agricultural Development
NGOs:	Non-Governmental Organization
O & M:	Operation and Maintenance
PM& E:	Participatory Monitoring and Evaluation
TOC:	Theory of Constraints
WCED:	Western Cape Education Department

ABSTRACT

Sustainability of community projects, and of the benefits they deliver, has been a major concern of the sector. The great investment by local communities and business class has not effectively tackled the challenge of sustainability, therefore many projects still fail to maintain the momentum of their lifecycle. The aim of this study was therefore to examine the determinants of sustainability of the community based projects in Kenya. Main emphasis was paid to Carolina for Kibera programme of projects. The study was guided by the following research objectives: to examine the effect of resource support on sustainability of community based projects in Kibera Slums, Kenya, to establish the influence of project design on sustainability of community based ventures in Kibera Slums, Kenya, to determine the influence of operational maintenance on sustainability of community based projects in Kibera Slums, Kenya, to examine the effect of participatory monitoring and evaluation on sustainability off community based projects in Kibera Slums, Kenya. The research work used a descriptive design in the collection of data on the determinants of sustainability of community based projects in Kibera Kenya. The target population was drawn from twenty three (23) projects in Kibera initiated by Carolina for Kibera consisting of nineteen (19) project managers, ninety one (91) project staff and one thousand two hundred and eighty three (1,283) beneficiaries. Simple random sampling technique was used to determine the sample size. Questionnaires were used for data collection and reliability was tested using test-retest method and analyzed using Cronbach's alpha with set lower limit of 0.6. Validity of the questionnaire was tested by use of content validity as well as experts' opinion. Data was analyzed using descriptive and inferential (correlation and regression) statistics with the aid of the software for social sciences (SPSS) and presented using frequency tables, bars, line graphs and pie charts. The research concluded that resource support, project design, Operational maintenance significantly influence sustainability of community based projects. The study found that the greatest factor affecting the sustainability of the community based projects lies with resource support. This was followed by monitoring and evaluation then operational maintenance and finally project design. The study recommends that all the project stakeholders i.e. project managers, project beneficiaries, project donors and even the government officials should be keen to consider all this factors of project design, resource support, Monitoring & evaluation during the project inception, planning and implementation to ensure that the project attains its intended objectives.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

According to Project Management Institute (2006) a project is a distinctive set of coordinated activities, with distinct beginning and end points, ventured privately or by an organization to meet specific objectives within a specific time frame.

A community venture is a term used to refer to any community-based project. (Allen, 2004). On the other hand, the term community is defined as: group of people bound by a common goal and aspirations and a given set of manerisms such as tradition, customs and religious orientations. Community-based ventures follow a specific pattern such as population clusters, regional boundaries and different levels of income (Cleaver, 2001).

According to Espinosa (2000) sustainability is the ability of a venture to keep its existence and growth momentum throughout its lifecycle. maintain. The World Bank (1986), defines continuity as the ability to maintain an optimum level of benefit flows through its financial cycle. The flow may be in quantitative terms involving financial rates of return, benefits or qualitative in terms of technology transfer and institution building. The level of output is a major indicator to measure the level of success of any community based venture. This takes the utmost responsibility of all stakeholders and total commitment of players to the letter and spirit of the venture.

IFAD (2006) distinguishing several factors that either contribute to hinder the achievement of project sustainability: the political climate through the enactment of sound policies, stakeholder interests and political interference; social and institutional support, policy implementation, staffing, recurrent expenditures; economic rebound, financial returns, technical training for operations and maintenance.

Allen, (2004) observes that the outcome of a community venture is closely linked to the coordination of the multi-sectoral approach of the stakeholders such as the government, private sector, NGO's , media or the so called forth estate , the political climate and also

the international partners. The political environment can affect a project positively or negatively, hence, a project strongly supported by one administration may lose its support in the event of government change or office portfolio (Fui-Hoon, Fiona, Lee-Shang and Jinghua, 2001).

There are several factors that influence sustainability of projects. They include planning and design, well-coordinated implementation, and monitoring and evaluation techniques to refine weak areas as reinforcement is done on the effective areas (Isabalijaa, Kituyi, Mayokab, Rwashana & Mbarika, 2011). Project Management Institute (2006) also points out that there are numerous approaches to project continuity. The perceived benefits by the local community such as employment avenues and favorable market for its goods and services. Transparency in the procedures such as tendering and inclusivity in the running of the joint venture.

The sustainability of a project is pointed out by its continuous operation and maintenance of the system (O&M). The O&M embraces project diversity and inclusivity of all the sectors required to sustain the project. According to Yacoob, (1990) sustainability of Projects is usually constrained by the inadequacy of financial resources that are needed to implement the same. Due to the imperatives of budgetary policies it is difficult to establish and resource project structures and associated institutions essential for effective implementation and the achievement of goals, except over the long haul. However, the situation can be mitigated by strong and effective capacities at the national level to manage and coordinate project financing which adequately project implementation and management

According to Kumar (2002) studies have shown that inclusiveness and active involvemt of all stakeholders nurtures a deep sense of pride and ownership of the joint venture rather than the one-man-syndrome. The active participation ensures that the venture can outlive its existence to future generations (Garande&Dagg 2005). The one- man- show approach robs the venture of its momentum as individuals are weighed down by the heaviness of responsibilities.

The resource support provided by the local community groups particularly with respect to the technical efficiency and financial support is essential to community venture continuity. In addition, the involvement of community groups in supporting project in areas of customer preference, effectiveness in design construction and maintenance of project facilities and equipment is equally important in project sustainability. Moreover, the participation of diverse community groups and training of staff on efficient use and management of project assets, improved skills and increased incomes of the beneficiaries and the local community will be reasons enough to sustain their interest in the project (2004).

Carolina for Kibera (CFK) is a project that is managed by locals and supported by volunteers from both American and Kenyan. The CFK's mandate is to champion the emancipation and spearheading the youth agenda particularily in the slum areas of Kibera. The youths in this areas are greatly disadvantaged by the many evils of society hustling even for the most basic necessities of life. In Kibera, life is a daily struggle. The CFK's engages the youth in activities such as sports, community development and young women's empowerment.To address these needs, CFK established three core projects: a youth sports association, Binti Pamoja Center and Rye Clinic.

The Sports Association uses sports to educate people on healthy lifestyles while fostering positive co-existence among the Kibra slum dwellers. There are about 5,000 youths who take part in the annual football competitions organized by CFK. The Tabitha Medical Clinic is another success story in Kibera. Then linic is a full fledged heathy are center offering a myriad of services both outpatient and inpatient. It has professional and experienced paramedics who offer their services to the Kibera residents at very affordable rates. The clinic, due to its affordability offers services to 112 patients daily.

The Sexual Reproductive Health Program uses debates, community theater, innovative door-to-door campaigns and school clubs which are spearheaded by about sixty peer counsellors. The peer counsellors disseminate information on sanitation and reproductive healthy including the campaign against HIV/AIDS scourge. The group does peer to peer counselling which has proved quite successful as their peers easliy open up to them and

communicae at the same level. They educa,te the community on safe birth-control alternatives and campaign against pre-marital sex, teenage pregnancies and sensitize them against procuring unsafe arbortions which statistics have shown to be very high.

The project also engages in collecting and recycling of solid and electronic waste. The electronic waste, which could be otherwise pose an health risk is collected and useful components reused. This has been found to safeguard the environment at the same time generating income. There are more than fifty youth being involved in the program and over 2, 400 The proousehold are currently being covered.The local women groups have not been left behind but have been actively involved in the recycling of plastic waste which they transform into lady handbags for commercial purposes.

1.2. Statement of the Problem

The continuity of community ventures, and of the resulting profits is of great interest by many researchers. Millions of dollars are invested by local communities and business people but fall short of maintaining the continuity of returns throughout the lifeclye of the venture. A number of factors may undermine the long term sustainability of community ventures, these include: the lack of close monitoring to mitigate emanating challenges. The lack of tecnocrats to tie the loose ends in successful delivery and follow-up to the conclusive end of the venture. As the number of community projects increases, both locally supported and other supported by big corporate, precise information is key in major decision making to yield the desired effects and remove the bottlenecks to the continuity of the venture.

In his study Karanja (2014) sought to investigate the success of the youth ventures in parts of Kangema in Muranga with respect to impact of effective management on the intergrality of the venture. The findings of the study showed a great correlation between prudent management of resources, continuous training and timely feedback as key pillars to the success of youth ventures. However, the study was not comprehensive to include other youth income generating projects in other counties, besides the variables were not exhaustive enough. Sizwe and Graciana (2012) studied the sustainability of Swaziland's

local waters. However the research study dealt with the general factors and failed to cover the specifics of the venture's continuity.

The goal of Habtamu (2012) study was to find the factors affecting the continuity of rural water supply systems in Ethiopia's Amhara area. However, the research study was equally not comprehensive as it focused only on one variable relating to the role of community involvement in project sustainability. Stephen, Isabalijaa, Kituyi, Mayokab, Rwashanac and Mbarika (2011) looked into Uganda's telemedicine data systems implementation and integration. However, the research study used case studies hence was not comprehensive enough and besides the study was not exhaustive as there are other factors affecting sustainability of telemedicine information systems. Therefore a knowledge gap exists in project sustainability with respect to the factors supporting project sustainability and this study therefore sought to investigate the determinants of sustainability of community based projects in Kibera Slums, Kenya

There are has been quite a number of ventures that have been initiated by various stakeholders in Kenya and across Africa. Unfortunately most have not served the intended purpose because they don't get to pick up and operate as envisioned. For example the Lake Turkana fish processing plant in Kenya which was designed in 1971 with an aim of providing jobs to the Turkana people through fish farming. The construction of the plant was completed and operations started but lasted for a few days after which it was shut down. Factors that led to its closure included, cost to operate freezers and the demand for clean water which is not readily available in Turkana being a semi arid region. The Turkana people being nomads with no background knowledge of fish farming could not integrate their lifestyles of nomadism and fish farming.

The Lesotho Highlands water project in South Africa is another example of unsustainable project. The project was started in 1986 with an objective of diverting fresh water from the mountains for electricity and sale to South Africa. Even though the electricity was delivered, it proved costly and the diversion of water was ill advised. The project was abandoned in 2005 and legal action taken against the firms involved.

The Roll Back Malaria, across Africa project which was started was established in 1998, targeting to reduce the malaria infections to less than half by the year 2010. The project was budgeted at about $1.9 billion yearly in Africa only. The project had however received $200 million in its kitty by 2012. The underfunding of the project saw the infection rate going up by 12 %. Experts say donors did not honor their pledges, additionaly, some programs were subject to political debates like whether or not to purchase low cost generic medicine or what amounts of money should the poor pay for mosquito nets or what sorts of pesticides to use. Due of lack donor funds flow as it was earlier projected the project could not be sustained. This and other example not highlighted have necessitated further study on factors that perpetuate the continuity of community ventures.

1.3 The aim of the research

The research set to establish the determinants of sustainability of community based ventures in Kibera Slums, Kenya using the case study of Carolina for Kibera.

1.4. Objectives

The following specific objectives guided the study:

i) To examine the influence of resource support on continuity of ventures initiated in Kibera Slums, Kenya.
ii) To establish the influence of project design on sustainability of community based projects in Kibera Slums, Kenya
iii) To determine the influence of operational maintenance on sustainability of community based projects in Kibera Slums, Kenya
iv) To examine the influence of monitoring and evaluation on sustainability of community based projects in Kibera Slums, Kenya

1.5. Research Questions

The study sought to answer the following research questions.

i) How does resource support influence sustainability of community based projects in Kibera Slums, Kenya?

ii) To what extent does project design influence sustainability of community based projects in Kibera Slums, Kenya?
iii) How operational maintenance influence sustainability of community based projects in Kibera Slums, Kenya?
iv) To what extent does participatory monitoring and evaluation influences community based projects in Kibera Slums, Kenya?

1.6. Significance of the Study

The research study would significant to project managers and staff of community projects in Kibera as they would be able to understand the sustainability of project development and how they would be able to strengthen the project so as to achieve its sustainability. The findings of the study would be significant to project beneficiaries as it would enhance their understanding of the importance of project sustainability and the need for participation of local communities in project design, implementation and management so as to advance the project sustainability. The study would be of important to project donors and sponsors who may appreciate the importance of community work to enhance these factors among others.

The study would enhance government officials' knowledge and understanding on the factors that affect community participation, partnerships, monitoring and evaluation in achieving project sustainability and apply the same to other projects.

1.7. Research Limitations

In the collection of data, the researcher encountered with some participants failing to give full information due to fear of backlash for senior officials of the organization. The researcher had to assure the respondents of the non disclosure of the information given to avoid victimization. Some respondents could not provide legitimate information but instead provided general or anonymous data which may be unreliable. This issue was dealt with where the researcher alternated open ended and closed questions.

1.8. Delimitations of the Study

The study was limited to investigating the factors that determine sustainability of community based ventures in Kibera Slums, Kenya. The study focused on the effect of resource support, project design, the monitoring and analysis on the integration of community ventures in Kibera Slums. The target population was drawn from Carolina for Kibera projects and consisted of project managers, project staff and project beneficiaries. The period the research study covered was between 2013 and 2014.

1.9. Assumptions of the study

The study used a questionnaire that relied on self-report responses to collect data for the study; the respondents to the questionnaire were assumed have given accurate and responses to the best of their knowledge. It was also assumed that all the Carolina for Kibera staff and management would be available during the period of the study.

1.10. Definition of Significant Terms

Community Project

A community project is a term applied to any community-predicated project. It commences when a small group of incentivized individuals within a community converge with a shared concern like responding to a gap or a need in the community.

Community Participation

The community was involved in the step by step design and execution of the community venture, the evaluation and monitoring of the venture for goodwill and improved performance of the joint venture.

Implementation

Implementation means putting word into action; ensuring that organization functions harmoniously as per blue print.

Maintenance

Continuous program for the upkeep and preservation of project facilities and equipment required to maintain them in efficient and effective condition to support project objectives

Monitoring and Evaluation

Monitoring means keeping track and assessing of project's activities and outputs and giving timely feedback to the concerned parties.

Operation

Refers to the provision of day to day services required to operate the project functions

Project Sustainability

The ability of the venture to run with minimum interference throghout the lifecyle and deliver successfully on the set target.

Project Design

Refers to the synchronized and well-coordinated breakdown of the task into manageable units and assigning each to specific technical group for handling. The approach can be top-down or bottom up problem anaylsis.

Operation

Refers to the provision of day to day services required to operate the project functions

Resource Support

These are the human efforts, equipment and machines and money required in the delivery and maintenance of project. They may be internal or external and include suppliers, contractors, and partners, statutory organizations etc.

1.11. Organization of the Study

The project report has been arranged into five chapters to effectively to effectively meet the study objectives. The first chapter has sought to introduce the background information relevant to the study and the statement of the research problem. The chapter also covers the general and specific assumptions and finally the definition of significant terms. Chapter two shall review literature, which is relevant to this study. The literature review critical to the women participation in community project management in Kenya. It shall also provide a conceptual framework on the relationship between the dependent and independent variables of the study. The third chapter has covered the research methodology from the design, target population, sample size and sampling techniques, piloting, data collection and analysis techniques. Chapter four shall consist of data analysis, presentation and interpretation while chapter five shall be discussions of data presented in chapter four, conclusions and recommendations for further research.

CHAPTER TWO
LITERATURE REVIEW

2.1Introduction

The evaluation of all sources of data that relate to the topic shall be discussed herein together with related work (Baker, 2003). The critical gaps in the published literature especially on the administration of Community Based Projects (CBPs) shall be clearly be shown as a justifiable basis for embarking on this study. The great input by the NGOs on the CBPs and their sustainability shall be delved into. This section will examine the following three theories; Theory of constraints, the theory of sustainability, and Aggregative and distributive theory. Also the role played the resource support, project design, operational maintenance and monitoring and evaluation in sustainability of community based projects will be examined.

2.2. Sustainability of Projects

The ability of benefits to trickle down to the lowest curdle of the organization, especially after funding has been done is the critical test of sustainability. However, it is of great importance to understand that benefit sustainability does not necessarily indicate that the venture itself perpetuates. The other threats to sustainability emanates from poorly formulated policies and overcomsuption from recurrent expenditure at the expense of production (Norgaard 1992). However there are myriad of factors that either positively or negatively influence project sustainability which must be critically looked during project design and implementation.

2.2.1 Resource Mobilization in Community based ventures

If a project does not have the resources it requires to implement a project plan it cannot be prosperous hence projects obtain these resources from both internal and external sources (stakeholders or community contribution). Resources are people, equipment and funds. Resource mobilization is a strategic process that is grounded in effective management of community based venture through open communication (Jugder& Muller, 2005).

Financial resource is the most critical in the sustainability of a project. Atkinson, (1999) observed that for efficacious operation and maintenance of community projects, it is paramount that financial management be in the hands of community members. Community participation in resource mobilization process strengthens and broadens partnerships with the local community/ stakeholders and also creates spaces for mutual learning. Bhavesh, (2006) illustrated that participatory resource mobilization process produce actual welfare effects by improving the effectiveness of project performance, emphasizing a pro-poor orientation and reducing possibilities for failure.

Transparency is a vital ingredient for building trust and maintaining the commitment of individual members of community projects. When the beneficiaries actively participate in financial management of community projects, the management committees incline to be more accountable and transparent in their operations. A study done by Twebaze (2010) on community mobilization in rural water supply and sanitation programs in Wakiso District Uganda established that the high cognizance by project beneficiaries on the way funds were spent incremented transparency in the way that the water Utilizer Committees of the programs operated. Atkinson (1999) observed that for efficacious operation and maintenance of community projects, it is paramount that financial management be in the hands of community members.

The in-kind material donations such as buiding materials, food stuffs and training equipment can help in reducing the costs of implementing an activity greatly. The donated material will definitely bring down the overall budget and gives an opportunity for members of the community to take part in a manner they can effectively manage.

2.2.2 Project Design and sustainability of Community Projects.

The Project design starts with clear verbalized goals, objectives, and underlying postulations. Project components must be rigorously monitored to ensure resources are well utilized in the most prudent manner. It is also important to monitor the laid down procedures of procurement to eliminate abuse by unscrupulous members of procurement committees. Environmental assessments and approval by bodies such as National

Environmental Management Authority (NEMA). Proper mitigation procedures should also be followed to minimize adverse effects to the environment.

2.2.3. Monitoring and Evaluation and sustainability of Community Projects.

According to Clements and Gido (2003) monitoring designates checking and testing each portion of project implementation vis a viz the set standards. Berkun (2005) explains the need for equitable distribution of resources through monitoring while project evaluation is that constituent of the venture that maintains its momentum and on course within the budgetary constraints. The M&E needs high level of coordination at the management level and draws from the best of each stakeholder in the entire spectrum of project execution and provide correction of any shortcomings.

The performance of a venture cannot be sustained without the sustained monitoring and evaluation. It is also imperative that target setting should be done collectively to realign energies and commitment of the stakeholders to the set goal. Endeavoring to achieve these may provide a committee with relevance and remain focused during the lifecycle of the project (Stephen, 2000).

Reporting the progress of community projects to the beneficiaries enhances transparency and accountability. The community develops trust with the project management and they can freely contribute funds for the operation of the projects and this makes the projects to be sustainable. Boyer et.al (2008) noted that community participation in assessing project progress is critical for their sustainability. Project progress reporting meetings should be held customarily and the local community equipped to actively participate. He additionally observed that the community should be offered a chance to query on the progress of the community projects because this reduces chances of misappropriation of project resources.

2.2.4 Operation and Maintenance (O&M) and sustainability of Community Projects.

The bulky of responsibility of O&M lie with community management the community and its bellwethers ought to be identified and given credit for their ingenious and individual efforts to bring great success to the organization through their own quandaries.

. The local community should therefore be sensitized on the need to completely understand the direct and indirect implications of a project within their locality. The community should not only embrace the positive benefits such as employment, increased income and elevation of its status, but also the negative ramifications.

2.3. Theoretical Framework.

The theories that underlie this study include the theory of Constraints, theory of Sustainability and the Aggregative and Distributive Theories, which are discussed below in details.

2.3.1 Theory of Constraints

The Theory of Constraints (TOC) articulates that every system, however how successful it has neen has at least one constraint that hinders its performance. The theory of constraints (TOC) , a management philosophy introduced by Goldratt in 1984 ,holds that any manageable system has an inhibitive factor which tends to cap the best perfomance of the institution. The constraint is the inhibiting factor that averts the system from achieving its goal or a project from getting more throughputs (typically, revenue through sales). Restraints can be within or outside the system.

A constraint from within exists when the market takes out more from the system than it gives back leading to a net loss fom the system. The dynamics of demand and supply constitute an external constraint. The project managers closely monitor the demand and supply curves to ensure equilibrium is maintained. The internal constraints include: lack of skilled labour and equipment necessarily to scale the operations of the venture. The other conditions which must be met include safety of the workers which should br in proper protective gear while working among others. The main goal for many organizations is making money in pursuit the goal.

2.3.2 Theory of Sustainability

The cohesivesnss of a community venture is key to the project success. The Brundtland report of 1987 linked sustainability to change, in the manner in which investments, exploitation of resources, and technological advancemnet work in tandem to meet human

needs and aspirations (WCED,1987). Projects are considered as transitionary organizations, in this perspective, considered as transitory organizations which work in a dynamic equilibrium (Lundin &Söderholm, 1995; Turner & Müller, 2003) that have a trickle down effect to all the components of the project.

2.3.3 Aggregative and Distributive Theories.

Jacobs (1993) and Weiss (1995) state that continuity of a joint venture takes into account the current environmental impact and project the a future impact on the the environment. They argue that equity requires equitable treatment of people regardless of class or social standing. Scarce goods should be allocated so as to maximize the sum of individual utilities (Yaari 1981).

The just distribution of resources is that which equalizes welfare among individuals. Rawls (1971) and Sen (1980) hold that resources are the opportune base, but that there are different kinds of resources that are of varying importance to the theory of equity. Sen (1980, 1999) holds that not the goods themselves are paramount, but what these goods can do for people

2.4. Conceptual Framework.

The study focuses on the relationship between the independent variables such as resource support, project design, operational maintenance and monitoring &evaluation and how they influence sustainability of community projects which is the dependent variables (outcomes) as shown in Figure 1.

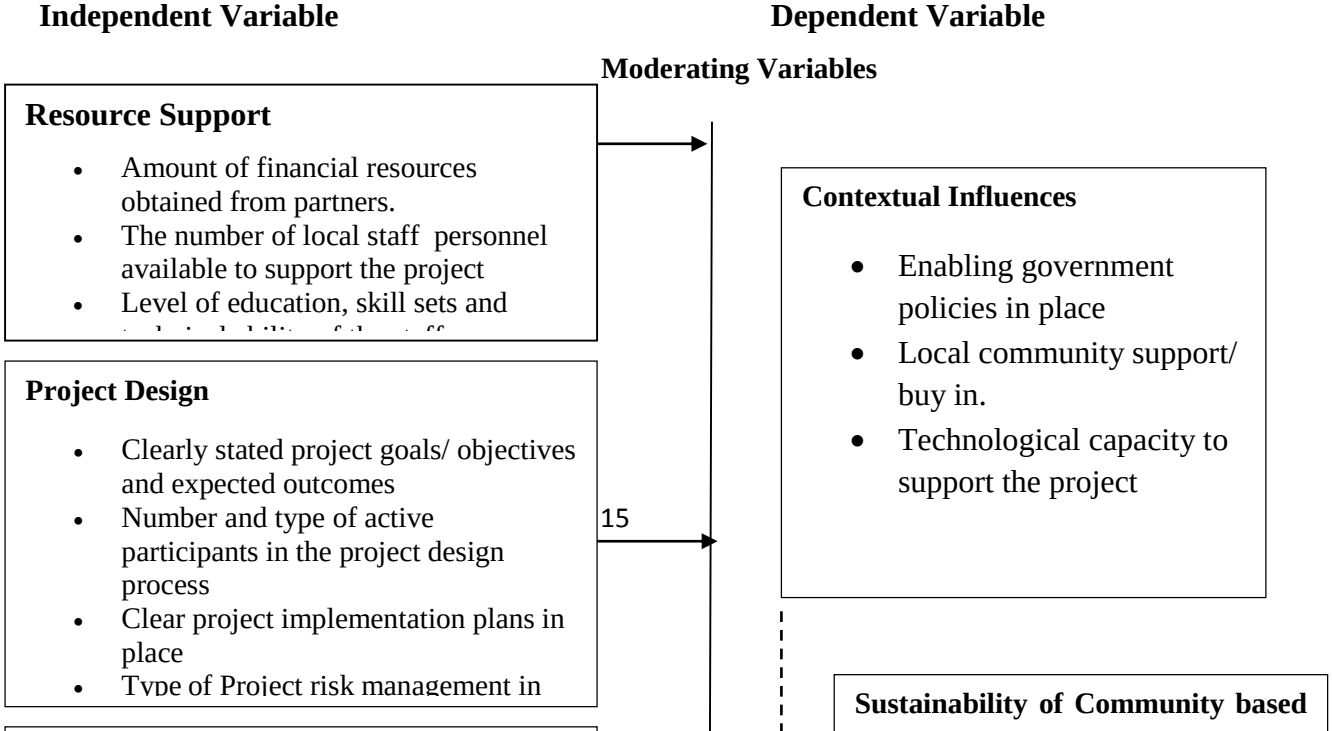

Figure 1: Conceptual Framework

2.5 Knowledge Gaps

In the quest to establish the link between performance and continuity of projects, several case studies have been hereby presented and the gaps in them identified. Sizwe and Graciana (2012) in their study focused on the continuity of water schemes in arid and semi arid areas. Swaziland using Multi-Criteria Analysis Approach to capture the amalgam of financial, social, technical, environmental and institutional factors which affect the continuity of rural water projects. The study found out that most of the water projects in the area were not well intergrated. However the study was unable to focus on the specific factors that affect sustainability of rural water projects. In fact the study recommends further study to be done to identify the precise factors which render rural water schemes unsustainable and come up with policy measures and actions to save the current water schemes as well as improve the sustainability of those to be constructed in the future.

The goal of Habtamu (2012) study was to find the factors affecting the continuity of water supply projects in Amhara and surrounding region, Ethiopia. However, the research study was equally not comprehensive as it focused only on one variable relating to the role of community involvement in project sustainability. Indeed there are other factors that affect water project sustainability. In addition the findings are constrained due to the fact that the study was a case study derived from one region of the country

Stephen,Isabalijaa, Kituyi. Mayokab, Rwashanac and Mbarika (2011) examined factors affecting adoption, implementation and sustainability of telemedicine information systems in Uganda. The research study used case studies hence raising the question of generalization of the findings hence study is not comprehensive enough and besides the study was not exhaustive of other factors affecting sustainability of telemedicine information systems. Therefore there is need for additional research in the area

Mazibuko (2007) in his study on ways of enhancing project sustainability beyond donor support explored four objectives that focused on scanning the boundary, in terms of

challenges and possible solutions. This provided some in-depth understanding of challenges that faced the process of establishing self-sustaining institutions of development.

However, the study was not able to come up with specific findings on each of the four variable and just gave one general finding that sustainability cannot be predicted due to the uncertainties and ambiguities associated with project success without recommending for further recommendation on further study to test his findings. Besides the study did not use control variables so as to mitigate the uncertainties and ambiguities associated with project success.

Argaw, Mesganaw andYemane (2007) in their study examined the continuity of community-based reproductive health programs in rural Ethiopia's northwest region. The Study was limited in that it focused on only one variable which was community involvement in project sustainability. Therefore there were other factors affecting sustainability of projects in the health sector. Indeed the study only focused on `project in the health sector but there are diverse factors affecting project sustainability which are sector specific.

2.6. Summary of the Reviewed Literature.

Sustainability is the ability of a project to maintain or expand a flow of benefits at a specified level for a long period after project inputs have ceased. However there are myriad of factors that either positively or negatively influence project sustainability which must be taken into consideration during project design, implementation and post implementation phase. Institutions at national and regional level need to be strengthened by removing many bottlenecks in the implementation of their mandate. They should also work closely with the stakeholders in the private sector for effective project sustainability. The critical factor in promoting sustainability is the role played by the project managers and other stakeholders. When project systems are not maintained, most often the fault lies with poor O&M management rather than technical incompetence.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research methodology which the researcher used to find answers to the research questions It provided the roadmap in the determination of the research design, target population, sampling technique and sample size, data collection techniques, instruments of data collection that aided the study. Also it provided guidelines to the methods that the researcher used in data analysis and presentation, and discussion of the findings of the study.

3.2 Research Design

The research used descriptive research design in the collection of data on the determinants of sustainability of community based projects in Kibera Kenya. Descriptive research is defined as the process of gathering data in order to test hypothesis or to answer questions concerning the current status of the element of the study, Mugenda Mugenda (2003). This is because a descriptive study ensures complete description of the situation, making sure that there is minimum bias in the collection and interpretation of data (Cooper and schindler, 2001). Descriptive studies helps to demonstrate associations or relationships between things in the world around you. This particular design can thoroughly examine the problem at hand, clarify it and obtain relatable information that can be of use to stakeholders in the Community development projects.

3.3. Target Population of the Study

The target population was drawn from twenty three (23) projects in Kibera initiated by Carolina for Kibera consisting of nineteen (19) project managers, ninety one (91) project staff and one thousand two hundred and eighty three (1,283) project beneficiaries as indicated by the population frame provided by Carolina for Kibera as shown on Table 3.1.

Table 3.1: Target Population

Areas	Projects	Project Managers	Project Staff	Project beneficiaries
Youth Sports	6	6	11	228
Health and Sanitation	3	3	9	300
Safe Spaces (Centers)	4	4	8	200
Business program	5	3	7	200
Trash Is Cash program	3	1	52	235
Education Program	2	2	4	120
Total	**23**	**19**	**91**	**1,283**

3.4. Sample size

A sample is a finite part of a statistical population whose characteristics are a representation of the whole (Merriam, 2003). Sampling is selecting a group (subgroup) that is representative of the whole. The results obtained from the representative sample can then be replicated to the whole set (Kothari, 2003)

This study used a sample size of 10% of the target population resulting to a sample size of 140 respondents. This is in accordance to the recommendation of using at least 10-30% of the study sample size (Mugenda&Mugenda, 2003).

Table 3.2: Sample Size

Target population	Total population	Sampling technique	Sample size	Total sample size
Project Managers	19	Simple Random	1 after every 5 of the PMs	3
Project Staff	91	Simple Random	10% 91	9
Project Beneficiaries	1,283	Simple random	10% 1,283	128
Total 1,393140				

3.5. Sampling procedures

The whole population was listed in a sampling frame. Then simple random sampling was carried out where one after every five project managers was selected, this resulted to 3 PMs being selected. Due to the size of the target population of the project staff and the beneficiaries 10% of the total population was selected resulting to 9 project staff being selected and 128 of the total number of beneficiaries being selected. Therefore a total of 140 respondents were selected for the study.

3.6. Data Collection Instruments

Research data was collected from both the primary and secondary sources. Data was collected from the project managers, staff and the beneficiaries of the Carolina for Kibera project and restricted to Kibera area which constituted the primary data.

The researcher collected data using Self-completion questionnaires, involving closed-ended questions items, from project managers and staff. Cooper and Emory (2008) stated that, a self - completion questionnaire is convenient and highly effective as it saves time and other travelling costs.

The questionnaire contained demographic profile of respondents, while the main body dealt on 1) Resource support, 2) project design, 3) operations and maintenance and 4) participatory monitoring and evaluation. Within each of these areas, the respondent will be requested to rate on a scale on 1 for strongly agree 2 for agree for neutral 4 for disagree and 5 for strongly disagree. Mugenda (2003) stated that Likert scales are utilized

for rating scales because they quantify attitude and perception. They are made up of numbers and description which are utilized to run the subjective and immaterial components in research on the contribution of the sundry aspects of the identified factor.

3.7. Validity of the Research Instrument

Through content validity, the questions in the questionnaire were assessed to see whether they achieved the objectives of the study or whether they answered the questions asked in the questionnaire. This enabled the researcher bring out all facets of the determinants of sustainability of community based projects. Through construct validity, the questions in the instruments were assessed to show whether they are phrased in terms of clarity, vagueness and also in a manner that ensures reliability. The research instrument was discussed between the researcher and the supervisor who gave the expert opinion in a bid to ensure that the instruments measure what they are intended to measure in accordance with the recommendations. This was ascertained further by a panel of education experts from the University of Nairobi who ensured that the items adequately represented the concepts that cover all relevant issues under investigation complying with the recommendations. The degree to which a test measures what it claims, or purports, to be quantifying were studied (Mugenda and Mugenda 2008)

3.8. Reliability of the Research Instrument

A test-retest measure of reliability was used by the researcher where the questionnaire was administered to a test sample population who provided their responses based on the questions asked. The questionnaire was administered again after a time lapse of one week to a test sample after which the researcher reviewed and reconciled any inconsistency that would have come up. Cronbach's alpha was then used to measure the internal consistency.

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N-1) \cdot \bar{c}}$$

Where N is equivalent to the number of items, c-bar is the average inter-item covariance among the items and v-bar equals the average variance.

3.9. Data Collection tools and Procedures

The data collection instrument that was used for this study was a structured questionnaire developed by the researcher and observations. Structured questionnaires were distributed to the targeted population. The questionnaires were personally administered to the respondents so as to have an in-depth understanding of how each respondent articulates issues relating to the projects. Each respondent received the same set of questions in exactly the same way and this were completed and collected after a period of two weeks. After collection, data was coded and entered in SPSS software for analysis.

3.10. Methods of Data Analysis

Quantitative data collected by use of closed ended questions in the questionnaire were edited and checked for completeness and comprehensibility; summarized; coded and tabulated .A statistical package was used to analyze the data and a descriptive statistics for quantitative data including regression analysis and content analysis was used. Descriptive statistics involved the use of frequencies, percentages, mean and standard deviation. Data interpretation was done using frequency tables, bars, line graphs and pie charts. Below function represents the analysis model for the study.

$Cs=f(X1, X2, X3, X4)$

Where; Cs is the Dependent Variable (Project Sustainability)

X1 is the Resource support

X2 is the Project design

X3 is the Operation and Maintenance

X4 is the Monitoring and Evaluation.

Therefore the regression model to be used will be as below

$Y = \alpha + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + \varepsilon$

Y = Project Sustainability

α = constant

b_{1-4} = Régression Coefficient

X_1 = Resource Support

X_2 = Project Design

X_3 = Operation and maintenance

X_4 = Participatory monitoring and evaluation.

ε = error term

3.11. Ethical Considerations

Prior informed consent was obtained from the respondent and the respondents were assured of confidentiality on the information obtained from them. The personal right of choice to participation in this study was assured by informing the respondents of their voluntary participation and freedom to withdrawal from the study anytime they could wish. In addition the researcher sought authority from the project managers to undertake research in the respective projects. The researcher also attached the authority to research letter from the university to the questionnaire which gave further assurance on the purpose of the study.

3.12. Operational definition of variables

The variables for the study were divided into independent variable consisting of: Resource support, Project design, Operational maintenance and monitoring and Evaluation and dependent variable (Sustainability of community based projects in Kenya). Resource support was measured by: Amount of financial resources obtained from partners, the number of local staff personnel available to support the project, Level

of education, skill sets and technical ability of the staff. Project design was measured by: availability of clearly stated project goals/ objectives and expected outcomes, number and type of active participants in the project design process, clear project implementation plans in place, type of Project risk management techniques in place. Operational Maintenance was measured by: Mechanisms in place to raise funds e.g. service charge for recurrent expenses, level of technical skills and knowhow of the technical staff to carry out maintenance, Resources in place to manage repairs on wear and tear, mechanisms in place to control waste, and conserve the environment, monitoring and Evaluation was measured by: the number of useful indicators in place to measure project performance, frequency of data collection and analysis The number of progress reports shared with the project beneficiaries, frequency of project progress meetings held with the local community, utilization & sharing of relevant Information while sustainability of community based project was measured by: Project usage, Operational facilities, functioning management committees, adequate financial resources, number of beneficiaries. This is summarized in table 3.3

Table 3.3: Operationalization of variables

Objectives	Variable	Indicators	Measurement	Scale	Data collection Method	Data Analysis
1.To examine the influence of resource support on sustainability of community based projects in Kibera Slums, Kenya	**Independent variable** Resource support	•Amount of financial resources obtained from partners. •The number of local staff personnel available to support the project •Level of education, skill sets and technical ability of the staff	Resource availability	Ordinal	Questionnaire	Mean, standard deviation, and regression analysis
2. To establish the influence of project design on sustainability of community based projects in Kibera Slums, Kenya	**Independent variable** Project Design	•Clearly stated project goals/ objectives and expected outcomes •Number and type of active participants in the project design process •Clear project implementation plans in place •Type of Project risk management in place	Clear project objectives	Ordinal	Questionnaire	Mean, standard deviation, and regression analysis
3. To determine the influence of operational maintenance on sustainability of community based projects in Kibera Slums, Kenya	**Independent variable** Operational Maintenance	•Mechanisms in place to raise funds e.g. service charge for recurrent expenses •Levels of technical skills and knowhow of the technical staff to carry out maintenance •Resources in place to manage repairs on were and tear •Mechanisms in place to control waste, and conserve the environment	Technical skills	Ordinal	Questionnaire	Mean, standard deviation, and regression analysis

4. To examine the influence of monitoring and evaluation on sustainability of community based projects in Kibera Slums, Kenya	**Independent variable** Monitoring & Evaluation	•Number of useful indicators to measure project performance. •Frequency of data collection and analysis •The number of progress reports shared with the project beneficiaries. •Frequency of project progress meetings held with the local community •Utilization & sharing of relevant Information	Monitoring & evaluation tools	Interval	Questionnaire	Mean, standard deviation, frequencies percentage and regression analysis

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents data collected from the field, its analysis, and finally the interpretation of the findings on the determinants of sustainability of community based projects in Kenya: The case of Carolina for Kibera. The data is presented in form of frequency table, graphs and charts.

4.2 Response Rate

The study targeted 140 respondents and out of the 140 questionnaires issued, a total of 103 respondents filled and returned their questionnaires giving a response rate of 74% and a non-response rate therefore was 26%.The 26% non-response rate was caused by challenges in accessing the project beneficiaries who are distributed in various locations within Kibera. According to Mugenda and Mugenda (2003) the statistically significant response rate for analysis should be at least 50%. The response rate is presented on Table 4.1.

Table 4.1: Response Rate

Category	Frequency	Percentage
Response	103	74
Non-response	37	26
Total	**140**	**100**

4.3 Demographic Information

This section presents the demographic details of the respondents which include the position held in the projects and also the highest level of education held. The findings are presented below.

4.3.1 Position in the Project

The study sought to establish the positions held by the respondents in the projects. The findings are presented on Table 4.2.

Table 5.2: Position in the Project

Position	Frequency	Percentage
Project Managers	2	2
Project Staff	7	7
Project Beneficiary	94	91
Total	**103**	**100**

Findings on Table 4.2 revealed that 91% of the respondents were project beneficiaries, 7% were project staff while 2% were project managers. This gave a good representation from the three groups that enabled the researcher meet the objectives of the study.

4.3.2 Highest Level of Education

Table 6.3: Level of Education Attained

Category	Frequency	Percentage
Secondary	28	27
College	59	57
University	16	16
Total	**103**	**100**

Results on Table 4.3 show that 57% of the respondents had attained college level of education, 27% secondary level while 16% had attained university level. This is an indication that all the respondents had attained a level of education that enabled them to read, understand and respond to the issues that had been raised in the questionnaire.

4.4 Project Sustainability

The study sought to establish project sustainability measures. The findings are presented on Table 4.4.

Table 7.4: Project Sustainability Measures

Statement	Mean	Std. Dev
Appropriate Project design	4.165	0.254
Project Structures owned and supported by the stakeholders	4.228	0.324
Project supported on an ongoing basis with locally available resources and competencies	4.231	0.116
Stakeholders provide appropriate level of financial, technical managerial resources	4.163	0.142

Results on Table 4.4 indicate that the respondents strongly agreed that project should be supported on an ongoing basis with locally available resources and competencies with a mean of 4.231, project structures should be owned and supported by the stakeholders with a mean of 4.228, there should be appropriate project design with a mean of 4.165 and that stakeholders should provide appropriate level of financial, technical managerial resources with a mean of 4.163.Community participation in resource mobilization process strengthens and broadens partnerships with the local community/ stakeholders and also creates spaces for mutual learning (Bhavesh, 2006).

4.5 Determinants of Project Sustainability.

This section presents findings on the determinants of project sustainability. Four determinants were addressed in this study, they include resource support, project design, operational maintenance and monitoring and evaluation.

4.5.1 Resource Support

The study sought to establish how resource support influence community based projects. Findings are presented on Table 4.3.

Table 8.5: Resource Support

Statement	Mean	Std. Dev
Projects mobilize financial resources from local community and other stakeholders like, businesses, local authorities and NGOs.	3.816	0.982
Community participation in resource mobilization has strengthened community ownership of the project	4.079	1.075
Community participation in resource mobilization process has created spaces for mutual learning and trust.	3.921	1.050
Community participatory resource mobilization process for projects has improved the effectiveness of project sustainability	4.422	1.023
Community active participation in financial management of projects has forced project managers to be more accountable and transparent in their operations.	3.868	0.934
Material donation to the projects from the local community has helped reduce the costs of implementing the project significantly	3.947	1.113
Community contribution in form of project expertise has been valuable contribution for the projects	4.105	0.952
Local community participation has been instrumental in providing skills and materials needed for the operation of community projects	3.684	1.358

Results from Table 4.5 indicated that community participatory resource mobilization process for projects had improved the effectiveness of project sustainability with a mean of 4.422, community contribution in form of project expertise had been valuable contribution for the projects with a mean of 4.105, community participation in resource mobilization had strengthened community ownership of the project with a mean of 4.079. The respondents further agreed that material donation to the projects from the local community had helped reduce the costs of implementing the project significantly with a mean of 3.947 and that community actively participated in financial management of projects which forced project managers to be more accountable and transparent in their operations as indicated by a mean of 3.868. These findings are in agreement with Bhavesh, (2006) who illustrated that participatory resource mobilization process

produced actual welfare effects by improving the effectiveness of project performance, emphasizing a pro-poor orientation and reducing possibilities for failure. It further concurs with Twebaze (2010) who did a study on community mobilization in rural water supply and sanitation programs in Wakiso District Uganda and established that the high knowledge by project beneficiaries on the way funds were spent increased transparency in the way that the Water User Committees of the programs operated.

The respondents were further asked if resource support affected sustainability of community based projects in Kibera Slums. The findings are as shown on Table 4.6.

Table 9.6: Influence of Resource Support on Project Sustainability

Category	**Frequency**	**Percentage**
Yes	97	94
No	6	6
Total	**103**	**100**

Results on Table 4.6 show that resource support affected project sustainability as indicated by 94% of the respondents. This is an indication that resources are important in ensuring sustainability of a community based projects.

4.5.2 Project Design

The study also sought to establish how project design influenced the sustainability community based projects. The findings are presented on Table 4.7.

Table 10.7: Project Design

Statement	Mean	Std. Dev
Project design has been built on local demand and initiatives	3.502	0.241
Project design is produced with much input from local communities and institutions	3.436	0.251
Project design has clearly stated goals, objectives, inputs, outputs, and strategies to ensure sustainability	3.367	0.283
Project components are carefully assessed to assure that the acquisition of resources is accomplished without compromising the environment	2.545	1.296
Environmental assessment was done before the project design and implementation to identify potential impacts and recommend mitigating measures.	3.362	0.283

Findings on Table 4.7 indicate that the respondents agreed that the project design had been built on local demand and initiatives as indicated by a mean of 3.502, that project design had been produced with much input from local communities and institutions with a mean of 3.502. They also agreed that environmental assessments was done before the project design and implementation to identify potential impacts and recommend mitigating measures with a mean of 3.362 and that the project design had clearly stated goals, objectives, inputs, outputs, and strategies to ensure sustainability. However, they were neutral on whether project components were closely monitored to ensure laid down procurement procedures are above board to safeguard the environment as shown by a mean of 2.545. This shows that project components must be evaluated carefully and thoroughly to eliminate possible the sustained yield of the environment.

The respondents were further asked if project design influenced sustainability of community based projects in Kibera Slums.

Table 11.8: Effects of Project Design on project Sustainability

Category	Frequency	Percentage
Yes	91	88
No	12	12
Total	**103**	**100**

From the results on Table 4.8, 88% of the respondents indicated that project design influenced the sustainability of community based projects. Designs which are expected to result in sustainable benefits should build on local demand and initiatives.

4.5.3 Operational Maintenance

The study also sought to establish how operational maintenance influenced project sustainability, results are as presented on Table 4.9.

Table 12.9: Operation and Maintenance

Statement	Mean	Std. Dev
Project managers and local communities actively participate in repairing leaks and maintaining project resources so as to minimize unnecessary wastage	3.365	1.128
The project rehabilitates facilities and equipment, rather than purchasing new equipment,	3.488	1.346
The local community bears the some repair costs of project equipment/ facilities	2.923	1.1196
The community participates in maintaining through local expertise	2.621	1.164

Results on Table 4.5 indicated that project managers and local communities actively participated in repairing leaks and maintaining project resources so as to minimize unnecessary wastage as shown by a mean of 3.365, that the old facilities and equipment of the institution are well maintained instead of new costly procurement, with a mean of 3.488. However, they were neutral on whether the community participated in maintaining

through local expertise as indicated by a mean of 2.621. These findings are in agreement with Roark et al (1993) who found out that community-managed systems are being sustained by foreign aid

The respondents were further asked to indicate if operational maintenance influenced sustainability of community based projects in Kibera slums. Findings are as presented on Table 4.10.

Table 13.10: Influence of Operational Maintenance on Sustainability of Projects

Category	**Frequency**	**Percentage**
Yes	93	90
No	10	10
Total	**103**	**100**

Results on Table 4.10 indicate that operational maintenance influenced sustainability of community based projects as indicated by 90% of the respondents. This is an indication that operational maintenance should be a key consideration in community based project and that the project management and community leadership must take charge in formulatiing and implementing a sustainable project.

4.5.4 Monitoring and Evaluation

Table 14.11: Monitoring and Evaluation

Statement	Mean	Std. Dev
The project has used monitoring and evaluation to improve project quality and governance performance	2.771	1.466
Monitoring and evaluation of projects in has enhanced community trust with the project operation	2.700	1.196
Projects monitoring and evaluation reports has been instrumental in reporting the progress of the projects and in enhancing transparency and accountability	1.786	0.991
Monitoring of child protection projects has kept the project management informed about scheduling, distribution and effectiveness of the project in delivering project activities and outputs hence ensuring project performance	3.043	0.613
Monitoring and evaluation of projects has kept the project on-track, on-time, and within budget.	3.029	1.329
Monitoring and evaluation of projects has facilitated early recognition of the project problem areas and enabled the project institute the necessary corrective measures	2.718	1.354
Monitoring and evaluation of projects has helped in meeting the internal needs of the local community contributing to their empowerment and project performance	2.136	1.301

Findings on Table 4.6 indicate the respondents disagreed on whether projects monitoring and evaluation reports had been instrumental in reporting the progress of the projects and in enhancing transparency and accountability with a mean of 1.786 and whether monitoring and evaluation of projects has helped in meeting the internal needs of the local community contributing to their empowerment and project performance with a mean of 2.136. The respondents were neutral on whether monitoring and evaluation of projects had enhanced community trust with the project operation with a mean of 2.700 and on whether monitoring and evaluation of projects had facilitated early recognition of the project problem areas and enabled the project institute the necessary corrective measures with a mean of 2.718. This is an indication that the management of the project

has not been keen on monitoring and evaluation of the project. Stephen (2000) noted that projects cannot easily be sustained by a local organization without systematically monitoring their performance, yet in practice, this issue receives little attention.

The respondents were also asked to indicate if monitoring and evaluation of projects influenced sustainability of community based projects. The findings are presented on Figure 4.6.,

Table 15.12: Influence of Monitoring and Evaluation on Project Sustainability

Category	Frequency	Percentage
Yes	98	95
No	5	5
Total	**103**	**100**

Results on Table 4.12 indicated that monitoring and evaluation influenced community based projects as indicated by 95% of the respondents. Boyer et.al (2008) noted that community participation in assessing project progress is critical for their sustainability. Project progress reporting meetings should be held regularly and the local community mobilized to actively participate.

4.6 Regression Results

In addition to descriptive analysis, the study conducted regression analysis to determine how resource support, project design, operational maintenance and monitoring and evaluation were related to project sustainability.

Table 16.13: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.886	0.785	0.659	0.741

The value of R was 0.886; the value of R square was 0.785 and the value of adjusted R square was 0.659. From the findings, 78.5 % of changes in the project sustainability was

attributed to the four independent variables in the study. Positivity and significance of all values of R shows that model summary is significant and therefore gives a logical support to the study model.

Table 17.14: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2.659	4	0.665	44.33	.051
Residual	1.202	103	0.015		
Total	3.861	107	0.680		

From the data findings in Table 4.14 the sum of squares due to regression is 2.659 while the mean sum of squares is 0.665 with 4 degrees of freedom. The sum of squares due to residual is 1.202 while the mean sum of squares due to residual is 0.015with 103 degrees of freedom. The value of F calculated is 44.33and the significance value is 0.051. The value of critical F is 5.6581.Since F calculated is greater than the F critical (44.33>5.6581), this shows that the overall model was significant

Table 18.15: Multiple Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	2.181	0.223		6.092	0.003
Resource support	0.812	0.104	0.356	11.064	0.002
Project Design	0.692	0.124	0.198	4.235	0.000
Operational maintenance	0.717	0.145	0.219	5.652	0.002
Monitoring and evaluation	0.842	0.196	0.412	6.595	0.001

From the regression findings, the substitution of the equation:

$Y = \alpha + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + \varepsilon$ becomes

$Y=2.181+0.356X_1+0.198X_2+0.219X_3 + 0.312X_4$

Where Y is the project sustainability, X_1 is resource support, X_2 is project design, X_3 is the operational maintenance and X_4 is monitoring and evaluation.

From the findings of the regression analysis if all factors (resource support, project design, operational maintenance and monitoring and evaluation) were held constant, project sustainability would be at 2.181. An increase in resource support would lead to an increase in the project sustainability by 0.356, an increase in the project designwould lead to an increase in the project sustainability by 0.198. An increase in the operational maintenance would lead to an increase in the project sustainability by 0.219 and an increase in monitoring and evaluation would lead to 0.312 increase in project sustainability.all the variables were significant as the P-values were less than 0.05, an indication that all the factors were statistically significant.

CHAPTER FIVE
SUMMARY OF FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter focuses on the summary of findings of the study which formed the foundation for discussions. The discussions provided a firm basis upon which conclusions and recommendations have been advanced on the study on the determinants of sustainability of community based projects in Kenya the case of Carolina for Kibra. It also inclu des suggested areas for further.

5.2 Summary of Findings

The summary of findings is presented based on the four objectives of the study.

Objective one which was to examine the influence of resource support on sustainability of community based projects in Kenya. The study sought to establish how resource support influences community based projects where 94% of the respondents agreed that yes resources are important in ensuring sustainability of a community project. They also agreed that community participatory resource mobilization process for projects had improved the effectiveness of project sustainability with a mean of 4.422 and a Std. Dev of 1.023, community contribution in form of project expertise had been valuable contribution for the projects with a mean of 4.105 with a Std. Dev of 0.952, and community participation in resource mobilization had strengthened community ownership of the project with a mean of 4.079 and a Std. Dev 1.075. The respondents further agreed that material donation to the projects from the local community had helped reduce the costs of implementing the project significantly with a mean of 3.947 and a Std. Dev 1.113 and that community actively participated in financial management of projects which forced project managers to be more accountable and transparent in their operations as indicated by a mean of 3.868 and a Std. Dev 0.934.

The study also sought to establish how project design influenced the sustainability community based projects. 88% of the respondents indicated that project design influenced the sustainability of community based projects. Majority of the respondents agreed that designs which are expected to result in sustainable benefits should build on local demand and initiatives and should be produced with as much input from stakeholders as possible.

The respondents agreed that the project design had been built on local demand and initiatives as indicated by a mean of 3.502 and a Std. Dev 0.241, that project design had been produced with much input from local communities and institutions with a mean of 3.436 and a Std. Dev 0.251. They also agreed that environmental assessments was done before the project design and implementation to identify potential impacts and recommend mitigating measures with a mean of 3.362 and a Std. Dev 0.283 and that the project design had clearly stated goals, objectives, inputs, outputs, and strategies to ensure sustainability. However, they were neutral on whether project components were carefully assessed to assure that the acquisition of resources was accomplished without compromising the environment as shown by a mean of 2.545. This shows that project components must be carefully assessed to assure that the development of resources is accomplished without compromising the sustained yield of the environment.

On objective three which sought to establish how operational maintenance influenced project sustainability, 90% of the respondents agreed that operational maintenance influenced sustainability of community based projects. Results indicated that project managers and local communities actively participated in repairing leaks and maintaining project resources so as to minimize unnecessary wastage as shown by a mean of 3.365, that the project rehabilitated facilities and equipment, rather than purchasing new equipment with a mean of 3.488. However, they were neutral on whether the community participated in maintaining through local expertise as indicated by a mean of 2.621. This is an indication that operational maintenance should be a key consideration in community based project.

Finally objective four which sought to establish hoe monitoring and evaluation influence sustainability of community based projects. The results indicated that monitoring and evaluation influenced community based projects as indicated by 95% of the respondents. The responded agreed that community participation in assessing project progress and regular project progress reporting meetings should be held regularly and the local community should be mobilized to actively participate in project progress.

The findings indicated the management of the project have not been keen on monitoring and evaluation of the project because respondents disagreed on whether projects monitoring and evaluation reports had been instrumental in reporting the progress of the projects and in enhancing transparency and accountability with a mean of 1.786 and whether monitoring and evaluation of projects has helped in meeting the internal needs of the local community contributing to their empowerment and project performance with a mean of 2.136. The respondents were neutral on whether monitoring and evaluation of projects had enhanced community trust with the project operation with a mean of 2.700 and on whether monitoring and evaluation of projects had facilitated early recognition of the project problem areas and enabled the project institute the necessary corrective measures with a mean of 2.718.

5.3 Discussion

From the findings presented on project sustainability measures, the study found that projects should be supported on an ongoing basis with locally available resources and competencies. Mazibuko (2007) asserts that raising resources locally gives a project more independence and flexibility to implement activities targeting needs that a community finds important. The resource support provided by the local community groups particularly with respect to the technical efficiency and financial support is essential to community project sustainability. In addition to providing the skills and materials needed to conduct community improvement projects, mobilizing local resources also helps a project to build long-term relationships with important individuals and institutions in their community (IFAD, 2009).

The study also established that there should be appropriate project design and that stakeholders should provide appropriate level of financial, technical and managerial resources. This concurs with findings by Mckinsey (2011) where they stated that, project designs are expected to result in sustainable benefits and should be built on local demand and initiatives. This requires that the stakeholders (the beneficiaries and local personnel) play a core role in the identification and design process. Designs should be produced with as much input from involved organizations as possible (OECD, 2006).

Determinants of project sustainability were identified as, resource support, project design, operational maintenance and monitoring and evaluation. On resource support, the study established that community participatory resource mobilization process for projects had improved the effectiveness of project sustainability, community contribution in form of project expertise had been valuable contribution for the projects and that community participation in resource mobilization had strengthened community ownership of the project. These findings are in agreement with Bhavesh, (2006) who illustrated that participatory resource mobilization process produced actual welfare effects by improving the effectiveness of project performance, emphasizing a pro-poor orientation and reducing possibilities for failure. It further concurs with Twebaze (2010) who did a study on community mobilization in rural water supply and sanitation programs in Wakiso District Uganda and established that the high knowledge by project beneficiaries on the way funds were spent increased transparency in the way that the water user committees of the programs operated.

On Project design, the study found out that the project was built on local demand and initiatives and that the project design had been produced with much input from local communities and institutions. The respondents also agreed that environmental assessments were done before the project design and implementation to identify potential impacts and recommend mitigating measures. This was in agreement with the recommendation by the Australian Agency for International Development (2000) where they stated that generating an understanding of, and support for, a program or project's objectives among a wide group of stakeholders should be a component of any sustainability strategy. Such awareness needs to start early in the design phase.

On operational maintenance, the study found out that project managers and local communities actively participated in repairing leaks and maintaining project resources so as to minimize unnecessary wastage, the project rehabilitated facilities and equipment, rather than purchasing new equipment. The finding concurs with recommendation by NETSSAF (2008) who recommend that it is necessary to have a community ownership and management approach, making the end-users directly responsible for the operation and maintenance of the installed facilities. However, the respondents ware neutral on whether the community participated in maintaining through local expertise. This is an indication that the local expertise is underutilized; this might affect the sustainability of the project in the long run.

On monitoring and evaluation, the study found out that projects monitoring and evaluation reports had not been instrumental in reporting the progress of the projects and in enhancing transparency and accountability. It also found out monitoring and evaluation of projects had not helped in meeting the internal needs of the local community contributing to their empowerment and project performance. This is an indication that monitoring and evaluation has not been carried out well in the Carolina for Kibra project and this could pose a major challenge for the project in terms of assessing their performance and also making decision for future growth. Collecting data on a project's processes is important, because the information can be helpful to those responsible for ensuring that the project is on track. Stephen (2000) asserts that projects cannot easily be sustained by a local organization without systematically monitoring their performance, yet in practice, this issue receives little attention.

5.4. Conclusion

The following conclusions were made from the study:

That all the independent variables in the study namely: resource support, project design, operational maintenance and monitoring & evaluation had a significant influence on the dependent variable of sustainability of community based projects.

It can be concluded that resource support influences sustainability of community based project in Kenya. That the study has further established that community participatory resource mobilization process for projects, community contribution in form of project expertise, community participation in resource mobilization strengthens community ownership and the effectiveness of material donation to the projects from the local community resulting to reduced cost of implementing the project have a strong influence on sustainability of community based projects.

It can be further concluded that project design influences sustainability of community based project. The research has established that project designs which are expected to result in sustainable benefits should build on local demand and initiatives and should be produced with as much input from stakeholders as possible. Project design should consider environmental assessments to identify potential impacts and recommend mitigating measures before commencement of project. It can also be concluded that a project design with clearly stated goals, objectives, inputs, outputs, and strategies to ensure project sustainability.

From the research also it can also be concluded that operational maintenance influences the sustainability of community based projects, the study has established that project managers and local communities should actively participate in repairing leaks and maintaining project resources so as to minimize unnecessary wastage, and also that project should rehabilitate facilities and equipment, rather than purchasing new equipment. This will go a long way to enable the project deliver its intended objectives upon implementation, hence operational maintenance should be a key consideration in community based project.

And finally we can conclude that monitoring and evaluation does influence sustainability of community based projects, the study has established that community participation in assessing project progress and regular project progress reporting meetings should be held regularly and the local community should be mobilized to actively participate in project progress.

The findings further indicate that monitoring and evaluation is instrumental in reporting the progress of the projects and in enhancing transparency and accountability and that monitoring and evaluation of projects has helped in meeting the internal needs of the local community contributing to their empowerment and project performance, Monitoring and evaluation also enhances community trust with the project operation and facilitates early recognition of the project problem areas and enabled the project institute the necessary corrective measures.

5.5 Recommendations

The following policy recommendations were made from the findings of the study.

Project managers and staff of community based project should appreciate and understand the importance of project sustainability and the key factors that determine sustainability and that as the study has established the key determinants i.e. resource support, project design, operational maintenance and Monitoring should be incorporated in the project implementation process to ensure sustainability.

Project beneficiaries should be keen to participate in local community projects and offer support during the project design, implementation and management so as to advance the project sustainability. This could be achieved by participating in monitoring and evaluation and attending project progress meetings.

Project donors and sponsors should ensure that local communities embrace monitoring and evaluation as a mandatory tool to monitor project progress, they should also ensure to incorporate the members of the local community who are also beneficiaries on the day to day running of the project to ensure successful project implementation and maintenance.

The government officials' should embrace and understand how community participation, partnerships, monitoring and evaluation in achieving project sustainability and help to come up with policies to incorporate this factors during project implementation.

5.6 Suggested areas for further research

The topic selected was limited to community based projects, there is a need for further research to cover all other projects like government driven projects, donor funded projects, CDF projects etc.

More research can also be done on why community projects fail as this will help to bring out the root cause of why most project do not get to achieve the intended objectives.

Further, the study recommends that a similar study should be conducted in other communities based in both urban and rural area so that to enable stakeholders make comprehensive conclusions and recommendations, this will minimise factors that lead to projects failure.

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APPENDICES

APPENDIX I: INTRODUCTORY LETTER

Dear Respondent

RE: **FACTORS INFLUENCING THE SUSTAINABILITY OF COMMUNITY BASED PROJECTS IN KIBERA SLUMS**,

I am a Masters student at the University of Nairobi pursuing Master of Arts degree in Project Planning and Management. Currently, I'm carrying out a research on the factors influencing the sustainability of community based projects in Kibra Slums, Kenya. I request you to fill in this questionnaire. The information collected will be used strictly for the purpose of this study and shall be treated in confidence

Thank you for agreeing to participate in the study.

Yours Faithfully

Linet Onkoba

APPENDIX II: RESEARCH QUESTIONNAIRE

Please answer all the questions as best as you can.

1. What is your position in the project?

Project Manager [ ] Project Staff [ ] Project Beneficiary [ ]

2. What is your highest level of education?

Secondary [ ] College [ ] University [ ]

Others [ ] specify……

Project Sustainability

3. Using a scale of 1-5, where 1= strongly disagree; 2=disagree; 3=Neutral; 4=agree; 5=stronglyagree, Please indicate the extent to which you agree with the following project sustainability measures

	①	②	③	④	⑤
Appropriate Project design	①	②	③	④	⑤
Project Structures owned and supported by the stakeholders	①	②	③	④	⑤
Project supported on an ongoing basis with locally available resources and competencies	①	②	③	④	⑤
Stakeholders provide appropriate level of financial, technical managerial resources	①	②	③	④	⑤

PART 3: Resource Support

4. Using a scale of 1-5, where 1= strongly disagree; 2=disagree; 3=Neutral; 4= agree; 5=strongly agree, Please indicate the extent to which you agree with the following statements

Statement	①	②	③	④	⑤
Projects mobilize financial resources from local community and other stakeholders like, businesses, local authorities and NGOs.	①	②	③	④	⑤
Community participation in resource mobilization has strengthened community ownership of the project	①	②	③	④	⑤
Community participation in resource mobilization process has created spaces for mutual learning and trust.	①	②	③	④	⑤
Community participatory resource mobilization process for projects has improved the effectiveness of project sustainability	①	②	③	④	⑤
Community active participated in financial management of projects has forced project managers to be more accountable and transparent in their operations.	①	②	③	④	⑤
Material donation to the projects from the local community has helped reduce the costs of implementing the project significantly	①	②	③	④	⑤

Community contribution in form of project expertise has been valuable contribution for the projects	①	②	③	④	⑤
Local community participation has been instrumental in providing skills and materials needed for the operation of community projects	①	②	③	④	⑤

5. In your opinion does resource support affect sustainability of community based projects in Kibra Slums?

Yes [ ] No [ ]

PART3-Project Design

6. Using a scale of 1-5, where 1= strongly disagree; 2=disagree; 3=Neutral; 4= agree; 5=strongly agree, Please indicate the extent to which you agree with the following statements

	①	②	③	④	⑤
project design has been built on local demand and initiatives	①	②	③	④	⑤
Project design is produced with much input from local communities and institutions	①	②	③	④	⑤
Project design has clearly stated goals, objectives, inputs, outputs, and strategies to ensure sustainability	①	②	③	④	⑤

Project components are carefully assessed to assure that the acquisition of resources is accomplished without compromising the environment	①	②	③	④	⑤
Environmental assessments was done before the project design and implementation to identify potential impacts and recommend mitigating measures	①	②	③	④	⑤

7. In your view does project design influence sustainability ofcommunity based projects in Kibra Slums?

Yes [ ] No [ ]

PART 5- Operation and Maintenance (O&M)

8. Using a scale of 1-5, where 1= strongly disagree; 2=disagree; 3=Neutral; 4= agree; 5=strongly agree, Please indicate the extent to which you agree with the following statements

	Strongly agree	Agree	Neutral	disagree	Strongly disagree

Project managers and local communities actively participate in repairing leaks and maintaining project resources so as to minimize unnecessary wastage					
The project rehabilitates facilities and equipment, rather than purchasing new equipment,					
The local community bears the some repair costs of project equipment/ facilities	①	②	③	④	⑤
The community participates in maintaining through local expertise	①	②	③	④	⑤

9. In your view do does operational maintenance influence sustainability of community based projects in Kibra Slums?

Yes [ ] No [ ]

PART 6- Monitoring and evaluation

10. Using a scale of 1-5, where 1= strongly disagree; 2=disagree; 3=Neutral; 4=agree; 5=strongly agree, Please indicate the extent to which you agree with the following statements

Statement	①	②	③	④	⑤
The project has used monitoring and evaluation to improve project quality and governance performance	①	②	③	④	⑤
Monitoring and evaluation of projects in has enhanced community trust with the project operation	①	②	③	④	⑤
projects monitoring and evaluation reports has been instrumental in reporting the progress of the projects and in enhancing transparency and accountability	①	②	③	④	⑤
Monitoring of child protection projects has kept the project management informed about scheduling, distribution and effectiveness of the project in delivering project activities and outputs hence ensuring project performance	①	②	③	④	⑤
Monitoring and evaluation of projects in kept the project on-track, on-time, and within budget.	①	②	③	④	⑤
Monitoring and evaluation of projects has facilitated early recognition of the project problem areas and enabled the project institute the necessary corrective measures	①	②	③	④	⑤

Monitoring and evaluation of projects has helped in meeting the internal needs of the local community contributing to their empowerment and project performance	①	②	③	④	⑤

11. In your view do monitoring and evaluation of projects influence sustainability of community based projects in Kibra Slums?

Yes [ ] No [ ]

THANK YOU