PROJECT MANAGEMENT PRACTICES AND SUSTAINABILITY OF AGRIBUSINESS PROJECTS IN SELECTED COUNTIES IN KENYA

KABETHI JOSEPH MIANO

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DECLARATION

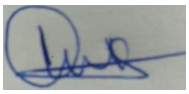
I affirm that this as a product my own effort which has under no circumstances been submitted elsewhere for any academic honour. All references are duly recognised and acknowledged appropriately.

Sign:  **Date: 23rd March, 2023**

Kabethi J. Miano

D86/CTY/23614/2012

We attest that we have overseen the preparation of this thesis by the aforementioned.

Sign:  **Date: 23rd March, 2023.**

Dr. Lucy Ngugi

Department of Management Science

Kenyatta University

Sign:  **Date: 24th March, 2023**

Dr. James Njatha Maingi

Department of Applied Economics

Kenyatta University

DEDICATION

To my parents, my dear wife and beloved children:

Starting with my late dad, you always said that ‘a sharp machete slashes better than a blunt one’. My dear mum, you stand as the epitome of hard work, perseverance, self-respect and human dignity. To my wife, Emma, you remain a beacon of strength and hope in my life. Your support and encouragement has been overwhelming. Finally, to my daughters; Ann, Hellen and Mary-Christine, you are an inspiration in my life.

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OPERATIONAL DEFINITION OF TERMS

Agribusiness Projects: Deliberate and time bound endeavours to promote agriculture as a commercial enterprise**.**

Agricultural Productivity and Agribusiness Projects: Projects in agriculture sector whose objective is to commercialise agriculture to raise the productivity and incomes of small scale farmers.

Capacity Building Practices: Initiatives to develop the ability of stakeholders to carry on with project activities on their own. These include training, field visits, apprenticeship, participation, and extension.

Government Policy: Government guidelines on matters of public interest comprising of laws, rules and regulations.

Monitoring and Evaluation Practices: Tools and methods intended to capture and present relevant information on planned project activities.

Project Design Practices: Initiatives to create a project as an intervention to an identified need. Usually involves activities at the beginning of a project where the project idea and execution plan is mapped out.

Project Management Practices: Activities carried out to actualise the project objectives. These include; project capacity building practices, project stakeholder's practices, project

design practices as well as project monitoring and evaluation practices.

Project Sustainability: Existence and continuity of project initiated structures, financial and operational abilities five years after the completion of project implementation.

Stakeholder's Management Practices: Deliberate management actions to influence the conduct of various project stakeholders. This includes stakeholder's identification, stakeholder's analysis and stakeholder's engagement processes in the project.

Sustainability: Capability of an entity to continue operating in the future.

ABBREVIATIONS AND ACRONYMS

APL: Adaptable Program Loan

APAPs: Agricultural Productivity and Agribusiness Projects

CIG: Common Interest Groups

GDP: Gross Domestic product

GIZ: German Corporation for International Cooperation

KAPAP: Kenya Agricultural Productivity and Agribusiness Project

M&E: Monitoring and Evaluation

MfDR: Management for Development Results

NGOs: Non-Governmental Organisation

PDP: Project Design Practices

PMI: Project Management Institute

PMPs: Project Management Practices

RBM: Result Based Management

R&D: Research and development

SPSS: Statistical Packages for Social Scientists

MEP: Monitoring and Evaluation Practices

CBP: Capacity Building Practices

SMP: Stakeholders Management Practices

ABSTRACT

Concerns abound on the sustainability of most agribusiness projects a few years after implementation. Without sustainability, the projects do not attain the desired objectives while the resources expended in such endeavours are wasted or lost. Various authors opine that the attainment of project sustainability requires integration of sustainability aspects in project management practices. However, the effect of such practices on sustainability of agribusiness projects in Kenya remains unknown. Through multiple linear regression model, the study was set to look at the effect of project management practices on the sustainability of Kenya Agricultural Productivity and Agribusiness Projects (KAPAP) in selected Counties in the country. The specific objectives of the study were to determine the effect of; project design practices, project capacity building practices, project stakeholder management practices as well as project monitoring and evaluation practices on sustainability of KAPAP, where government policy was considered as a moderating variable. The inquiry adopted a pragmatism research paradigm with descriptive and explanatory research designs. The study population comprised of 6,401 communities of interest groups under which KAPAP projects were implemented from year 2010 to 2015. A sample of 376 projects was selected by stratified multistage random sampling techniques. Data was collected using a semi structured questionnaire and captured through SPSS software. Quantitative data was analysed through descriptive statistics and multiple linear regression. Qualitative data was subjected to content analysis. The study findings were presented using tables and charts. From the findings, the four project management practices had a positive significant effect on the sustainability of KAPAP projects while government policy significantly moderated the effect of the relationship between the variables. The research recommends for consideration of various project management practices collectively rather than each in isolation to improve on project sustainability. On capacity building practices, enhanced practical oriented project activities are necessary to impart hands on skills relevant for project sustainability. Inclusion of project beneficiaries from the beginning of a project is important for project ownership and sustainability. Government officers should avoid micromanaging the projects and allow project beneficiaries some latitude in decision making for project ownership and sustainability. There is also need for proper coordination of national and regional/county government activities pertaining to agricultural productivity projects in the country to ensure the stakeholders get essential services relevant for project sustainability. In addition, the monitoring and evaluation systems should provide feedback in a timely manner to allow for effective corrective measures to be undertaken in time further promoting the prospects of attaining project sustainability.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The desire to achieve continuity in the delivery of organisational mandate has propelled the growing discourse on sustainability in management circles. While decrying the dismal performance of various entities, many scholars and practitioners have expressed the need for the consideration of sustainability as a key area in management. Köhler, van den Brink and Silvius (2012) identified sustainability as a major management challenge in present time. Similar observation was made by Aarseth, Ahola, Aaltonen, Økland, and Andersen (2017) who postulated that there is growing pressure on organisations to include sustainability concepts in their policies and activities. Silvius and Schipper (2014) equally posited that within the last decade, the concept of sustainability has gained currency in management of organisations as part of good corporate governance practice.

As observed by IFAD (2006), sustainability is often combined with notions of sustainable development, the two frequently being used interchangeably. This is in line with the views of Global Footprint (2009) who indicated that the idea of sustainability stems from the quest to achieve development that is sustainable. As per Brundland Commission (1987), sustainable development should be about being able to provide what we require at present as well as in the future. The concern for sustainability was amplified even higher in year 2015, when the UN adopted the Sustainable Development Goals whose theme is to bring poverty to an end, take care of the planet, and bring prosperity for all by 2030 (Assembly, 2015).

As observed by Gaziyev (2019), originally, the sustainability perspective focused more on environmental concerns. However, over the years the literature expanded into economic, social and many other fields. Goedknegt and Silvius (2012) similarly observed that sustainability is all about ensuring that the actions of current generation will not restrict the span of environmental, economic as well as the social options available for generations to come. Consequently, the discourse on sustainability has increasingly gained prominence in both academia and industry. Sustainability has progressively become a key area in theory and practice of project management as well as other disciplines.

The growing concern for project sustainability has been driven by realisation that though a lot of resources have been devoted by governments, donors and other development partners to various projects, the envisaged benefits are seldom attained due to lack of sustainability in the project activities. Concerns on the challenge of project sustainability have been raised by many authors and development practitioners as well. As noted by Asian Development Bank (2010) up to 40% of the projects which they support are seldom operational beyond a few years after termination of external aid. A similar view was expressed by Ika, Diallo, and Thuillier (2012) who identified sustainability as one of the key areas of challenge for World Bank funded projects. Maphosa (2014) equally postulated that though a lot of donor funds had been injected in various community programs in South Africa, the state of affairs of the poor was getting worse over the years as most of the projects were not sustainable.

The World Bank (2004) observed that many of the projects in the country have continued to record dismal performance with only one out of fourteen projects promising satisfactory continuous outcomes. UNDP (2014) also indicated that in Kenya sustainability was a challenge in many programmes after completion. Oino, Towett, Kirui, and Luvenga (2015) equally observed that majority of community projects in Kenya usually did not produce benefits continuously as expected. As noted by Sebastian, Eduard, Cristian and Iuliana (2018), failure to attain project sustainability leaves the project objectives un-achieved which has negative effects for both the community and the host organization. It also leads to loss of precious and scarce resources which were already invested in such projects. In addition, to this, there is disaffection and loss of public trust which will negatively affect introduction of other projects within the same community in the future.

1.1.1 Project Sustainability

As explained by Langran (2002), project sustainability can be described as the continuation of project activities into the future. It indicates the capability of an endeavour to continue its activities during its envisaged time and beyond (Bamberger and Cheema, 1990; Wieners, 2019). Other authors (AusAID, 2000; Joshi, 2007) have associated project sustainability with the continuation of project activities beyond donor support. Mulwa (2010) indicated that project sustainability is based on continuity till it attains the laid down objectives, while Khan (2010) described sustainability as the proportion of initiated activities present five years after termination of project implementation.

Sustainability has been appraised as a key aspect in project management by various authors. Martens and Carvalho (2016) observed that there is a growing interest in using sustainability concepts in project management. Similar views were expressed by Jonas and Alexander (2013), who posited that the consideration of sustainability principles has gained a lot of fame in the discipline of project management. Sabini (2016) underscored the need for sustainable projects as this will provide a good foundation for a sustainable economy and society. Andreas (2015) equally indicated that including sustainability principles in project management would have significant effects as a great proportion of the world output is generated by projects. Martens and Carvalho (2016) associated project sustainability with understanding the economic, social, and environmental consequences throughout the project lifecycle. Similar views were expressed by Silviuos and Schipper (2014) as well as Silvius, Brink, and Kohler (2012).

Past authors have isolated various dimensions of project sustainability. Joshi (2007); Seltzer (2014) identified three types of project sustainability to include; financial sustainability, institutional/organisational sustainability and programmatic/operational sustainability. Financial sustainability refers to ability to achieve stable flow of funds for project activities over time preferably from divergent sources. Institutional/organisational aspect is about continuity of organisational/institutional structures that were designed for the project. Operational sustainability on the other hand refers to continuity of organisations activities in the absence of outside support. Wieners (2019) similarly identified three categories of project sustainability as organisational, financial and community sustainability. IFAD (2009) looked at project sustainability through three

lenses; sustainability of outcomes, sustainability of processes, and sustainability of resources. In this study, project sustainability was conceptualised as the dependent variable with institutional/organisational, financial and operational aspects as the key dimensions of sustainability. Disaggregating sustainability into known constituent aspects allows for deeper academic insights and understanding.

1.1.2 Project Management Practices

As observed by Ilies, Crisan and Muresan (2010) the evolution of project management has been accompanied by development of practices that optimise project activity. Such practices have been adopted by various organizations and even project management associations. Advocating for adoption of known project management practices, PMI (2013) observed that the application of such practices has been shown to promote the possibilities of success in many areas.

Various practices have been appraised in project management. Murungi (2015) identified strategic planning, monitoring plan and stakeholder's involvement as the practices that influence donor suported education projects in Kenya. Musau (2018) listed planning, Monitoring and Evaluation (M&E) as well as stakeholders' participation as practices that affect project implementation in the county of Machakos in Kenya. Amadi (2017) singled out project planning and design as the most significant practice that influence the success of community projects. Harvey (as cited by Simiyu, 2018), identified project planning as well as M&E among the project management practices that are applied by the project promoters to achieve desirable outcomes. From the reviewed literature, project design,

capacity building, stakeholder's management as well as M&E have been identified as essential practices in the success of various projects. These were conceptualised as the independent variables in the study.

1.1.3 Project Management Practices and Project Sustainability

There is a growing discussion on project management practices and sustainability. International Project Management Association (IPMA) posited that sustainability should be considered as an objective in every project (IPMA, 2017). Similar views were expressed by Joshi (2007), who advocates for consideration of sustainability concepts in a project from the start to generate valuable relations with key stakeholders. Ebbesen and Hope (2013) also identified sustainability as a key factor in project lifecycle. As recommended by IFAD (2009), sustainability should be factored into the project right from the preliminary design stage.

Different authors have associated various project management practices with project sustainability. Onkoba (2016), identified project design as one of the issues influencing continuity of Carolina for Kibera society projects in Kenya. In an enquiry on capacity building and sustainability of projects in Burundi, Ndayizeye (2018) established that capacity building had a notable role towards sustainability of agribusiness programs in Burundi. Capacity building and training was singled out by Yaseen, et al., (2015) as factors that contributed to sustainable livelihood projects in Pakistan. Martens and Carvalho (2016) further identified stakeholder's management as a main factor of sustainability in project management. Biwott, Egesah and Ngeywo (2017) equally established that M&E

had a great contribution on utility and sustainability of projects implemented through constituency development fund in Kenya. Similarly, Umugwaneza and Kule (2016) reported that M&E practices strongly correlated with continuity of projects in Rwanda. Despite the lack of unanimity on the specific practices by different authors, some popular practices in project management can be singled out to include; capacity building practices, stakeholders management practices, project design practices as well as M&E practices.

1.1.4 Government Policy

Torjman (2005) defined government policy as conscious decision that provides guidance for addressing identified public concerns. This is in line with the views of Skopje (2007), who said that government policy is a line of strategy adopted by the Government to handle a certain issue. Egberi and Monye (2015) posited that government policy is a consistent way in which government carries out its activities. Government policy can thus be said to be deliberate efforts by government to provide guidance on matters of public interest.

The purpose of government policy is to influence the way various activities are carried out in the society. Skopje (2007) elucidated that government policy influences the society or economy. As pointed by Torjman (2005), government policy seeks to achieve a predetermined end for the common good. Petri and Jari (2017) further noted that government policies are developed through a given process and enforced by a public agency. This way government policy moderates the way various activities are carried out in the society. Alila and Atieno (2006) observed that in Kenya government policy in

agriculture is focussed on increasing productivity and incomes, enhanced food security, commercialisation and promotion of farm production.

Specific policies in the agriculture sector have been enacted as Acts of Parliament, sector specific guidelines and regulations in the country. Among them there is the Crop Production and Livestock Act of 1963 with various subsequent amendments. Under this Act, the minister in charge of agriculture is empowered to develop and enforce rules controlling the production, transportation, grading, preparation for market and marketing of any crop or agricultural produce (both crops and livestock) in the country. There also exist specific policies dedicated to a given agricultural practice such as the Potato Production and Marketing Standards Rules 2005. These rules provide for guidelines on recommended potato production practices, harvesting, storage, transportation and processing among other things (GoK 2005). In the dairy sector we have the Dairy Industry Regulations, 2021 which touch on various aspects on dairy industry including the recommendation for a minimum farm gate price for milk.

The enforcement of these and other such policies has some influence on the operations of individuals, organisations and institutions in the agricultural industry. The investigator thus endeavoured to know whether government policies had a moderating effect on the association between the identified project management practices and sustainability of agribusiness projects in Kenya. The moderating role of government policy has been identified in various studies. In Nigeria, Oyelakin and Kandi (2017) established that government policies fully moderated the association between innovation technologies and

entrepreneurship development. Si-jeoung, Eun-mi, Yoonkyo & ZeKun (2016) equally established that government policy had positive moderating effects on the development of small enterprises in Korea. Ojiambo (2018) found that government policy had a notable moderating effect on the connection between success factors and actualisation of construction work projects in Kenya.

1.1.5 Kenya Agriculture Productivity and Agribusiness Projects (KAPAP)

Kenya Agriculture Productivity and Agribusiness Project (KAPAP) was a project targeting small scale farmers in twenty administrative Districts in the country implemented from years 2010 to 2015 (GoK, 2015). The project was part of a twelve years' programme referred to as Strategy for Reviving Agriculture (SRA) 2004–2014. Phase one which was known as Kenya Agricultural Productivity Project (KAPP) closed in December 2008. The second and final phase referred to as Kenya Agricultural Productivity and Agribusiness Project (KAPAP), with $ 98.58 million (about ten billion Kenya shillings), budget was implemented from 2010 to 2015. The project initially targeted 20 administrative Districts which have since been renamed as Counties in seven diverse regions of the country. GoK (2015) shows that 6,401 projects were implemented in twenty Counties under KAPAP between years 2010 to 2015.

The development objective of KAPAP was to raise productivity and the incomes of smallholder farmers (World Bank, 2016). As reported in GoK (2015), the project was organized around four components. The first component on policy/institutional and project implementation was designed to address enabling policy structures for the project

operations in the country. The second component targeted the provision of support for agricultural research through Agricultural Research System (NARS) and Kenya Agricultural Research Institute (KARI). The third component was on Agricultural Extension, Farmers and other Stakeholder Empowerment, while the final component was on Agribusiness and Market Development. The interest of this study is on sustainability of agribusiness projects from the farmer's perspective as expressed in component three and four of the project.

Under component three and four, the project involved promotion of farming, value addition and trading in various agricultural products under selected value chains. The project activities were organised around the following agricultural value chains; Vegetables value chain which included onions, bananas, tomatoes and Irish potatoes, meat value chain comprising of fish and rabbit rearing, dairy value chain which involved keeping of dairy cows and goats for milk as well as poultry value chain. Others were beekeeping value chain, fruits value chain and cereals value chain comprising of maize, beans and groundnuts. The farmers were organised into Common Interest Groups (CIG), within a locality along the respective value chains which were formalised by registration as CBO's. The CIGs provided the basis for implementing a subsection of KAPAP project. This was necessary to develop implementation structures for the project (Wanjala et al., 2017). The project adopted contracted service provider model where expert consultants were engaged to offer agricultural extension services to farmers in their CIG's and other players along the value chain. The consultants were to operate in conjunction with government officers from relevant ministries such as Ministry of Agriculture. The project further focussed on

identification of key agribusiness investment opportunities for value addition by community groups as well as formation of apex farmers and commodity associations through formation of cooperative societies (Gok, 2015).

Field visits as well as discussions with various project stakeholders in 2021 revealed divergent results on the sustainability of KAPAP projects in the country five years after the end of project implementation. While there is continuity and even expansion in a number of the projects, some have since ceased operations, while others are struggling with dismal performance. The divergent results on project sustainability make KAPAP projects a suitable case study on sustainability of agribusiness projects in the country.

1.2 Statement of the Problem

There is growing dependence on projects to actualise development initiatives in different sectors of the economy. The World Bank (2008) observed that 22% of the global Gross development product is generated through projects. Turner, Anbari and Bredillet (2015) estimated that over 20% of world economic activity is achieved through projects. In Kenya Vision 2030, specific flagship projects in several key sectors of the economy were identified as necessary to steer the country to desired development levels by year 2030 (GoK, 2007). Successful completion and sustainability of these projects is necessary for actualisation of the desired development objectives. In concurrence with this view, Sabini (2016) adduced that the growing dependence on projects in various sectors of the economy promotes sustainable development in the country.

As postulated by different authors (Martens & Carvalho, 2016; Jonas & Alexander, 2013), the growing dependence on projects has been accompanied by concerns on project sustainability. Despite these concerns, the attainment of sustainability in projects has remained a great challenge. Soliman and Adam (2015) pointed out that many projects implemented by donor organisations decline soon after the donors exit. Making a similar observation, Lungo, Mavole and Martin (2017), decried the lack of continuity of many projects where a lot of funds had been spent. IFAD (2018) further indicated that sustainability of benefits and efficiency remains longstanding bottlenecks for project performance. While decrying about the large resources expended in community projects, Oino et al., (2015) indicated that lack of sustainability has denied such a community the envisaged benefits from the project. The Asian Development Bank (2010) equally indicated that nearly a half of the funded programs are not operational beyond a few years after ending of the bank support.

In an attempt to address the pervasive deficiency in project sustainability, various authors and project promoters (Martens & Carvalho, 2016; Silvius, Brink, & Kohler, 2012) have advocated for the incorporation of sustainability concepts in various project management practices. As observed by Jonas and Alexander (2013) there is increasing desire to incorporate sustainability into project management process. Joshi (2007) similarly recommends for integration of sustainability aspects in a project from the initial stages. Various organisations have equally committed to incorporate sustainability concepts among their project management practices. This view was advanced by Bindon et, al., (2019) who postulated that attaining sustainability calls for a strategic inclusion of

continuity concepts right from the beginning in USAID projects. IFAD (2009) likewise noted that the important elements of sustainability strategy should be considered from the initial steps of project design. There is need for an empirical inquiry on the effectiveness of incorporating the sustainability concepts in project management practices in various fields.

Several studies on project sustainability have been carried out by different scholars. Mokgadi (2012) looked at factors affecting sustainability of poverty alleviation projects in South Africa while Ngonyani (2013) focussed on factors influencing sustainability of micro-projects in Tanzania. These studies focussed on factors affecting sustainability of projects outside Kenya. Mboi and Kidombo (2018) looked at continuity of irrigation programs where the interest was on irrigation projects. Keura and Moronge (2016) looked at drivers of sustainability of donor funded projects in Samburu County, while Sang (2015) looked at sustainability of World Bank funded projects in Kenya. In these studies, sustainability was considered as the dependent variable whose measurement is limited to a dichotomous range of responses and analysed through Logit regression. The above studies did not also focus on agricultural productivity and agribusiness projects. There is need for a comprehensive inquiry on project management practices and sustainability of agricultural productivity and agribusiness projects. The researcher intended to ascertain the effects of project management practices on sustainability of Kenya Agricultural Productivity and Agribusiness Projects in selected counties in the country.

In this inquiry, sustainability was considered as a continuous dependent variable whose magnitude is expressed in Likert scale and analysed through linear regression. Project sustainability concept is further disaggregated into financial, institutional and operational aspects in line with Joshi (2007), Seltzer (2014), Wieners (2019) and IFAD (2009) to allow for exhaustive analysis and better understanding.

1.3 General Objective of the Study

To establish the effects of project management practices on the sustainability of KAPAP projects in selected Counties in Kenya.

1.3.1 Specific Objectives of the Study

The study sought to;

i. Establish the effect of capacity building practices on the sustainability of KAPAP projects in selected Counties in Kenya.
ii. Assess the effect of stakeholder's management practices on the sustainability of KAPAP projects in selected Counties in Kenya.
iii. Find out the effect of project design practices on the sustainability of KAPAP projects in selected Counties in Kenya.
iv. Examine the effect of monitoring and evaluation practices on the sustainability of KAPAP projects in selected Counties in Kenya.
v. Assess the moderating effects of government policy on the relationship between project management practices and sustainability of KAPAP projects in selected Counties in Kenya.

1.3.2 Hypothesis of the Study

The following hypotheses were tested;

i. H_{O1}: Capacity building practices do not have a significant effect on the sustainability of KAPAP projects in selected Counties in Kenya.

ii. H_{O2}: Stakeholder's management practices do not have a significant effect on the sustainability of KAPAP projects in selected Counties in Kenya.

iii. H_{O3}: Project design practices have no significant effect on the sustainability of KAPAP projects in selected Counties in Kenya.

iv. H_{O4}: Monitoring and evaluation practices have no significant effect on the sustainability of KAPAP projects in selected Counties in Kenya.

v. H_{O5}: Government policy has no significant moderating effect on the relationship between project management practices and sustainability of KAPAP projects in selected Counties in Kenya.

1.4 Significance of the Study

The enquiry sought to generate an understanding on the effects of PMPs on the sustainability of agricultural productivity and agribusiness projects in Kenya. The outcome of the investigation helped to capture and document new insights on the effects of project management practices on project sustainability. This knowledge is invaluable to scholars in project management desirous of understanding the link between project management practices and project sustainability. The findings are also important to various players such as government agencies and development partners keen in designing and implementing successful projects in agriculture and other fields. The recommendations of the study have

identified areas of improvement in social and economic structure of the society to create a favourable environment for project implementation. This forms a basis for policy formulation to provide enabling laws, regulations and guidelines that will help to attain project sustainability in the future.

1.5 Scope of the Study

The investigation looked at project management practices and sustainability of agricultural productivity and agribusiness projects in selected counties in Kenya. Through extensive literature review, four practices in project management were singled out as the predictor variables for the study. The four are; capacity building practices, stakeholders management practices, project design practices as well as M&E practices. In addition, government policy was considered as a moderating variable while sustainability was premised as the predicted variable in the inquiry.

Kenya Agricultural and Productivity Projects (KAPAP) was identified as an ideal project for the study. Through random sampling methods the counties of Nyeri, Meru, Busia and Siaya were selected for data collection. The four counties were sampled from twenty counties where KAPAP project was implemented between years 2010 to 2015. Data was captured on the various project components that were relevant to project sustainability. The study sought information from project leaders on project management practices and sustainability of their respective projects five years after project closure. The data was analysed through multiple regression models and interpreted in as per the outlined objectives.

1.6 Limitations of the Study

The investigation was undertaken five years after project closure. Due to passage of time, the responses by some respondents could have been factually inaccurate. To address this challenge, the researcher allowed the respondents adequate time to give responses to avoid hurried responses that may not be accurate. Another likely limitation is non-cooperation by some respondents. Some respondents bitterly complained that they were defrauded money contributed for the establishment of cooperatives societies and were not willing to give the information necessary for the inquiry. Other respondents were hesitant to take part for concern of being accused to have given out or exposed the project information without authority. The investigator had to reassure them that he was not part of the KAPAP team and he was seeking data for academic purposes only. Additionally, there was strict observance of research ethics including getting necessary approvals before setting out for data collection and assuring the respondents of confidentiality. Alternative respondents were also identified where it was impossible to get responses from a respondent.

1.7 Organisation of the Study

The thesis is presented in five main sections which are preceded by a preliminaries section. The first chapter also called introduction contains; background, problem statement, purpose, significance, scope, and limitations of the study respectively. In the second chapter, there is theoretical review, empirical review and a summary. Chapter three has the research methodology which starts with an introduction, followed by the research philosophy, design as well as ethical issues. Next there is chapter four on discussion of the

research findings followed by chapter five on conclusions and recommendations. At the end there are references and various appendices.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Five theories appropriate to the research are expounded in this section. This is followed by a review of past relevant studies presented in order of specific study variables. A brief of reviewed literature highlighting the identified research gaps appears next. The chapter concludes with a conceptual framework depicting the relationship between the variables.

2.2 Theoretical Literature Review

The inquiry was anchored on systems, stakeholder's management, constraints and sustainability theories. The origin of each is explored together with the views of the main proponents. This is followed by a description of what the theory postulates. The significance of each these is presented by identifying the specific hypothesis grounded on that theory.

2.2.1 Theory of Change

The development of the theory can be traced to a 1995 publication by Carol Weiss under the US based Aspen Institute. Weiss (1995) explained it as "a way to express the postulations that describe the steps that point to the ultimate goal". The theory can be seen as a formula that shows how a certain intervention is premised to guide to a given end (UNDAF, 2017). The theory is normally presented in a narrative often accompanied by a diagrammatic representation that demonstrates the pathway of how to get from here to there.

The theory has since been expounded by other scholars including Davies (2018) who explained it as an account of a set of actions that are anticipated to lead to a particular premeditated end in a program. As noted by Taplin, et al... (2013), theory of change requires one to first identify the goals and then work backwards on possible outcome pathways which is opposed to the usual forward oriented reasoning. The application of the theory of change was also supported by Patricia (2014) who elucidated that it describes how given actions are premised to produce results which lead to achievement of intended impacts. Vogel (2012) further opined that it can be regarded as an ongoing discourse which provides awareness on programme logic and implementation. These views were supported by James (2011) who noted that the theory promotes a common view on how change takes place and brings out the projects own role in bringing about change.

While supporting the underlying logic behind the theory of change, Mulgan (2016) observed that the theory requires near perfect knowledge about the future which is not always the case. In a critic to the relevance of the theory in development work, he avers that the theory tends to be simplistic by presupposing that given inputs always lead to certain known results. In practice, this does not always happen. He further argues that the theory risks squeezing the space for learning. In his views, the theory prescribes the transformation pathways in advance hence diminishing the possibility of utilising personal initiatives.

Despite the criticism, the theory recommends for a thorough examination of how an intended change is anticipated to happen in a project. The theory of change provides a good

grounding for interrogating the association between the variables in this research. It can be applied for interrogating in advance the effect of various PMPs on the attainment of predetermined project goals. The theory also allows for an examination of the interrelationships between the various project management practices and the underlying assumptions capturing the complete picture of the project beforehand. This theory offers a basis for the formulation of various hypotheses in the study.

2.2.2 Systems Theory

Friedman and Allen (2014) postulated that the system theory approach originated in 1940's from the works of Ludwig von Bertalanffy who focussed on growth and change in living organisms. Ludwig explained that change may be a result of relations between various parts of an organism (Friedman & Allen, 2014). The theory later gained prominence in other fields beyond the biology. The application of the systems theory in management has been advocated by various proponents including Cristina, Jacqueline and Francesco (2010), who held that to understand a global vision of a phenomenon, it is necessary to underline its functioning components. In support of the theory Chikere & Nwoka (2015) referred to the systems theory as a holistic approach to understanding phenomena. Ansari (2004) equally supported the utility of systems theory and emphasised that the arrangement of the various parts and their mode of interaction can explain the qualities of a given system.

Through the systems theory approach, a project can be viewed as a one big concept made up of interrelated segments where various project management practices are employed to actualise the project goal. In this view, a holistic understanding of how various project

management practices interact with each other will provide insights on how the project may achieve the desired project objectives including sustainability. The systems theory provides a good grounding for the formulation of hypotheses to interrogate the connection between PMPs and project sustainability.

2.2.3 Stakeholders Theory

Littau, Jujagiri and Adlbrecht (2010) observed that the beginning of stakeholder's theory can be associated with Edward Freeman who looked at stakeholders as any entity who can influence or be influenced by your activities. Various authors have advocated for the management of stakeholders in line with the tenets of stakeholder's theory (Cleland, 1986; Miller & Lessard, 2001; Olander & Landin, 2005). The stakeholder's theory proposes that an organisation should concern itself with the interest of all the stakeholders. Antonio (2007) observed that the stakeholder theory is relevant while looking at those groups or individuals whom a firm should be responsible. Harrison, Freeman and Abreu (2015) equally observed that the stakeholder theory promotes a rational way to oversee an entity in dynamic and challenging operating conditions. The theory proposes that the achievements of an organisation are dependent on its skill to manage the stakeholders.

Notwithstanding the growing popularity, the theory has been faulted by several scholars. Key (1999) contended that the theory is deficient on specific parameters and so may not be examined in a way that permits scientific inspection. Brayden (2006) equally expressed that the theory does not offer any decision-making criteria that would sufficiently support

corporate governance. Teppo (2006) further termed the theory as vacuous and one that offers an unrealistic view of how organizations operate.

Despite the above criticism the stakeholder's theory prescribes an important approach to secure stakeholder support for the attainment of the project goals including sustainability. It aptly recognises that project success is dependent upon the goodwill of various players. The theory provides the basis for the formulation of a hypothesis to assess the connection between stakeholder's management practices and project sustainability.

2.2.4 Theory of Constraints

The theory holds that every endeavour has at least one item that inhibits the realisation of optimum performance levels (Goldratt, 1990). As reported by Tulasi & Rao (2012), the theory adopts the common proverb "the strength of a chain is limited by the weakest link". This means that in any organization, weakest person or section can always adversely affect the results. The theory was initially proposed by Eliyahu M. Goldratt in 1984. The theory has since been propounded by other proponents (Watson, Blackstone, and Gardiner, 2007: Dettmer, 1997; Kendall 1998). In line with this theory, understanding of an organisations bottleneck should be prioritised for improved performance. The theory holds that organisations should strive to identify and manage their weakest point or constraints for improved performance.

The effectiveness of the theory of constraints has been criticised on several grounds. Markgra (2019) observed that the major challenge in this theory is how to identify the

constraints. There is a risk of focusing on misleading constraints which may not be relevant to the situation at hand. One could spend precious time and resources on areas that are not significant to the achievement of the goal. Secondly, as noted by Ebby (2017), another weakness of theory of change is that it focuses on short term performance with little regard to the long term performance. It's concerned with actual situations and hence confines itself to short-term effects.

Despite the criticism, the theory has a lot of relevance in project management work. In line with this theory, project managers should seek to identify and understand the constraints within which the projects are carried out. Government policy in form of laws, rules and regulations prescribes the boundaries within which the project management practices can be carried out. This presents the constraints within which the project can be implemented. An understanding of the relevant government policy is thus necessary for the attainment of the project objectives. The theory provides a good grounding for consideration of government policy as a moderator in this inquiry.

2.2.5 Sustainability Theory

Sustainability has been associated with the continuity of desirable outcomes over a long time by various authors. Soliman and Adam (2015) associated sustainability with keeping something going. This is in line with Harrington (2016) who defined sustainability as the ability to stay in a certain condition for an extended period of time. The quest for sustainability means that the aim is to uphold given conditions over the long term.

Sustainability theory would thus be concerned with deliberate human efforts that promote the continuity of desired conditions in the long term.

The discourse on sustainability was ignited by the desire to provide for the growing world population. Bac (2008), traces the emergence of sustainability concept to the writings of Robert Malthus who in 1798 had envisaged a crisis in feeding the growing world population. He proposed for deliberate human efforts to avert the impending food shortage in the future. WCED (1987) introduced a futuristic dimension where sustainability is viewed as ensuring the welfare of present and later generations is upheld.

Goedknegt and Silvius (2012) expressed sustainability as the interaction between economic, social and environmental aspects in development. The interrelationship between the three aspects was represented by Barbier (1987) as shown in Figure 2.1.

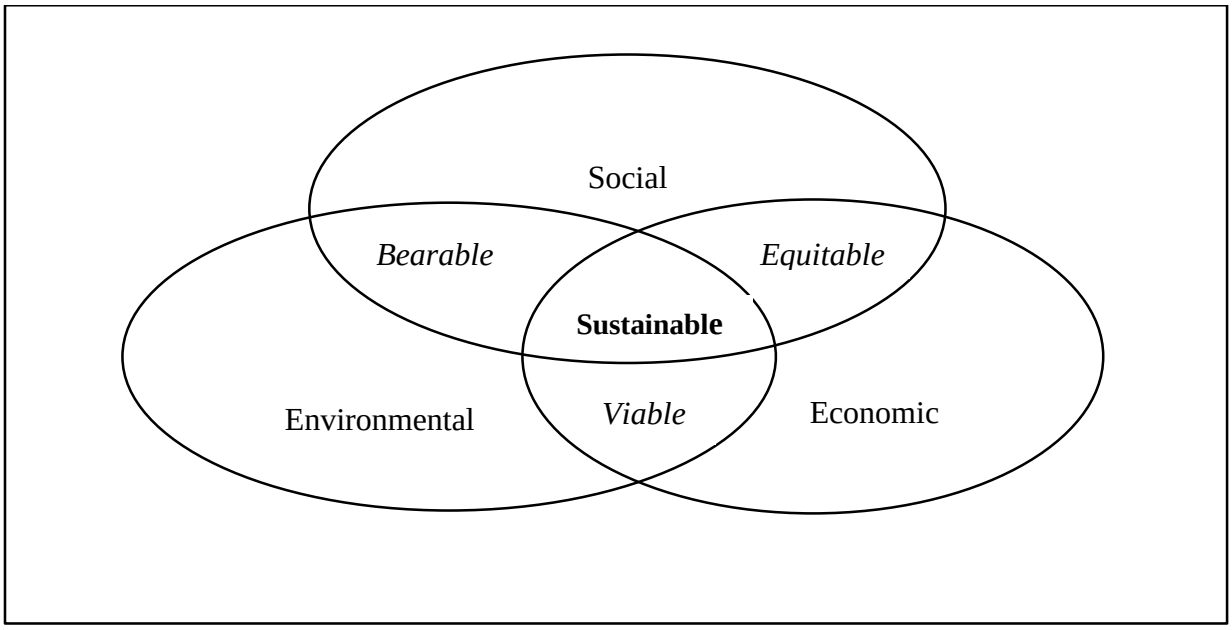


Fig 2.1: Pillars of Sustainable Development (Barbier, 1987)

Sustainability concept has over the years been adopted in other fields beyond environmental conservation. Starik and Kanashiro (2013) described a sustainable world to include enough access to resources for people and other species. Soliman and Adam (2015) indicated that sustainability also refers to resource utilisation and lifestyles without causing harm to the society. Offering a critic to the sustainability theory, Dernbach & Cheever (2015) described the theory as too vague to provide guidance. They pointed out that the term sustainability has a variety of definitions which makes it hard to discern the true meaning of the theory.

The reviewed literature indicates that the sustainability requires deliberate efforts to ensure continuity of desirable outcomes over a long time. As noted by Silvius, Brink, and Kohler (2012), it is wise to consider sustainability in guaranteeing continuity of program outcomes over a long term. The project management practices provide the pathways for integrating sustainability aspects in the project activities. This provides a good grounding for consideration of sustainability as the dependent or predicted variable in the study.

2.3 Empirical Literature Review

Views from past studies pertinent to the research objectives on project capacity building practices, project stakeholder's management practices, project design practices as well as project monitoring and evaluation practices are presented in this section. Relevant isolated research gaps in relation to the current study were brought out as well.

2.3.1 Capacity Building Practices and Project Sustainability

Different scholars have looked at the effects of capacity building in various projects. Komujuni, et al., (2013) looked at capacity development initiatives and sustainability of health projects in Uganda. Cross-sectional survey design was utilized where the respondents were identified through purposive sampling as well as random sampling methods. Data was gathered with questionnaires and interviews and later analysed through regression analysis. Results revealed a considerable association between the variables. The interest was on sustainability of health projects in Uganda. The results may not apply to projects in other areas. There is need for further studies on sustainability of Agricultural Productivity and Agribusiness projects with a local context.

Ouma (2016) set to get the role of capacity building programs on performance in Danish refugee council projects. Descriptive survey design was applied where the respondents were identified through stratified sampling methods. The respondents comprised of staff at Danish refugee council. Questionnaires were employed in data collection which was later analysed through regression analysis. The findings established that the capacity building methodology as well as content influenced project performance. The findings were based on the views of staff at Danish refugee council. There is need for further studies incorporating the views of other stakeholders especially the project beneficiaries.

Ondieki (2016) carried out a study in Kisii town on stakeholders' role in M&E using a descriptive design where data was captured from representatives of various project stakeholders using questionnaires. The findings indicated a direct relationship between the

variables. There is need for further studies on capacity development practices and project continuity. Ndayizeye (2018) investigated capacity building of agribusiness programs in Burundi. A cross sectional design was employed with mixed method approach. Through questionnaire and interview schedule, data was captured and later analysed through regression analysis. The findings indicated that capacity building had a role in continuity of the projects. There is need to confirm the role of capacity building on continuity of Agribusiness projects with a local context.

2.3.2 Stakeholders Management Practices and Project Sustainability

The role of stakeholders in projects has been captured in several past studies. Bal, Bryde, Fearon, and Ochieng (2013), looked at stakeholder management in the construction sector projects in the United Kingdom. An exploratory study was conducted where specific project managers were selected through purposive sampling and subjected to structured interview. The data was subjected to content analysis and compiled into an expressive descriptive narrative. The results suggest that understanding the stakeholder's management processes is important to achieve sustainability related goals. The study focused on stakeholder's engagement and achieving sustainability in the construction sector. Since the respondents were identified through purposive sampling, application of the results beyond this study may not be appropriate. Further studies are necessary in other fields where the respondents are identified though more representative methods.

Another investigation on stakeholders and sustainability of community projects was done by Ochunga (2015). The investigator adopted a descriptive survey with questionnaires to

collect the data. The subjects were identified through random sampling. Data was analysed through regression analysis. Stakeholders' participation influence was analysed along a four-point continuum ranging from passive to optimum participation. Results indicated that stakeholder's participation influence on project sustainability was found to increase along the continuum with passive participation having the least influence while optimum participation had the most influence. The identification of respondents through simple random sampling method is appropriate where the respondents are homogeneous. There is need for further studies where the heterogeneous nature of the respondents is taken care of.

Martens and Carvalho (2016) carried out an inquiry on project managers' perspectives on project sustainability in Brazil. Systematic literature review and survey-based research were carried out. More data was collected from selected project managers using questionnaires. Sampling frame for the study was generated from Linkedin professional social media platform. The data was analysed through exploratory factor analysis. Stakeholder's management stood out as a key aspect of sustainability. The use of a sampling frame from a social platform media may have locked out any possible respondent who was not a member of such a platform. There is need for further investigations in local context with respondents identified through more inclusive methods.

2.3.3 Project Design Practices and Project Sustainability

Various studies on project design practices have been carried with different outcomes. Serrador (2012) looked at the role of planning in project success in various fields. Data was gathered from existing literature in academic papers and books. The outcome indicated a

strong association between planning and project success. Secondary data was utilised to establish the importance of planning in project success. This inquiry did not address the importance of planning on project sustainability. There is need for further studies on planning and project sustainability using primary data.

Onkoba (2016) carried out a study on Carolina community based projects in Kibera. Data was gathered using pre-coded questionnaires and analysed through descriptive statistics as well as regression analysis. Project design was found to be among the major factors affecting the continuity of these projects. The researcher intended to get the effects of four predetermined factors on endurance of community projects. It is important to consider the responsibility of these as well as other factors on continuity of various projects in other areas beyond community based projects.

Simiyu, Ngugi and Minja (2018) looked at the role of planning and execution on the success of projects in agriculture in Bungoma County. Descriptive as well as explanatory designs were employed. Subjects were identified through stratified sampling while data was collected through interviews and questionnaires. Regression analysis was applied for data analysis. Project planning as well as implementation was identified as practices that influenced the performance of the projects. There is need for further studies on project management design practices and sustainability of Agricultural Productivity and Agribusiness projects in other areas.

2.3.4 Monitoring and Evaluation Practices and Project Sustainability

M&E has been associated with project success as well as sustainability by several scholars. Karanja (2014) looked at sustainability of youth projects in Murang'a. Respondents were selected through stratified sampling methods while data was captured with questionnaires, interviews and focus group discussions. Monitoring and evaluation was identified as one of the management practices that had a role on project continuity. The study focused on specific management practices and the continuity of income generating projects. There is need for further studies on M&E practices and performance of Agricultural projects.

Broad and Mulyungi (2018) looked at participatory M&E and success of projects supported by donors in Rwanda. Respondents were randomly identified and issued with questionnaires. Data was later analysed in line with the study objectives using a multivariate regression model. The findings implied that active beneficiary participation in M&E activities contributed to project sustainability. The study did not consider other approaches in monitoring and evaluation beyond active beneficiary participation. There is need for more comprehensive studies on relevance of M&E on continuity of various programs and in local context.

A study on effects of participatory M&E on project success was carried out by Jamaal (2018). The investigator collected data using structured questionnaires and subjected it to a regression model. The findings showed participatory monitoring and evaluation led to successful completion of projects. Nevertheless, the inquiry did not address the issue of

endurance of the programs after successful completion. There is need for further studies on effects of M&E and project sustainability.

2.3.5 Government Policy as a Moderator between PMPs and Project Sustainability

Ndachi and Kimutai (2018) inquired on execution of medical projects in Nyeri County. Cross-sectional survey design was utilised with stratified sampling used to get the respondents. Data was analysed through descriptive statistics as well as regression analysis. Government policies were found to have negative influence on project execution. The inquiry focused on practices that affect implementation of health programs. There is need for further studies on sustainability of Agricultural Productivity and Agribusiness projects in the Country.

Ochenge (2018) studied the role of government policy on PMPs and performance of road projects. Descriptive and explanatory designs were employed. Census data was subjected to multiple regression models for analysis. From the findings, the policies had no significant moderating effect on the connection between the variables. The results may not be relevant in other fields beyond road infrastructure projects. There is need for further studies to look at the moderating role of government policy in other sectors of the economy.

Ojiambo (2018) looked at government policy as a moderator between success factors and projects completion in Bungoma County. Mixed designs comprising of descriptive survey and correlation research design were adopted. The respondents were selected through purposive stratified sampling methods. Questionnaires as well as interviews were used in

data collection. From the findings, government policy compliance had a significant moderating effect. The enquiry did not address the issue of sustainability of the projects after completion. There is need for further studies on various factors affecting the sustainability of projects after completion.

Another inquiry on the moderating effect of government guidelines on the connection concerning workforce autonomy and service delivery by Kenyan workers in County governments was carried out by Mutuma, Iravo, Waiganjo, & Kihoro (2017). Descriptive and correlation designs were used while data was analysed through a multiple regression model. The outcome indicated that government guidelines did not have significant influence. The issue of project sustainability was not addressed. There is thus a need to carry out a study on government policy as a moderating factor on project sustainability.

Oyelakin, and Kandi (2017) looked at government policy and the connection between technology innovation and entrepreneurship growth in Nigeria. Cross-sectional design was applied where data was obtained using questionnaires from respondents who were identified through simple random sampling technique. Data was analysed using a structural equation model. From the results government support had a significant positive effect. There is need for an investigation on the influence of government policy on the continuity of Agribusiness projects in Kenya.

Si-jeoung, Eun-mi, Yoonkyo and ZeKun (2016) looked at innovation in service on research and development area and government activities systems in Korea. Data from the Korea

Innovation Survey 2012 was analysed using a binary logistic model. Respondents were selected through multistage stratified and systematic sampling techniques. The researchers deduced that government policy had positive moderating effects on small and micro enterprises. There is need for further studies on moderating effect of government policy on sustainability of Agricultural Productivity and Agribusiness in Kenya.

2.4 Summary of Reviewed Literature

This is presented in Table 2.1

Table 2.1 : Summary of Reviewed Literature

Author	Study Focus	Key Findings	Knowledge Gap	Focus of this Study
Serrador (2012)	Project planning and project success	Project planning and success are positively correlated	Link between planning and project sustainability not addressed	Project design practices and sustainability of KAPAP.
Bal, et al., (2013)	Stakeholder involvement in construction field project in the United Kingdom.	Understanding the stakeholders sustainability agendas is necessary to achieve sustainability related goals in construction projects	The effect of stakeholder's involvement in agribusiness projects.	Stakeholder's management practices and sustainability of KAPAP.
Komujuni, Basheka and Oluka (2013)	Capacity development approaches and continuity of health care projects in Uganda	There was strong association between the capacity development approaches and continuity of the projects	Relationship between capacity building approaches and sustainability of agricultural productivity and agribusiness projects in Kenya.	Capacity building practices and sustainability of KAPAP.
Karanja (2014)	Management practices and continuity of youth projects	M&E influences projects sustainability.	Place of M&E on continuity of projects in agriculture	M&E practices on sustainability of KAPAP.
Ochunga (2015)	Stakeholder engagement and continuity of community projects	Influence of stakeholders contributions on project sustainability increased with level of participation	The influence of stakeholders participation practices on endurance of projects by other organisations and in other areas	Stakeholders' management practices and sustainability of KAPAP.

Author	Study Focus	Key Findings	Knowledge Gap	Focus of this Study
Martens and Carvalho (2016)	Project managers perspectives factors of project sustainability	Stakeholders management stood out as a key aspect	The place of stakeholder management on project sustainability in Kenya.	Stakeholder's management practices and sustainability of KAPAP.
Ondieki (2016)	Stakeholders' capacity building and participation in M&E of water projects in Kenya	Deficient capacity building leads to poor stakeholder's participation.	The influence of capacity building on project endurance.	Capacity building practices and sustainability. of KAPAP
Onkoba (2016)	Determinants of sustainability of CBO projects in Kenya.	Identified project design as one of the determinants of sustainability in Carolina for Kibera projects.	Project management practices and sustainability of agricultural projects	Project management practices and sustainability of KAPAP.
Ouma (2016)	Influence of capacity building programs on project success in nongovernmental organizations in Kenya.	Project success influenced by Capacity building methodology as well as content.	The effect of capacity building programs on project sustainability.	Project capacity building practices and sustainability of KAPAP.
Si-jeoung, Eun-mi, Yoonkyo and ZeKun (2016)	Innovation, R&D practices and government support structures in Korea.	Government policy had positive moderating effects on small and micro enterprises in Korea.	Government policy, project management practices and project sustainability in Kenya	Moderating role of government policy on association between Project management practices and sustainability of KAPAP.
Mutuma, Iravo, Waiganjo and Kihoro (2017)	Government policy, workers autonomy and service delivery in County government	No significant moderating influence by Government policy.	Government policy as a moderator between project management practices and project sustainability.	Moderating role of government policy on project management practices and project sustainability of KAPAP.
Oyelakin and Kandi (2017)	Government policy, technology, and	Government policies fully moderated the association between innovations,	Government policy as a moderator between project	Government policy, project management practices and sustainability of KAPAP.

Author	Study Focus	Key Findings	Knowledge Gap	Focus of this Study
	entrepreneurship development	technology and entrepreneurship growth	management practices and sustainability in Kenya.	
Broad and Mulyungi (2018)	Participatory M&E and endurance of donor projects, in Gasabo District.	PM&E necessary factor in sustainability of projects.	M&E practices and project sustainability in Kenya.	Monitoring and evaluation practices and sustainability of KAPAP
Jamaal (2018)	Effects of participatory M&E on donor programs	Participatory M&E led to successful completion of projects.	Monitoring and evaluation practices and project sustainability.	M&E practices on sustainability of KAPAP.
Ndachi and Kimutai (2018)	Moderating role of government policy on PMPs and implementation of healthy projects	Government policies had a negative effect on the execution of the projects.	The moderating effect of government policy on project design practices and project sustainability.	Government policy and association between project design practices and sustainability of KAPAP.
Ndayizeye (2018)	Capacity building contributions on the continuity of agribusiness projects in Burundi.	Capacity building affected the project sustainability	Capacity building practices and project sustainability with in local context.	Capacity building practices and sustainability of KAPAP.
Ochenge (2018)	Government policy, PM practices and project performance	Government policy had insignificant moderating influence on the association between the variables	Government policy, PM practices and sustainability of agricultural projects	Government policy PM practices and sustainability of KAPAP.
Ojiambo (2018)	Government policy, project success elements and performance of projects in Kenya.	There was notable moderating effect on the association between success factors and project completion	Moderating influence of government guidelines on various factors affecting the sustainability of projects	Moderating role of government policy on link between PM practices and sustainability of KAPAP.
Simiyu, Ngugi and Minja (2018))	PMPs and performance of project in agricultural	PMPs had notable effects project performance.	PMPs and sustainability of agricultural projects.	PMPs and sustainability of KAPAP.

(Source: Researcher, 2021)

2.5 Conceptual Framework

Through a diagrammatical presentation, the variables are shown in a conceptual framework in Figure 2.2. The Capacity building practices, stakeholder's management practices, project design practices as well as monitoring and evaluation practices are depicted as the four independent variables of interest in the study. Project sustainability is shown as the dependent variable while Government policy is the moderating variable. Specific relevant attributes for measuring each of these variables are presented under each variable.

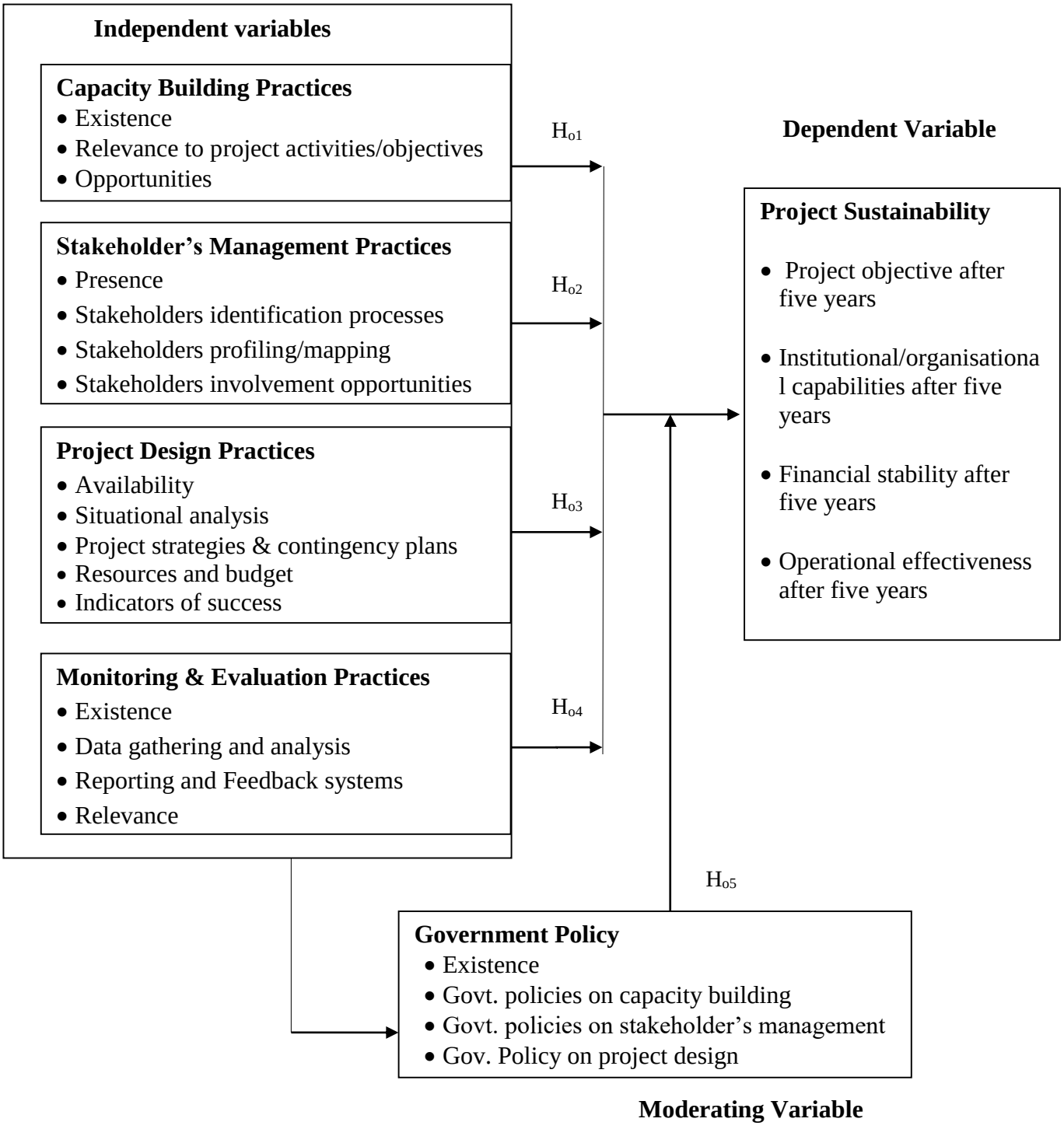


Fig. 2.2: Conceptual Framework (Source: Researcher, 2021)

CHAPTER THREE

METHODOLOGY

3.1 Introduction

A detailed explanation of how the inquiry was carried out is covered in this section. The contents comprise of the philosophy, design, model, population, sampling design, instruments of data collection diagnostic tests as well as pertinent ethical norms.

3.2 Philosophy

A pragmatism philosophy was adapted in the study. Creswell (2012) elucidated that pragmatic research method is anchored on abduction logic which combines induction and deduction insights to enable the use of mixed methods in the same study. Giacobbi, Poczwardowski, and Hager (2005) explained that pragmatists prefer methodologies that are useful in given circumstances and not necessarily those that bring out underlying facts about the nature of reality. In addition, Pragmatists further recognize the need to consider the contextual nature in scientific inquiry that strongly influences the scientific process (Giacobbi et al., 2005).

The proponents of pragmatism hold the view that the world is not an absolute unity. Consequently, different ways of gathering and analysing data are necessary to gain full understanding of the divergent scenarios. Creswell (2012) indicated that a pragmatic paradigm allows one to seek knowledge using multiple approaches. This was also propounded by Tashakori and Tedlie (1998) as well as Data (1994) who explained that it provides a basis for utilising mixed methods in research. A pragmatic paradigm allows the

application of mixed methods comprising of quantitative as well as qualitative techniques in a study (Onwuegbuzie & Leech, 2004). Pragmatism paradigm was thus appropriate for this study which sought to utilise qualitative and quantitative methods.

3.3 Research Design

In line with the views of Saunders et al., (2007), both descriptive as well as explanatory designs were appropriate in the enquiry. In a descriptive design, the object of study is observed and described without interfering with it (Cooper & Schindler (2014). The design was thus appropriate in this study which sought to collect data without influencing the subjects in any way. An explanatory research design was also necessary to get the causal relationships between the variables. Maxwell and Miltapalli (2008) posited that explanatory research design is relevant where inquiry is meant to illuminate on causal relationships between variables.

3.4 Empirical Model

A multiple regression model was applied. Creswell (2012) observed that through multiple regression analysis, the differences in the response variable will be accounted for by the variance of each of the explanatory variables as well as the combined effect of all independent variables. The model has been recommended by several scholars as an appropriate technique for estimating the magnitude of a continuous predicted variable where several predictor variables are involved (Hosmer, 2000; Jackson, 2009; Cooper & Schindler, 2014). Project sustainability which is the dependent variable was represented by (Y), while project design practices, project capacity building practices, project

stakeholder's management practices as well as project monitoring and evaluation practices were represented by X_1 - X_4 respectively.

Typical equation is;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 \ldots\ldots\ldots\ldots\ldots + \beta n X n + \varepsilon \quad \text{..... Model 3.1}$$

To get the direct association between the study variables model 3.2 was applied;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{Model 3.2}$$

Where:

Y = Project sustainability

β_0 = Constant

$\beta_1 - \beta_4$ = Regression Coefficients

X_1–X_4 = Independent variables (capacity building practices, stakeholder's management practices, project design practices as well as monitoring and evaluation practices respectively).

ε = Error term

Model 3.2 was applied to get coefficients for each of the independent variables as well as the related p-values. Every p-value was evaluated for significance at 0.05. A p-value below 0.05 meant the independent variable was statistically significant. The null hypothesis (H_{o1}-H_{o4}) was in such a case not accepted. The research hypotheses were tested at 5% level of significance.

Model 3.3 was applied to check for moderation effect. If p value is below 0.05, the moderating variable was to be considered as statistically significant. This would indicate that there was moderation by government policy on the relationship between predictor and the predicted variables. The null hypothesis (H_{O5}) would is such case not be accepted.

$$Y = \beta_O + \beta_5 X + \beta_6 E.E + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.3$$

Where:

Y = Project sustainability

X = Composite index for project management practices (independent variables)

β_0 = Constant

$E.E$ = Government policy

β_5 & β_6 = Beta coefficients

ε = Error term

After confirmation that the moderating variable has statistically significance effects on the relationship between the PMPs and project sustainability, model 3.4 was used to establish the direction and effect of the moderation. In model 3.4, hierarchical linear regression models were applied to compare the change in the coefficient of determination (R^2) before and after inclusion of the moderating variable as recommended by Allen (2017). An improvement in the magnitude of R^2 was a confirmation that at 5% level of significance, government policy had a positive significant moderating effect on the association between

PMPs and project sustainability. This means that the relationship between the project management practices and project sustainability was enhanced by government policies.

$$Y = \beta_O + \beta_7 X + \beta_8 E.E + \beta_9 X * EE + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.4$$

Where:

X*EE = Product of project management practices and moderator (government policy)

Y	=	Project sustainability
X	=	Composite index for project management practices
β_0	=	Constant
$E.E$	=	Government policy
$\beta_{7,}\beta_{8}$ & β_9	=	Beta coefficients
ε	=	Error term

3.5 Operationalization of Variables

In line with the views of Bhandari (2020), operationalization of research variables involves turning abstract concepts into measurable observations. This helps to define unclear ideas and allowing them to be determined in an empirical and quantitative way appropriate for investigation (Shuttleworth, 2008). The variables were thus operationalized as shown in Table 3.1

Table 3. 1: Operationalization of Study Variables

Variable	Nature	Indicators	Operationalization	Measurement	Hypothesised direction
Project Sustainability	Dependent	Institutional/organisational aspects	Existence of project structures Effectiveness of project structures Relevance of project structures	Likert scale, 1-5	None
		Financial aspects	Sources of funds Adequacy of funds Reliability of funds		
		Operational aspects	- Level of operations - Consistency of operations - Quality of operations		
Capacity building practices	Independent	Skills development activities Involvement in project governance. Participation in project activities	Existence of skills development activities Existence of project governance structures Existence of opportunities for member's participation in project activities.	Likert scale, 1-5	Positive
Stakeholder management practices	Independent	Identification processes stakeholders mapping activities Stakeholder's involvement opportunities.	Existence of stakeholder's identification processes. Relevance of stakeholders mapping activities Availability of Stakeholders involvement opportunities	Likert scale, 1-5	Positive
Project Design	Independent	Project policies and charters Project plans and schedules Project budget	Existence of project design practices Consideration and inclusion of sustainability matters Identification of relevant tools and procedures	Likert scale, 1-5	Positive

Variable	Nature	Indicators	Operationalization	Measurement	Hypothesised direction
			Resources set aside		
Monitoring and evaluation practices	Independent	M&E Systems Information gathering activities M&E Reports on sustainability	Existence of M&E systems Application of M&E tools and practices Reporting on project sustainability	Likert scale, 1-5	Positive
Government policy	Moderating	Policies on Crop production Policies on livestock production Policies on agribusiness/ trading	Existence of policies Role of the policies on predictor variables Role of government policies on sustainability	Likert scale, 1-5	Positive

Source; Researcher (2021)

3.6 Population

This comprised of Community of Interest Groups (CIG's) through which KAPAP project was implemented from 2010 to 2015 in the country. As per GoK (2015), the project had 6,401 CIG's spread across seven regions in twenty administrative Districts as shown Table 3.2. A list of the existing CIG's from respective KAPAP County Service Unit (CSU) coordinators office provided the sampling frame.

Table 3.2: Target Population (Number of CIG's per County)

REGION	**COUNTY**	**No of CIG'S**
COAST	Kilifi	229
	Kwale	252
	Taita Taveta	221
	Tana River	151
CENTRAL	Nyeri	560
	Nyandarua	353
EASTERN	Makueni	326
	Embu	252
	Meru	520
WESTERN	Busia	597
	Butere Mumias	232
	Kakamega	348
NYANZA	Siaya	118
	Kisii	464
	Homa Bay	463
NORTH EASTERN	Garissa	127
	Wajir	129
RIFT VALLEY	Nakuru	408
	Transzoia	372
	West Pokot	279
	TOTAL	**6,401**

Source: GoK 2015

3.7 Sampling Design and Procedure

The sample was selected through stratified multistage random sampling method. This is necessary to capture the diversity of the population as recommended by Creswell (2012). The CIG's were first grouped under seven known geographical regions in the country as shown in Table 3.2. Through random sampling method, four regions were first identified to provide a basis for second level of sampling. From each of the selected four regions one County was randomly picked for further sampling. From a list of CIGs that existed in each of the four selected counties, specific CIGs were randomly selected to constitute the appropriate sample size. Using Yamane (1967) formula, the sample size was determined as follows;

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

Where;

n = Sample size

N = Population size

e = Precision level

Ngulube (2010) suggested a rule of thumb at 95% confidence level, with degree of variability at 0.5 and 0.05 sampling error, through which a sample size of 376 was generated as follows;

$$n = \frac{6401}{1+6401(0.05)^2} = 376$$

A proportionate sample size was then determined for each stratum using the following formula and results presented in Table 3.3

$$ns = P(\frac{S}{N})$$

Where;

ns = Sample size per stratum

P = Population in the stratum /District/County

S = Sample size (i.e. 376)

N = Total Population in the selected counties (Districts)

Table 3.3: Sample Size per County

Region	**Selected county**	**Number of CIGs*(x)***	$\boldsymbol{ns = x(\frac{376}{1795})}$	**Percentage**
Central	Nyeri	560	117	31
Eastern	Meru	520	109	29
Nyanza	Siaya	597	125	33
Western	Busia	118	25	7
Total		**1795**	**376**	**100**

Source: Researcher, 2021

From each of the identified CIG, the group chairperson/ leader was identified as the study respondent. The group chairperson/leader serves as the custodian of information in the respective group and is thus identified as the most appropriate respondent on behalf of the group.

3.8 Data Collection Instruments

A questionnaire with both open and close ended questions was applied in data collection. This allowed for a variety of responses from the respondents. The closed ended questions had possible answers presented in a 5 points Likert Scale. The subjects were expected to mark their preferred response for each question. The open ended questions permitted for expression in greater depth. In line with Punch (2003), the research tool was organised in line with variables of study for ease of answering.

3.8.1 Pilot Testing

The data collection instrument was piloted in Embu County which is one of the counties where KAPAP was implemented. Fifteen questionnaires were administered to selected project leaders in line with Fink (2003b) as cited in Saunders et al., (2007) who recommended at least ten questionnaires for a pilot study. During the pilot study, the researcher checked on clarity of questions to the respondents, precision of responses as well as the effect of the questions on the subjects. The outcomes of the pilot test helped to improve the research instrument for effective data collection.

3.8.2 Validity

Testing of validity guarantees that the outcome accurately captures the event under study (Mugenda & Mugenda, 2003). To begin with, thorough literature review was done to establish the pertinent components of interest in respect to each variable of study for inclusion in the research tool. This was necessary to ensure that the questionnaire comprehensively covered the relevant aspects in line with past studies. The research tool

was further tested for various forms of validity. Starting with face validity, a draft questionnaire was given to three practitioners involved in agricultural productivity and agribusiness projects to confirm that the questions were appropriate as suggested by Saunders et al., (2007). The feedback was incorporated to refine the tool before going to the field. Face validity was also improved from the results of the pilot study.

To check for content validity, the researcher sought the views of three experts in project management on the appropriateness of the questionnaire in relation to the aims of the study. This is in line with the views of Gray (2004) who indicated that content validity is determined by an expert. To achieve internal validity, the study respondents were selected through stratified random sampling method. This way, every potential respondent had an equal probability of getting selected in the sample thus minimizing systematic errors in the study. As noted by Mitchel and Jolley (2008), checking for internal validity minimizes systematic errors or bias.

3.8.3 Reliability of Research Tool

The findings of the pilot test were applied to check for reliability of research tools. Cronbach's Alpha coefficient was computed and interpreted in line with rating as given by George & Mallery (2003). Vladimir (2021) explained that under this rating, the coefficient lies between 0 and 1. Higher values denote more reliability. In line with Nunnally and Bernstein (1994), as well as Marczyk, DeMatteo and Festinger (2005), a reliability coefficient of at least 0.7 score is acceptable. From the pilot study, the variables in the

research tool achieved a Cronbach value above 0.7 and thus the tool was considered as appropriate for the study.

3.9 Data Collection Procedure

Relevant authorisation was obtained from the University as well as NACOSTI prior to commencement of data collection. Field data collection was done by the investigator and research assistants within a period of two months. The researcher engaged a team of three assistants who were trained on the procedure to follow. The research assistants visited the identified respondents in their places of residence or operation and administered the questionnaires in person to guarantee honest and quick responses. The researcher monitored the research assistants through random field visits during data collection.

3.10 Data Analysis and Presentation

Saunders et al., (2007) recommended for cleaning and editing of data as a way of making it more appropriate for analysis. Accordingly, the responses were checked for clarity, relevance and suitability upon which relevant amendments were done without distorting the views of the informants. The data was then coded and captured through SPSS software Version 22.

Qualitative data was examined through content analysis. Informant's views were assembled along common themes and interpreted in accordance with the aspirations of the study. As noted by Cooper and Schindler (2014) content analysis serves to elicit matters that would not have otherwise been brought out by other means. The quantitative data was

examined through descriptive and inferential statistics. To begin with, percentages, frequencies, means, and standard deviations were used to summarise the survey data. As postulated by Mugenda (2008), descriptive statistics brings out crucial characteristics of the data and gives impetus for conducting further analysis. After getting the descriptive statistics, inferential statistics were computed through regression analysis.

Cognisant that individual Likert scale responses are largely ordinal in nature, the arithmetic mean of individual questions were generated to provide a composite index that could be considered as interval scale data capable of more relevant parametric statistical analysis. This approach was in line with the views of several scholars: (Herpe, 2015; Carifio & Perla, 2007; Joshi, Kale, Chandel & Pal, 2015; Ombea, 2020) who recommended that to attain interval level measure under the Stevens' measurement model, the mean of individual responses to a list of items on a Likert scale may be applied.

An aggregate mean of means was further computed to provide the general respondents descriptive view on each variable in the study. As expounded by Carifio & Perla (2007), a five-point scale was established by splitting the range of the numerical values into five classes with equal width and labelled in line with the categories in the Likert scale as follows; Strongly disagree ($1 < SDA < 1.8$); Disagree ($1.8 < DSA < 2.6$); Undecided ($2.6 < UND < 3.4$); Agree ($3.4 < AGR < 4.2$) and Strongly Agree ($4.2 < SAG < 5.0$). Based on this scale, a mean score above 3.4 was considered as an indication that a majority of the informants agreed with the opinion as expressed in the specific sentence. Similarly, a score

below 2.6 was considered as disagreement, while scores between 2.6 and 3.4 were interpreted to mean the respondents were undecided on the specific item.

Before computing inferential statistics, correlation as well as other relevant diagnostic tests were carried out to check for conformity with relevant assumptions for regression analysis. Pearson's correlation coefficient (r) was used to check for association between each of the independent variables and the dependent variable. According to Dancey and Reidy (2004), the value of (r) lies between negative one to positive one. The magnitude of the coefficient shows the direction as well as the strength of linear relationship between the variables. Field (2009), elucidated that values closer to positive one indicates near perfect positive linear association while negative values shows an inverse association. Zero is an indicator of no association between the variables.

After establishing association and satisfying the assumptions for various parametric tests, multiple regression analysis was carried out using the empirical model as shown in equation 3.2 and 3.3. From the results, the value of coefficients of determination (R^2) were used to make conclusions on the statistical significance of the association between respective study variables. The outcome helped in testing of the hypotheses and drawing of conclusions. The findings were as shown in chapter four.

3.11 Diagnostic Tests

As noted by Gujarati and Porter (2009), diagnostic tests help to check whether parameter estimates are biased, inefficient or inconsistent. To start with, Kolmogorov-Smirnov test

was applied to check for normality as explained by Finan (2017). In this test, a data set is to be considered as normally distributed when the P value is greater than 0.05 (i.e. $p > 0.05$). Brooks (2008) further indicated that non-normality may be minimised by isolating the extreme values also known as outliers or by subjecting the data to a transformation so that its distribution is nearly normal.

Existence of linearity was tested using scatter plot of observed versus predicted values where the plot points should be symmetrically distributed around a diagonal line. In case non linearity is detected, an appropriate nonlinear transformation should be applied to the independent or dependent variable as necessary. A test for equivalence of variance or homoscedasticity was done using scatter plots of standardised predicted value verses standardised residual values as suggested by Osborne and Waters (2002). In line with Su and Berenson (2017), the data is homoscedastic if it does not have an obvious or discernible pattern while plotted on a scatter plot. The points should be fairly spread around zero line on the horizontal axis, and similarly on either side of zero line on the vertical axis. Karthe (2016) opined that where the plot displays any obvious pattern (possibly a funnel or cone shape), it would imply non-normal distribution of errors meaning there is heteroscedasticity.

The extent of multicollinearity was analysed by looking at the magnitude of Variance Inflation Factor (VIF), and tolerance factors. Where the VIF was above 10, that variable was identified to be highly collinear (Field, 2009). A Tolerance Factor (TF) value of more than 0.1 was an acceptable indicator of non multicollinearity. Menard (1995), pointed a TF

of less than 0.1 as an almost definite indicator of a serious multicollinearity problem. As recommended by Gujarati & Porter (2009) the problem could be solved by dropping the highly collinear variables. Kaiser-Meyer-Olkin (KMO) test was also necessary to measure sampling adequacy to ensure the sample was adequate for making valid deductions. A KMO statistic greater than 0.05 was recommended by Field (2009) as adequate and therefore the data set can be considered as appropriate for statistical analysis.

3.12 Ethical Considerations

Ethics is about passing a verdict about right and wrong conduct (Kerridge, Lowe and McPhee, 2005). Velasquez, Andre, Shanks, & Meye, (2010) further expounded that ethics signifies well-established guidelines that recommend what persons ought to do or not do. In line with these views, the researcher endeavoured to uphold relevant research ethics in the several ways. For compliance with the government policy, a research permit was acquired from NACOSTI prior to going to the field. Secondly, an introductory letter expounding on the aim of the enquiry was affixed to the research tool to secure informed consent from the respondents before data collection. As recommended by Mugenda and Mugenda (2003), the questions were framed in a polite language, while avoiding embarrassing and irreverent details that would make the subjects uneasy or nervous. The subjects were also not required to indicate their names in the responses to protect their identity and uphold the commitment to confidentiality. Together with these measures, the data was only to be used in line with the aims of the study.

CHAPTER FOUR

RESEARCH FINDINGS

4.1 Introduction

Findings are captured under various relevant sections. This is followed by a discussion in line with the theoretical and reviewed empirical literature.

4.2 Response Rate and Reliability

The investigation targeted 376 respondents who were spread in four counties. The response rate as well as the outcome of the reliability test for the data collection instrument was as presented here under.

4.2.1 Response Rate

Out of 376 questionnaires that were administered, 314 were received back, while 62 were not returned. However, 42 of the returned questionnaires were incomplete and were discarded for various inconsistencies which could not be rectified through data cleaning. A total of 272 questionnaires were filled appropriately which is equivalent to 72.34% overall response rate. As shown in Table 4.1, the subjects were fairly distributed through the four counties with Meru County leading at 73.39%, second was Nyeri County at 72.65%, next followed Busia County at 72% and finally Siaya County having the least response rate at 68%.

Table 4.1: Questionnaires Response Rate

County	Issued	Returned	Response rate (%)	Not returned	Non response rate (%)
Nyeri	117	85	72.65	32	27.35
Meru	109	80	73.39	29	26.61
Busia	125	90	72.00	35	28.00
Siaya	25	17	68.00	8	32.00
Total	**376**	**272**	**72.34**	**104**	**27.66**

Source; Survey Data (2021)

For assessing the questionnaire response rate, different authors (Mugenda and Mugenda, 2003; Saunders and Thornhill, 2007; Babbie, 2004), have recommended the following criteria; 50 percent response rate is considered as adequate, 60 percent response rate as good, while a response rate of 70 and above percent is very good. At 72.34% the rate was considered as sufficient and appropriate for the task.

4.2.2 Reliability Test

Jackson (2009) described reliability as a sign of the consistency of a measuring tool in research. Cronbach's Alpha coefficient was applied to assess reliability. As shown in Table 4.2, the computed Cronbach's Alpha values for various study variables were 0.89, 0.91, 0.72, 0.84, 0.75 and 0.78 respectively. The overall computed coefficient for the entire data set was 0.81. A computed Alpha value of 0.70 is considered sufficient for the research instrument (Nunnally and Bernstein, 1994; Marczyk, DeMatteo & Festinger, 2005). At 0.81, the tool was confirmed as reliable.

Table 4.2: Reliability of Research Instrument

Variable	Number of items	Cronbach's Alpha	Conclusions
Capacity building practices	3	0.89	Reliable
Stakeholders management practices	5	0.91	Reliable
Project design practices	7	0.72	Reliable
Monitoring and evaluation practices	5	0.84	Reliable
Government policies	5	0.75	Reliable
Project sustainability	9	0.78	Reliable
Overall reliability	36	0.81	Reliable

Source; Survey Data (2021)

4.3 General information

Demographic data on the respondents as well as background information for the respective projects is depicted in this section.

4.3.1 Position held in the Project

From Table 4.3, the respondents had occupied different management positions in the projects from 2010 to 2015. A large group of the respondents were chairmen at 39.3%, followed by secretaries at 26.1%, then treasurers at 12.1% and vice chairmen at 10.7%. Being the custodians of the project assets and information, those occupying positions of management were considered to be the best respondents on behalf of their projects.

Table 4.3: Position held in the Project

Position	Frequency	Percent
Chairman	107	39.3
Vice Chairman	29	10.7
Secretary	71	26.1
Treasurer	33	12.1
Member	29	10.7
Execution Officer	3	1.1
Total	**272**	**100.0**

Source; Survey Data (2021)

4.3.2 Respondents Gender

As shown in Table 4.4, the subjects were fairly spread in terms of gender with male gender having a slight majority at 51.8% while female gender followed at 48.16%. This depicts near gender parity in which is in line with recommendations by the UN (2015) in the SDGs as well as in the Kenya Vision 2030 (GoK, 2007) blue print.

Table 4.4: Gender of Respondents

	Frequency	Percent
Male	141	51.84
Female	131	48.16
Total	**272**	**100.0**

Source; Survey Data (2021)

As noted by Bayeh (2016) gender equality is a necessary precondition to bring about sustainable development in the society. The status of near gender parity could have provided a favourable environment for the attainment of the project goals including sustainability.

4.3.3 Respondents Age

Table 4.5 shows that a great majority of the subjects (79.4%) belong to the middle age cohort, followed by those over 60 years at 19.1% and only 1.5% were below 35 years in age. This shows that there were very few young people involved in the agricultural productivity and agribusiness projects in the country. This is in line with general expectations in the country where from middle age onwards, many people revert to agriculture enterprises after failing to secure a career in other sectors of the economy. On the other hand, many in the youth age bracket age (below 35 years) have not yet settled on life time careers and are still experimenting with various opportunities in other sectors. The high number of respondents in middle age and above indicates that the majority have already settled in agriculture as their lifelong careers. This is good for the sustainability of the projects.

Table 4.5: Age Bracket in Years

Age bracket	Frequency	Percent
Below 35	4	1.5
35-60	216	79.4
Over 60	52	19.1
Total	**272**	**100.0**

Source; Survey Data (2021)

4.3.4 Highest Level of Formal Education

As indicated in Table 4.6, most of the respondents (61.4%) had attained secondary level education, next was those with tertiary education at 22.4%, while 14.0% had primary level education. Only 2.2% of the respondents had university level of education.

Table 4.6: Highest Level of Formal Education

Level	Frequency	Percent	Cumulative Percent
University	6	2.2	2.2
Tertiary college (diploma/certificate)	61	22.4	24.6
Secondary	167	61.4	86.0
Primary	38	14.0	100
Total	**272**	**100.0**	

Source; Survey Data (2021)

Cumulatively, 86% had attained secondary education and above. This demonstrates that most of the subjects had a good foundation in formal education relevant for respective positions held in various projects. In addition, the findings imply that the concerned were learned enough hence able to interpret and respond to the research questions with ease.

4.3.5 Project Value Chain

The project activities were carried out under several agricultural value chains. As shown in Table 4.7, vegetable value chain was most popular at 37.5%, followed by meat value chain at 17.6% and cereals at 15.4%. Others were poultry value chain at 11.4%, bee keeping at 5.9% and fruits value chain at 2.6%.

Table 4.7: Project Value Chain

Value chain	Frequency	Percent
Dairy	26	9.6
Cereals	42	15.4
Vegetable	102	37.5
Meat	48	17.6
Poultry	31	11.4
Fruits	7	2.6
Bee keeping	16	5.9
Total	**272**	**100.0**

Source; Survey Data (2021)

The variability in agriculture value chains undertaken by various groups as shown in Table 4.7 presents the diversity of the potential in the agricultural sector in Kenya. The agricultural productivity and agribusiness projects considered for the study were thus a fair representative of the activities undertaken in the agricultural sector in the country. This ensured that the study outcomes were representative of the reality on the ground and could be generalised with a fair degree of certainty.

4.3.6 When the Project Group Started

As shown in Table 4.8, majority of the groups (73.5%) were started between 2010 and 2015 during the period of KAPAP implementation. The other 26.5% of the groups were started before KAPAP came on board. This shows that the model of implementing agricultural productivity and agribusiness projects through community groups was there even before KAPAP came on board.

Table 4.8: When the Group was started

Period	Frequency	Percent
Before 2010	72	26.5
2010-2015	200	73.5
Total	**272**	**100**

Source; Survey Data (2021)

4.3.7 Existence of Project Group

The enquiry further desired to get whether the project groups were still in existence in 2021, five years after the closure of KAPAP project. As shown in Table 4.9, many of the groups (56.3%) still existed in 2021, while 43.8% of the groups were no more. The existence of a majority of the groups five years after project closure could be an indicator of continuity of project activities beyond donor support which may be an indicator of project sustainability.

Table 4.9: Project Group Existence in 2021

	Frequency	Percent
Yes	153	56.3
No	119	43.8
Total	**272**	**100.0**

Source; Survey Data (2021)

4.3.8 Source of Project Idea

The researcher desired to find out where the project idea for specific group had come from. As shown in Table 4.10, a great majority (81.6%) of the groups had received the project idea from government agricultural officers, 11.8% from the donor while only 6.6% got the idea from fellow group members. This underscores the important role of played by government field agricultural officers in the sector.

Table 4.10: Source of Project Idea

Source	Frequency	Percent
Members	18	6.6
Donor	32	11.8
Government officer	222	81.6
Total	**272**	**100.0**

Source; Survey Data (2021)

4.4 Descriptive Statistics

As expounded by Trochim (2002), descriptive statistics provide fundamental features of the data in form of summaries on the sample and the measures. First, the subjects were required to indicate various PMPs applied in their projects. The frequencies and percentages of prevalence of various PMPs were then computed to provide a general view of the PMPs applied in the projects together with the popularity of each. Secondly, the informants were requested to rate various statements on a five point Likert scale where; 1 = strongly disagree (SDA), 2 = disagree (DSA), 3 = undecided (UND), 4 = agree (AGR) and 5 = strongly agree (SAG). From the rating scores, the mean and the aggregate mean of the scores in the Likert scale were computed to provide the respondents descriptive view on each variable in the study. Resultant aggregate mean was interpreted on a five notch scale in line will the views of Carifio and Perla (2007) as follows; strongly disagree ($1 < SDA < 1.8$); Disagree ($1.8 < DSA < 2.6$); Undecided ($2.6 < UND < 3.4$); Agree ($3.4 < AGR < 4.2$) and Strongly Agree ($4.2 < SAG < 5.0$). The computed descriptive statistics are presented as per the variables of study in the ensuing sections.

4.4.1 Capacity Building Practices

The subjects were first expected to specify the capacity building practices used in their project. This was followed by a set of three questions to be answered on a five notch Likert scale.

4.4.1.1 Capacity Building Practices Used

A variety of practices were used for capacity building among the various project groups as shown in Table 4.11. Training in workshops was evident in every group, followed by extension services at 97.06%, farm field visits at 91.18% and group presentations at 66.91%. Other capacity building methods included involvement in projects leadership at 65.44%, provision of farm inputs at 64.35% and participation in project activities at 60.66%.

Table 4.11: Capacity Building Practices

	Frequency	**Percent**
Training in workshops and seminars	272	100
Extension services(by field officers)	264	97.06
Farm field visits by group members	248	91.18
Presentations in groups	182	66.91
Provision of farm inputs/grants	175	64.34
Involvement in projects leadership	178	65.44
Participation in project activities	165	60.66

Source; Survey Data (2021)

4.4.1.2 Capacity Building Practices Rating

The respondents were asked to give an assessment of capacity building practices on a five point Likert scale. Table 4.12 shows the snapshot of the responses on the Likert scale with respective means and standard deviation for every item. An aggregate mean is presented at the end.

Table 4.12: Responses on Capacity Building Practices

Statement	N	1	2	3	4	5	MEAN	SD
The capacity building activities helped the group members to carry out project activities	272	2 (0.7%)	8 (2.9%)	20 (7.4%)	85 (31.3%)	157 (57.2%)	4.44	0.758
The skills development/training activities were relevant for achievement of project objectives	272	0 (0.0%)	2 (0.7%)	20 (7.4%)	86 (31.6%)	164 (60.3%)	4.51	0.665
Members were given a chance to participate in the management of project activities	272	1 (0.4%)	11 (0.4%)	27 (9.9%)	110 (40.4%)	123 (45.2%)	4.26	0.825
Aggregate							**4.40**	**0.451**

Source; Survey Data (2021)

The Likert scale ratings show that the respondents strongly concurred with the statements on capacity building in their projects. The results in Table 4.12 show that the respondents highly agreed (mean 4.44), that the capacity building activities helped the group members to carry out the project activities. The respondents equally strongly agreed (mean 4.51) that the skills development activities were relevant for achievement of project objectives. The respondents additionally strongly agreed (mean 4.26) that members were allowed to take part in the management of project activities.

With an aggregate mean (mean of means) at 4.40, the respondents on overall strongly agreed on the application of capacity building practices in their projects. This is an affirmation of the popularity of capacity building practices in agricultural productivity and

agribusiness projects. The finding corroborates the views of Ndayizeye (2018), who acknowledged the role of capacity building on project performance.

4.4.2 Stakeholders Management Practices

The investigator desired to find out the kind of stakeholders engaged in the project together with the stakeholders' management practices employed in the project.

4.4.2.1 Project Stakeholders

A list of expected stakeholders other than farmers was provided for the respondents to indicate if each was involved in their project. The outcome was as depicted in Table 4.13

Table 4.13: Project Stakeholders

	Frequency	**Percent**
Suppliers	158	58.09
Government administrators	47	17.28
Ministry of agriculture officers/extension officers	246	90.44
Consumers	146	53.68
Traders/buyers	153	56.25
Donors	101	37.13
Service providers	164	60.29
Politicians	6	2.21

Source; Survey Data (2021)

As outlined in table 4.13, the projects had a varied range of stakeholders other than farmers. Most prominent stakeholder was the ministry of agriculture extension officers at 90.44%. The high rating can be accounted for by the fact that the project was rolled out under the

ministry of agriculture. This was followed by service providers at 60.29%, suppliers at 58.09%, traders at 56.25% and consumers at 53.68%.

4.4.2.2 Stakeholders Management Practices Rating

On a five notch Likert scale, the study sought to get the rating on various stakeholder's management practices as presented in a set of five statements. The findings were as presented in Table 4.14

Table 4.14: Stakeholders Management Practices Rating

Statement	**N**	**1**	**2**	**3**	**4**	**5**	**MEAN**	**SD**
Various stakeholders were identified for respective project activities	272	0 (0.0%)	8 (2.9%)	38 (14.0%)	116 (42.6%)	110 (40.4%)	4.21	0.788
The stakeholders were classified in line with their contribution /role in the project	272	0 (0.0%)	8 (2.9%)	20 (7.4%)	85 (31.3%)	159 (58.5%)	4.45	0.757
Various stakeholders took part in relevant project activities	272	0 (0.0%)	2 (0.7%)	19 (7.0%)	86 (31.6%)	165 (60.7%)	4.52	0.659
The project provided opportunities for stakeholder involvement	272	0 (0.0%)	8 (2.9%)	37 (13.6%)	117 (43.0%)	110 (40.4%)	4.21	0.785
The project leaders listened to stakeholder views	272	1 (0.4%)	10 (3.7%)	19 (7.0%)	83 (30.5%)	160 (58.8%)	4.44	0.780
Aggregate							**4.37**	**0.352**

Source; Survey Data (2021)

As shown in Table 4.14, the respondents highly concurred with all the items on stakeholders' management practices. The respondents strongly agreed that various stakeholders were identified for respective project activities with an average score of 4.21. Walker, Shelley, and Bourne (2008) underscored the need for stakeholders' identification and mapping in the project management process. They also highly agreed (mean 4.45), that the stakeholders were classified in line with their contribution or role in the projects. The subjects further strongly confirmed with a mean of 4.52 that various stakeholders took part in relevant project activities. A similar strong agreement rating was recorded on whether the project provided opportunities for stakeholders' involvement at 4.21. Together with above, the findings strongly confirmed with a mean on 4.44, that the project leaders listened to stakeholder's views.

The variable had an aggregate mean of means of 4.37, which is a clear indication that stakeholders' management was highly recognised as a relevant project management practice in line with the views of Walker, Shelley, and Bourne (2008). This confirms that stakeholders' management was recognised as a significant component in the functioning of KAPAP projects. This is in line with the views of Martens and Carvalho (2016) who postulated that stakeholders' management is one of the important aspects in any project management process.

4.4.3 Project Design Practices

The investigation endeavoured to establish who had designed or planned the KAPAP project as well as an assessment of several identified project design practices.

4.3.3.1: Designer/Planner of KAPAP Project

The respondents were provided with a list of possible designers of the project and were required to tick as many as they found appropriate. The outcome was as shown in Table 4.15.

Table 4.15: Who Designed/Planned your Project?

Project Designer/Planner	Frequency	Percentage
Group members	103	37.9%
Donor	88	32.8%
Consultant	121	44.5%
Ministry of agriculture officers	207	76.1%
Any other	0	0%

Source; Survey Data (2021)

From Table 4.15, majority of the subjects (76.1%) reported that officers from the ministry of agriculture designed the project. Next were consultants at 44.5%, while those who indicated group members were the ones stood at 37.9%. From these results, it is evident that the project was designed in a top-down model and cascaded downwards to the farmers for implementation.

4.3.3.2: Ratings on Project Design Practices

In a five notch Likert scale, the respondents were required to give a rating on various project design practices presented in a set of seven sentences. The outcome is as presented in Table 4.16

Table 4.16: Project Design Practices Ratings

	N	1	2	3	4	5	MEAN	SD
Situational analysis/needs assessment was done at the beginning (design) of the project.	272	0 (0.0%)	1 (0.4%)	20 (7.4%)	86 (31.6%)	165 (60.7%)	4.53	0.648
The project goals were identified at the beginning (design) stage of the project.	272	1 (0.4%)	8 (2.9%)	37 (13.6%)	116 (42.6%)	110 (40.4%)	4.20	0.809
Project strategies (i.e. how to achieve project goals) were formulated at the beginning (design) stage of the project.	272	2 (0.7%)	8 (2.9%)	18 (6.6%)	83 (30.5%)	161 (59.2%)	4.44	0.804
Resources (people, equipment, facilities) relevant for the project implementation were identified at the beginning (design) stage of the stage.	272	1 (0.4%)	2 (0.7%)	19 (7.0%)	86 (31.6%)	164 (60.3%)	4.51	0.693
Contingency plans (or alternative plans) for achieving the project goals were identifies at the beginning (design) stage of the project.	272	2 (0.7%)	9 (3.3%)	26 (9.6%)	111 (40.8%)	124 (45.6%)	4.27	0.824
The project budget was developed at the beginning (design) stage of the project.	272	0 (0.0%)	9 (3.3%)	39 (14.3%)	117 (43.0%)	107 (39.3%)	4.18	0.799
The project evaluation plan (i.e. criteria for measuring success) were developed at the beginning (design) stage of the project.	272	2 (0.7%)	8 (2.9%)	19 (7.0%)	82 (30.1%)	116 (59.2%)	4.18	0.799
Mean of means							**4.36**	**0.357**

Source; Survey Data (2021)

As shown in Table 4.16, the respondents either agreed or highly agreed with the statements on various project design practices. The findings indicate that the respondents highly concurred that situational analysis or needs assessment was done during the design of the project with an average score of 4.53. With average of 4.20, the representatives approved that the goals were identified at the design phase of the project. This was followed by high agreement with statement that project strategies were formulated at the beginning of the project at an average of 4.44. The subjects also highly concurred that resources relevant for project implementation were identified at the beginning stage of the projects with a mean of 4.51. With an average of 4.27, the respondents further concurred that contingency plans for achieving the project goals were identified at the design stage of the projects. There was an agreement with the statement that the project budget was developed at the design phase with a rating of 4.18. Similarly, there was agreement that the evaluation plan was developed at the design phase of the project with an average rating of 4.18. The aggregate mean rating for project design practices was 4.36 which correspond to highly agree rating on the various project design practices. These findings collaborate with the views of Amandi (2017), who advocated for great consideration of project planning design as a key ingredient for success.

4.4.4 Monitoring and Evaluation Practices

The enquiry set to get the respondents views on M&E by establishing the M&E practices applied in the respective projects as well as through a Likert scale rating on several sentences.

4.4.4.1: M&E Practices Applied

The subjects were required to identify the monitoring and evaluation practices applied in their projects in a provided list. The outcome was as in Table 4.17.

Table 4.17: M&E Practices

Practice	Frequency	Percentage
Data collection	214	78.7
Field visits	254	93.4
Inspection	168	61.8
Use of checklists	163	59.9
Interviews	147	54.0
Periodical progress reports (daily, weekly, monthly)	193	71.0
Data analysis	153	56.3
Dissemination of M&E Reports	153	56.3

Source; Survey Data (2021)

Table 1.16 indicates that a variety of M&E practices were applied in diverse projects. Field visits were the most popular practice at 93.4%, followed by data collection at 78.7%. Periodical progress reports were third at 71.0%. Other practices were; inspection at 61.8%, use of checklists at 59.9%, data analysis at 56.3%, dissemination of reports at 56.3% and interviews at 54%.

4.4.4.2 Rating of Monitoring and Evaluation Practices

Through a Likert scale rating, the researcher endeavoured to get the views on various monitoring and evaluation practices presented in a set of five questions. The results were as revealed in Table 4.18

Table 4.18: Rating of Monitoring and Evaluation Practices

Statement	N	1	2	3	4	5	MEAN	SD
The project had an M&E system in place.	272	3 (1.1%)	2 (0.7%)	19 (7.0%)	86 (31.6%)	161 (59.2%)	4.51	0.693
The M&E system collected/ captured data on various project activities.	272	2 (0.7%)	8 (2.9%)	27 (9.9%)	111 (40.8%)	124 (45.6%)	4.28	0.816
The project provided for data analysis on the project activities.	272	4 (1.5%)	5 (1.8%)	46 (16.9%)	100 (36.8%)	117 (43.0%)	4.18	0.799
The project had M&E reports and feedback systems.	272	1 (0.4%)	49 (18%)	11 (4.0%)	93 (34.2%)	118 (54.4%)	4.17	0.821
The M&E system was relevant for improvement of project activities.	272	3 (1.1%)	7 (2.6%)	19 (7.0%)	82 (30.1%)	161 (59.2%)	4.44	0.822
Mean of means							**4.32**	**0.493**

Source; Survey Data (2021)

As exhibited in Table 4.18, the respondents either highly agreed or agreed with the statements on monitoring and evaluation with a cumulative mean of 4.32. They also highly concurred that there existed an M&E system with a mean of 4.51. The subjects equally highly accepted that the systems collected data on diverse project activities with a mean of

4.28. With a mean rating of 4.18, the respondents concurred that the project provided for data analysis on project activities. The respondents further agreed (mean 4.17) that the project had M&E reports and feedback systems. With an average of 4.44, the subjects finally highly agreed that the M&E system was relevant for improvement of project activities. The findings are in conformity with the views of Murungi (2015), Musau (2018) and Simiyu (2018), who identified M&E as one of key project management practices.

4.4.5 Government Policy

The enquiry set out to establish the moderating influence of government policy on the association between various PMPs and project sustainability. The respondents were expected to indicate whether there existed government policy in form of rules, regulations or guidelines that may have influenced the project activities. In addition, the respondents were to give their assessment on a Likert scale for a set of five sentences on government policy and various project management practices.

4.4.5.1 Existence of Government Policies

The study sought to establish if there existed government policies that may have influenced the design and operations of KAPAP projects. The outcome is as shown in Table 4.19

Table 4.19: Existence of Government Policies

	Frequency	Percentage
Group/project formation	263	96.7%
Group Agricultural activity operations (crop/livestock production)	247	90.8%
Group financing/funding activities	200	73.5%
Selling and trading in project agricultural products	171	62.9%

Source; Survey Data (2021)

As displayed in Table 4.19, most of the subjects indicated that there were government policies on all the listed aspects. A great majority of the members (96.7%) pointed that there was some government policy that influenced the formation of the project. A further 90.8% of the respondents indicated that there existed government policy on agricultural activities. This was followed by those who acknowledged the existence of government policy on project financing activities at 73.5%. Finally, 62.9% of the respondents gave an indication of existence of government policy that influenced the selling and trading in project agricultural products.

4.4.5.2: Ratings on Government Policy

On a five notch Likert scale, the study desired to get the subjects views on the role of government guidelines on the interaction between various PMPs and project sustainability as availed on a set of five questions. As shown in Table 4.20, the responses were spread between strongly agreed and agree. The respondents strongly agreed that the project capacity building practices were influenced by government policy with a mean of 4.50. This was followed by a highly agreed rating (4.25) with the statement that the project

design practices were influenced by existing government policy. At an average of 4.20, there was concurrence that the stakeholders' management practices were influenced by government policy. The respondents further highly agreed (mean 4.44) that government policy had influenced the M&E practices. Lastly, the members also accepted that the sustainability of the projects was affected by the existing government regulations at an average of 3.74.

The aggregate mean was 4.23, indicating a rating of high agreement with the various statements on the moderating role of government guidelines on the association between the dependent and the independent variables. This outcome concurs with the views of other scholars (Si-jeoung et al., 2016; Oyelakin and Kendi, 2017; Ojiambo, 2018) who established the significant moderating role of government policy on the interaction between various variables of study.

Table 4.20: Rating on Government Policy

Statements	N	1	2	3	4	5	MEAN	SD
The project design practices were influenced by existing Government policy (laws/rules/regulations).	272	2 (0.7%)	2 (0.7%)	18 (6.6%)	86 (31.3%)	164 (60.3%)	4.50	0.719
The project capacity building practices were influenced by the Government policy (laws/rules/ regulations).	272	3 (1.1%)	11 (4.0%)	25 (9.2%)	110 (40.4%)	123 (45.2%)	4.25	0.864
The project stakeholder's management practices were influenced by the Government policy (laws/rules/regulations).	272	1 (0.4%)	7 (2.6%)	37 (13.6%)	119 (43.8%)	108 (39.7%)	4.20	0.795
Government policy (laws/rules/regulations) had influence on monitoring and evaluation practices.	272	0 (0.0%)	10 (3.7%)	19 (7.0%)	84 (30.9%)	159 (58.5%)	4.44	0.780
The continuity/sustainability of the project has been affected by the Government policy (laws/rules/ regulations).	272	8 (2.9%)	15 (5.5%)	59 (21.7%)	148 (54.4%)	42 (15.4%)	3.74	0.890
Mean of means	**272**						**4.23**	**0.440**

Source; Survey Data (2021)

4.4.6 Project Sustainability

The investigator desired to get the respondents views on project sustainability through a mix of open and close ended questions as well as sentence ratings on the Likert Scale. The findings were as presented in the following segment.

4.4.6.1: Main Purpose of Starting the Project

In an open ended question, the subjects were required to write the main objective of starting their project. The responses in narrative form were read to establish the common themes along which they were later arranged and analysed as shown in Table 4.21.

Table 4.21: Main Purpose of Starting the Project

Purpose	**Frequency**	**Percent**
Income generation/Poverty alleviation/create employment/ economic welfare	151	55.5
Get new knowledge/technologies on farming	37	13.6
Food security	9	3.3
Marketing/ eliminate brokers	45	16.5
Table banking	3	1.1
Get farm inputs, seeds/ seedlings/ irrigation water	4	1.5
Conserve environment	1	0.4
Reduce post-harvest losses	16	5.9
Increase production	4	1.5
Value addition	2	0.7
Total	**272**	**100.0**

Source; Survey data 2021

From Table 4.21, a big proportion of the projects (55.5%) were started with the main objective of generating income for the farmers. This was expressed in various ways including; poverty alleviation, create employment and improve economic welfare of members. This was in tandem with the development objective of KAPAP which was to raise the incomes of smallholder farmers (World Bank, 2016). Marketing of farm produce was the second most popular objective of starting the projects at 16.5% as indicated by the respondents. This was followed by acquiring of new knowledge and technologies on farming and agribusiness at 13.6%. Other objectives included the reduction of post-harvest losses, achieve food security, increase production and obtain farm inputs, table banking as well as environmental conservation respectively.

These objectives resonate well with the views of UNEP (2015) who decried the many challenges facing agriculture in developing countries including low factor productivity, poor utilisation of land, bottlenecks in the supply chain, deficient post-harvest practices and minimal value addition for most agriculture exports. In addition, the objectives were also in line with 'The Strategy for Revitalising Agriculture in Kenya' launched in 2004, which set out a vision for a commercially oriented agricultural industry to ensure food security, reduce poverty and unemployment (GoK, 2004).

4.4.6.2: Achievement of Main Purpose of Starting the Project

After indicating the purpose of starting the projects, the informants were further required to state whether the stated objective was achieved or not. The answers are as displayed in Table 4.22.

Table 4.22: Attainment of Project Objectives

Question	Response	Frequency	Percent
In your view was the main purpose (objectives) of the project achieved?	Yes	117	43.0
	No	155	57.0
Total		**272**	**100.0**

Source; Survey Data (2021)

Reading from Table 4.22, the bulk of those involved (57%) felt that the main objective of starting the projects was not achieved while 43% had a contrary opinion. This finding corroborates with an observation by World Bank (2004) that many of their projects in the country have continued to perform poorly with only one out of fourteen projects promising satisfactory outcomes. Oino, Towett, Kirui, and Luvenga (2015) had equally observed that majority of community projects in Kenya usually did not produce benefits as expected.

4.4.6.3: Reasons for not achieving the Project Objectives.

The 155 (43%) of the respondents who indicated that the projects did not achieve the main objective were further required to select from a pre-printed list the possible reasons for the failure to achieve the objectives. The findings were as exposed in Table 4.23.

Table 4.23: Reasons for not achieving Objectives

Reason	Frequency	Percentage
Inadequate project budget/finance	111	71.61
Project leadership problems	70	45.16
Lack of commitment by group members	49	31.61
Weakness in the project design structure	65	41.94
Lack of product market	59	38.06
Lack of government support	85	54.84
Lack of support by the various stakeholder	85	54.84
Low quality products	37	23.87
Low volume of products	47	30.32

Source; Survey Data (2021)

Table 4.23 reveals a big number of informants (71%) identifying inadequate project budget or finance as the main reason for not attaining the project objective. Deficient government support as well as lack of support by other stakeholders was identified as the next two most prevalent reasons for the failure to achieve the project objectives at 54% each. Project leadership problem was cited by 45.16% of the respondents followed by weaknesses in the project design structure at 41.94%. Other reasons included lack of product market at 38.06%, lack of commitment by group members at 31.61%, low volume of products at 30.32% and low quality products at 23.87%. The first three main reasons identified by the respondents' points to a danger of growing dependency syndrome where the farmers are expecting a lot of assistance from the donors, government as well as other stakeholders. Dependency syndrome was rated among the major problems that Africans must overcome to attain development (Mhango, 2017).

The respondents were also given a chance to state any other reason outside the pre-printed list that may have hampered the achievement of the project objective. Among the reasons listed in this section was corruption by government officers from the ministries of agriculture and cooperatives which was identified by 23% of the respondents. Crop diseases mainly bacterial wilt which affected the production of potato was listed by 5% of the respondents. Another 2% of the subjects indicated that drought or lack of enough rainfall affected the achievement of the project objective.

4.4.6.4: Rating for Sustainability

On a five step Likert Scale, the investigator endeavoured to get the views of the respondents on sustainability in year 2021, five years after project implementation. The respondents were given nine sentences to rate on a Likert scale. The revelations were as displayed under Table 4.24.

Table 4.24: Ratings for Project Sustainability

Statements	N	1	2	3	4	5	MEAN	SD
The group/project leadership/ management structure was in existence in year 2021	272	0 (0.0%)	2 (0.7%)	20 (7.4%)	83 (30.5%)	167 (61.4%)	4.53	0.665
The group/project leaders were effective in their roles in year 2021.	272	0 (0.0%)	9 (3.3%)	28 (10.3%)	111 (40.8%)	124 (45.6%)	4.29	0.782
The group/project leaders concentrated on activities that were relevant or related to the KAPAP project in year 2021.	272	0 (0.0%)	8 (2.9%)	43 (15.8%)	113 (41.5%)	108 (39.7%)	4.21	0.788
The project leaders had the ability (skills and knowledge) to manage the project in year 2021.	272	9 (3.3%)	13 (4.8%)	15 (5.5%)	85 (31.3%)	150 (55.1%)	4.45	0.757
The project was able to generate money from its activities in year 2021.	272	0 (0.0%)	2 (0.7%)	20 (7.4%)	86 (31.6%)	164 (60.3%)	4.51	0.665
The project had several sources of money (more than one) in year 2021.	272	0 (0.0%)	12 (4.4%)	27 (9.9%)	110 (40.4%)	123 (45.2%)	4.26	0.813
The project was able to operate without donor support in year 2021.	272	0 (0.0%)	9 (3.3%)	38 (14.0%)	104 (38.2%)	121 (44.5%)	4.19	0.797
The group was able to produce a product to sell in the market in year 2021.	272	0 (0.0%)	10 (3.7%)	27 (9.9%)	92 (30.9%)	143 (52.6%)	4.44	0.780
The group was able to produce a product to sell in the market in year 2021.	272	6 (2.2%)	18 (6.6%)	60 (22.1%)	152 (55.9%)	36 (13.2%)	3.71	0.858
Mean of means							**4.23**	**0.440**

Source; Survey Data (2021)

As portrayed in Table 4.24, the informants highly accepted that the projects management structure was in existence with a mean of 4.53 five years after the end of project implementation. Most of the members at a mean of 4.29 highly concurred that the project leaders were effective in their role at this time. At an average rating of 4.21, the informants highly accepted that the project leaders concentrated on activities relevant to KAPAP project in year 2021. The respondents also highly concurred that the project leaders had the ability (skills and knowledge) to manage the projects five years down the line with a mean score of 4.45. The informants highly consented that the projects were able to generate money from its activities with a mean rating of 4.51. Together with this, the respondents also highly accepted that the project had several sources of money in year 2021 with a mean rating of 4.26. With a mean of 4.19, the respondents accepted that the projects were able to operate without donor support. Additionally, at an average rating of 4.44, the respondents highly agreed that the projects were able to produce a product to sell in the market in year 2021. Finally, the respondents were agreed that the project members produced good quality products at a mean rating of 3.71.

The questions in the questionnaire were organised around the three aspects of project sustainability. The first four queries were meant to capture views on institutional sustainability while the next three questions looked at financial sustainability of the projects. Finally, the last two questions focused on operational sustainability of the projects five years after closure of project implementation. On institutional sustainability, the respondents were highly agreed (mean: 4.53, 4.29, 4.21 & 4.45) on all the four statements that the project was sustainable with mean aggregate rating of 4.37. The respondents had

mixed responses about the financial sustainability of the projects with a rating of highly agreed on two statements (mean: 4.51 & 4.26) and agreed in one of the statements (mean: 4.19). This gives a mean aggregate rating of 4.35 which is equivalent to an overall rating of highly agreed. Operational sustainability had mixed response rating with highly agreed (mean: 4.44) and agreed (mean: 3.71) on one statement each. The aggregate mean for operational sustainability is 4.08 which is equivalent to rating of agreed.

From the findings, the projects were more sustainable on institutional aspects at a mean rating of 4.37, trailed by financial aspects at a mean rating of 4.35 and lastly, operational aspect at a rating of 4.08. As presented in Table 4.24, overall, the subjects were highly agreed that the projects were sustainable with an aggregate mean rating of 4.23. The respondents intimated that they were still applying the knowledge and skills acquired from the project in their farming enterprises even beyond KAPAP projects. This could partly explain the favourable rating on various sustainability aspects. This is very encouraging for future interventions in the agriculture industry through agricultural productivity and agribusiness projects. The findings contradict the observation by Oino, Towett, Kirui and Luvenga (2015) that majority of community projects in Kenya did not produce benefits as expected due to challenges in sustainability.

4.5 Correlation Analysis

Pearson correlation coefficient was used to check for existence of association between each of the independent variables and the dependent variables and interpreted in line with Dancey and Reidy (2004). The results are as displayed in table 4.25

Table 4.25: Correlation Results

		Sustainability
Capacity Building Practices	Pearson Correlation	.249
	Sig. (2-tailed)	.000
	N	272
Stakeholders Management Practices	Pearson Correlation	.404
	Sig. (2-tailed)	.000
	N	272
Project Design Practices	Pearson Correlation	.263
	Sig. (2-tailed)	.000
	N	272
Monitoring & Evaluation Practices	Pearson Correlation	.288
	Sig. (2-tailed)	.000
	N	272

Source; Survey Data (2021)

As shown in table 4.25, each of the four independent variables have a positive linear association with the dependent variable with p values less than 0.05. Stakeholders management practices had the strongest association (r=0.404, p=0.000), trailed by monitoring and evaluation (r=0.288, p=0.000), then design practices (r=0.263, p=0.000), while capacity building practices had the weakest association (r=0.249, p=0.000). After confirmation of positive linear association between the independent and the dependent variables, linear regression models could be accurately estimated in line with Harvey (2012).

4.6 Multiple Regression Analysis

Multiple linear regression analysis was done in line with the recommendations of Hosmer, 2000; Jackson, 2009; as well as Cooper & Schindler, 2014 who identified multiple regression as an appropriate model for parametric data analysis. However, before running the regression analysis, relevant diagnostic tests were done as discussed in the next section.

4.6.1 Diagnostic Tests

Karthe (2016) observed that regression is a parametric method where assumptions about data are made for the intent of analysis. While agreeing with this view, Osborne and Waters (2002) further opined that when such assumptions are violated, the outcomes may not be trustworthy. Consequently, before regression analysis, it's always necessary to confirm such suppositions through various diagnostic tests. As noted by Gujarati and Porter (2009), diagnostic tests help to avoid parameter estimates being biased, inefficient and inconsistent. Sarstedt and Mooi (2014) listed necessary diagnostic tests in multiple regression analysis to include test for; normality, linearity, homoscedasticity and test for multi-collinearity. Together with these, Kaiser-Meyer-Olkin Test was done to check for Sampling Adequacy.

4.6.1.1 Normality

The Kolmogorov-Smirnov was applied to check for normality**.** Norusis (2007) indicated that a data set is to be considered as normally distributed where p value of Kolmogorov-Smirnov statistic is more than 0.05 (i.e. $p > 0.05$). The results are as depicted in Table 4.28.

Table 4.26: Kolmogorov-Smirnov Statistic

Tests of Normality			
	Kolmogorov-Smirnov		
	Statistic	df	Sig.
Sustainability	0.227	272	0.098

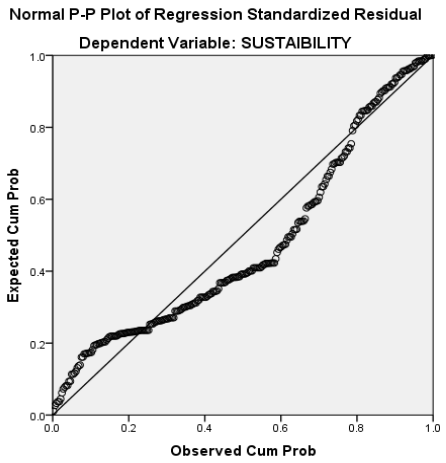
Source; Survey Data 2021

In Table 4.28, calculated probability value for sustainability was 0.098. The results were used to test the null hypothesis (H_o) that the data is not different from normal. Since the P

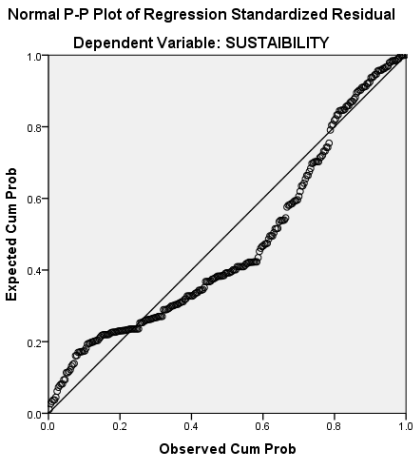
value (0.098) is higher than 0.05, the null hypothesis was rejected. The conclusion is that at 95% confidence level, the sample is not statistically different from normal in line with the recommendations of Razali and Wah (2011). After the confirmation of normality, the data was amenable to further statistical tests.

4.6.1.2 Linearity

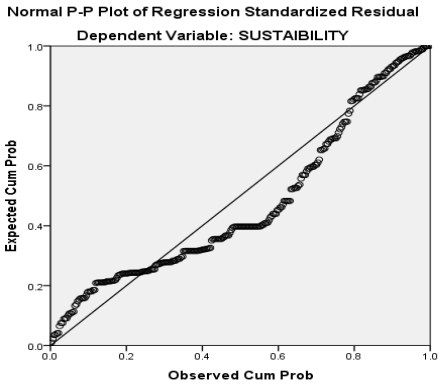
Existence of linearity between the variables was tested using scatter plot of observed versus predicted values. To conform to linearity, the points on the scatter plot should be symmetrically distributed around a diagonal line (Moore, Notz and Flinger, 2013). The output for the various predictor verses the predicted variable is as displayed in Figures 4.1(a-f).



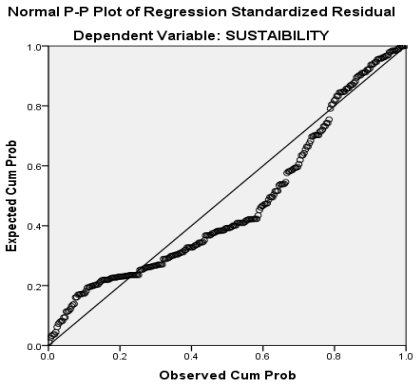
(a) Capacity building vs sustainability



(b) Project Design vs sustainability



(c) M&E Vs Sustainability



(d) Govt. Policy vs sustainability

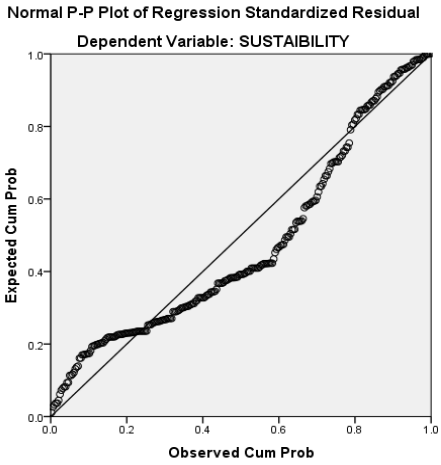
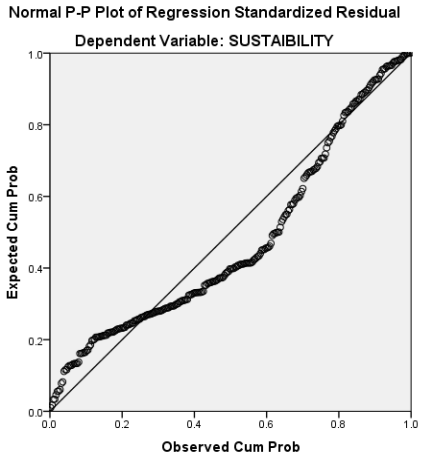


Fig (e) Stakeholders Mngt. vs sustainability



(f) Aggregate independent variables vs sustainability

Fig 4.1: Linearity Scatter plots (Source: Survey data: 2021)

As shown in Figures 4.1a to 4.1f the P-P plots, indicates that the values were symmetrically spread around a diagonal line confirming that the variables met the test for linearity. As recommended by Harvey (2012), the confirmation of a linearity between predictor and predicted variables allows for the application of linear regression model in the study through which dependent variable values can be derived corresponding to known values of the independent variable(s).

4.6.1.3 Homoscedasticity

Existence of non-constant variance in the error terms results in heteroscedasticity which is a serious violation of the assumptions for regression analysis (Sarstedt and Mooi, 2014). For data to qualify for linear regression analysis, it should be homoscedastic, meaning that it should meet the assumption of equal variance. As postulated by Osborne and Waters (2002) testing of homoscedasticity was done using the scatter plot. The results are as presented in Figure 4.2

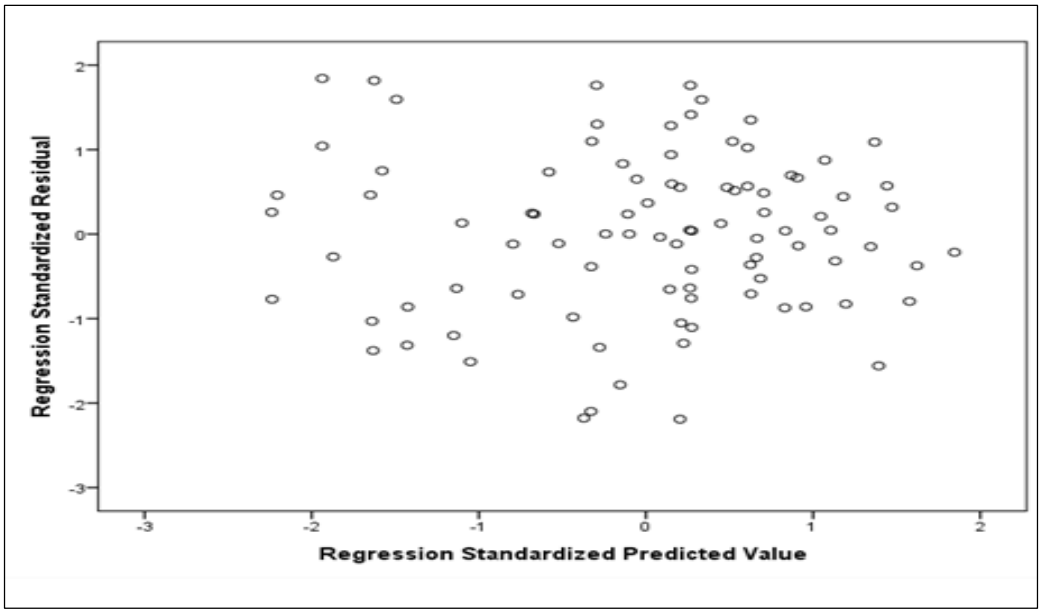


Fig 4.2: Scatter Plot on the Dependent Variable (Sustainability)

The scatter plot on Figure 4.2 presents a near equal distribution of the residuals from the point of origin (zero line). This confirms that the data meets the condition of equality of variance thus there is lack of heteroscedasticity which gave way running a linear regression model for project management practices on project sustainability.

4.6.1.4 Multicollinearity

Multicollinearity was evaluated by looking at the magnitude of Variance Inflation Factor (VIF) and tolerance factors. If the score is more than 10, that variable is said to be highly collinear (Field, 2009). In line with Menard (1995), a tolerance factor value of more than 0.1 was an acceptable indicator of non multicollinearity.

Table 4.27: Test for Multicollinearity

Variables	Torrance Factors	VIF
Capacity building	0.939	1.065
Stakeholders management	0.616	1.622
Project design practices	0.530	1.885
Monitoring and evaluation	0.566	1.768
Government policies	0.531	1.885

Source: Survey Data (2021)

As indicated in Table 4.26, the independent variables had tolerance factors ranging from 0.530 to 0.939. This shows that the tolerance factors were above 0.1 as recommended by Menard (1995). On the other hand, the VIF factors ranged from 1.065 to 1.885. Again this

was less than 10 which is the cut-off point as recommended by Field (2009). The two tests confirm that there was no multicollinearity.

4.6.1.5 Sampling Adequacy

Before computing inferential statistics, the data was also checked for sampling adequacy using Kaiser-Meyer-Olkin (KMO) test. This is necessary to ensure the sample is adequate for making valid conclusions. As recommended by Field (2009), a KMO statistic greater than 0.05 is considered as adequate for the given data set. The findings are as presented in Table 4.27.

Table 4.28: Test for Sampling Adequacy

KMO Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.761

Source: Survey Data (2021)

As indicated in Table 4.27, the KMO value was 0.76, which is greater than 0.05. The data thus met the sampling adequacy test.

4.7 Multiple Regression Results

Multiple regression analysis was performed after confirming that the data met the requisite assumptions as expounded in the previous section under diagnostic tests. The analysis was done at 95% confidence level and used as a basis for making conclusions on the nexus between explanatory and explained variables. The outcome of the overall joint regression analysis before moderation are shown in Table 4.29.

Table 4.29: Regression Results of Joint Effect of PMPs on Sustainability of APAPs

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.847[a]	.718	.714	.14858

Source; Survey Data 2021

In Table 4.29, the value of $R^2 = 0.718$. This illustrates that explanatory variables (project capacity building practices, project stakeholder's practices, project design practices and project monitoring and evaluation practices) jointly explain 71.8% of project sustainability. The remaining 18.2% being explained by other factors beyond those considered in this enquiry. The general significance of the model is shown in the ANOVA results as presented in Table 4.30.

Table 4.30: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	15.013	4	3.753	170.024	.000[b]
Residual	5.894	267	.022		
Total	20.908	271			

Source; Survey Data 2021

As evident in Table 4.30 the F statistic was 170.024 with 4 degrees of freedom and a corresponding P value was 0.000. The P value is less than the critical 0.05 ($P<0.05$) meaning that the overall model is statistically significant. The model was thus suitable for testing the study hypothesis.

The regression coefficients for the respective predictor variables were as presented in Table 4.31

Table 4.31: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.329	.117		11.358	.000	1.098	1.559
	CBP	.331	.072	.334	4.597	.000	.190	.472
	SMP	.171	.069	.217	2.478	.014	.036	.306
	PDP	.533	.114	.685	4.675	.000	.251	.815
	MEP	.124	.036	.128	3.444	.000	.005	.195

Source; Survey Data 2021

This relationship produced a modelling Equation 4.1.

$$\boldsymbol{PS = 1.329 + 0.331CBP + 0.171SMP + 0.533PDP + 0.124MEP}$$ **.....Equation 4.1**

Where: PS = Project Sustainability

CBP = Project Capacity Building Practices,

SMP = Project Stakeholder Management Practices,

PDP = Project Design Practices,

MEP = Project Monitoring and Evaluation Practices

As shown in Equation 4.1, the four predictor variables (project management practices) were positively associated to the dependent variable (project sustainability). This implies that an increase or improvement in any of the project management practices would result

to an improvement in the level of project sustainability. The finding makes a positive contribution towards the attainment of project sustainability which has been variously described as an elusive goal in project management (IFAD, 2018; Soliman & Adam, 2015; Lungo, Mavole & Martin, 2017; Martens & Carvalho, 2016).

4.7.1: Test of Hypotheses One

The first objective of the study sought to ascertain the effects of capacity building practices on sustainability of Kenya Agricultural Productivity and Agribusiness Projects in selected counties in Kenya. This objective was to be tested through the following null hypothesis;

$H_{O1:}$ Capacity building practices do not have a significant effect on the sustainability of KAPAP projects in selected counties in Kenya

The findings as presented in Table 4.31 depicts the value of coefficient of capacity building practices as 0.331 while the P value was 0.001. The P value was below 0.05 and therefore at 5% level of significance, the null hypothesis was rejected. This means that other independent variables held constant, a single unit adjustment in capacity building practices contributes to 0.331 changes in sustainability of the projects.

These findings are in agreement with the views of Komujuni, et al., (2013) who established a considerable association between capacity development initiatives and sustainability of health projects in Uganda. Ouma (2016) equally confirmed that the capacity building methodology as well as content influenced project performance. The findings affirm the

importance of capacity building practices in the practice of project management. Project promoters should always consider equipping the project beneficiaries with relevant knowledge and skills to ensure sustainability of the projects.

4.7.2: Test of Hypotheses Two

Secondly, the investigation set to determine the effect of stakeholder's management practices on the sustainability of KAPAP projects in selected counties in Kenya. This objective was to be tested through the following null hypothesis;

H_{O2}: Stakeholders' management practices do not have a significant effect on the sustainability of KAPAP projects in selected counties in Kenya

As shown in Table 4.31, the value of the coefficient of project stakeholder management was 0.171. The corresponding P value was 0.014 which was lower than 0.05. This indicates that at 5% level of significance, the null hypothesis was rejected. This demonstrates that other predictor variables held constant, one unit variation in project stakeholder management practices score contributes to 0.171 changes in project sustainability score. The study concludes that stakeholders' management practices significantly affected the sustainability of KAPAP projects.

The finding underscores the primacy of stakeholders' management practices in the field of project management. Project proponents should thus be purposefully committed to relevant stakeholders' management practices for sustainability of their projects. The results are in

accord with the views of Bal, et al.., (2013) who articulated that understanding the stakeholder's management processes is important to achieve sustainability related goals. The findings also concur with the views of Martens and Carvalho (2016) who equally established that Stakeholders' management is a key aspect of project sustainability.

4.7.3: Test of Hypothesis Three

The next objective was to find out the effect of project design practices on the sustainability of KAPAP projects in selected Counties in Kenya. This objective was to be tested at 95% confidence level through the following null hypothesis;

H_{O3}: Project design practices have no significant role on the sustainability of KAPAP projects in selected counties in Kenya

From the research outcome as displayed in Table 4.31, the value of coefficient of project design practices was 0.533 while the P value was 0.001. The P value was below 0.05 and therefore at 5% level of significance, the null hypothesis was rejected. This means that keeping other predictor variables constant, a single unit change in project design practices score contributes to 0.533 changes in project sustainability score. The results are consistent with the observations of Onkoba (2016) that Project design is a main factor that may affect the sustainability of a project. The findings are also in line with views of Amadi (2017) who singled out project planning and design as the most critical practices that influence the success of community projects.

4.7.4: Test of Hypothesis Four

The investigation endeavoured to examine the effects of monitoring and evaluation practices on the sustainability of KAPAP projects in selected counties in Kenya. The objective was to be tested through the following null hypothesis;

H_{O4}: Monitoring and evaluation practices have no significant effect on the sustainability of KAPAP projects in selected counties in Kenya

As shown in Table 4.31, the value of the coefficient of monitoring and evaluation practices was 0.124 while the P value was 0.001. The P value was below 0.05 and therefore at 5% level of significance, the null hypothesis was not accepted. This means that if other predictor variables were held constant, one unit change in project M&E practices score would result to 0.124 changes in project sustainability score. The result confirms the findings of Karanja (2014) that M&E is one of the project management practices that have a notable effect on project sustainability. These outcomes also concur with the views of Broad and Mulyungi (2018), who posited that the project M&E activities contributed to project sustainability.

4.7.5: Moderation Effect Results and Test for Hypothesis Five

Government policy was hypothesised as the moderating variable in the study. The null hypothesis for this objective was as follows;

H_{O5}: Government policy has no significant moderating effect on the association between project management practices and sustainability of KAPAP projects in selected counties in Kenya.

In line with the recommendations of Fairchild and Mackinnon (2009), it is necessary to confirm that the hypothesised moderating variable has a significant relationship with the predicted variable as a precondition for testing for moderation. The moderating role of government policy on the association between PMPs [capacity building practices (CBP), stakeholder management practices (SMP), project design practices (PDP), monitoring and evaluation practices (MEP)] and project sustainability (PS) was tested by checking the statistical significance of the value of coefficient of determination in each model. The output is presented in Table 4.32 containing three models from hierarchical linear regression.

Table 4.32: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.847[a]	.718	.714	.14858	.718	170.024	4	267	.000
2	.887[b]	.787	.783	.12933	.069	86.373	1	266	.000
3	.889[c]	.790	.783	.12952	.003	.243	1	265	.023

a. Predictors: (Constant), MEP, CBP, SMP, PDP

b. Predictors: (Constant), MEP, CBP, SMP, PDP, GP

c. Predictors: (Constant), MEP, CBP, SMP, PDP, GP, IT

Source; Survey Data 2021

The first model (Model 1) indicates the direct effect of project management practices (PMPs) and project sustainability before the moderator is added. The output indicates a positive effect of PMPs on project sustainability, accounting for 71.8% variation in the value of project sustainability which was statistically significant($F_{4,267} = 170.024, p < 0.05$). The second model (Model 2) indicates that when government policy is introduced, the projects become more sustainable. This is confirmed by the fact that the coefficient of determination increases from 0.718 to 0.787. The government policy increased project sustainability score by 0.069 which signalled that government policy moderates the effect of project management practices on project sustainability. The statistical significance of the moderation effect is confirmed in the third model (Model 3) where the interaction term (IT) is introduced. The coefficient of determination improved from 0.787 to 0.790 which is statistically significant ($F_{1,265} = 0.243, p < 0.05$). The government policy is thus a statistically significant moderator in the association between project management practices and project sustainability.

The government policy having been found to statistically significantly moderate the effect of the PMPs on project sustainability, the relationship was modelled as indicated in equations 4.2, 4.3 and 4.4 as derived from Table 4.34. The reliability of the models was tested using ANOVA whose output is presented in Table 4.33

Table 4.33: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.013	4	3.753	170.024	.000[b]
	Residual	5.894	267	.022		
	Total	20.908	271			
2	Regression	16.458	5	3.292	193.647	.000[c]
	Residual	4.449	266	.017		
	Total	20.908	271			
3	Regression	16.517	6	2.753	161.941	.000[d]
	Residual	4.391	265	.017		
	Total	20.908	271			

a. Dependent Variable: PS
b. Predictors: (Constant), MEP, CBP, SMP, PDP
c. Predictors: (Constant), MEP, CBP, SMP, PDP, GP
d. Predictors: (Constant), MEP, CBP, SMP, PDP, GP, IT
e. IT = MEP*CBP* SMP* PDP*GP

Source; Survey Data 2021

The output in Table 4.33 showed that the models in Equations 4.2, 4.3, and 4.4 were statistically significant, that is for Model 1 ($F_{4,267} = 170.024, p < 0.05$), Model 2 ($F_{5,266} = 193.647, p < 0.05$), and Model 3 ($F_{6,265} = 161.941, p < 0.05$). This output showed that capacity building practices (CBP), stakeholder management practices (SMP), project design practices (PDP), as well as project monitoring and evaluation practices (MEP) can be used to reliably predict project sustainability, and this prediction is enhanced by implementation of government policies.

The modelling of the relationship between project management practices {(capacity building practices (CBP), stakeholder management practices (SMP), project design practices (PDP), monitoring and evaluation practices (MEP)} and project sustainability (PS) as moderated by government policies (GP) was done using a hierarchical regression whose model coefficients are presented in Table 4. 34.

Table 4.34: Regression Coefficients with Moderating Variable

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.329	.117		11.358	.000	1.098	1.559
	CBP	.331	.072	.334	4.597	.000	.190	.472
	SMP	.171	.069	.217	2.478	.014	.036	.306
	PDP	.533	.114	.685	4.675	.000	.251	.815
	MEP	.124	.036	.128	3.444	.000	.005	.195
2	(Constant)	1.148	.104		11.062	.000	.944	1.353
	CBP	.334	.068	.347	4.912	.000	.201	.467
	SMP	.188	.060	.238	3.133	.002	.070	.306
	PDP	.478	.099	.614	4.826	.000	.283	.673
	MEP	.206	.037	.365	5.532	.000	.133	.279
	GP	.297	.032	.475	9.294	.000	.234	.360
3	(Constant)	1.151	.104		11.057	.000	.946	1.356
	CBP	.341	.085	.351	4.012	.000	.174	.508
	SMP	.191	.061	.242	3.147	.002	.071	.310
	PDP	.475	.099	.610	4.798	.000	.280	.670
	MEP	.206	.037	.367	5.538	.000	.133	.279
	GP	.296	.032	.474	9.240	.000	.233	.359
	IT	.394	.071	.306	5.549	.000	.255	.533

Dependent Variable: PS,

IT = MEP*CBP* SMP* PDP*GP

Source; Survey Data 2021

The output in Table 4.34 produced the following models:

$$PS = 1.329 + 0.331CBP + 0.171SMP + 0.533PDP + 0.124MEP$$ **.....Equation 4.2**

$$PS = 1.148 + 0.334CBP + 0.188SMP + 0.478PDP + 0.206MEP + 0.297GP$$ **.....Equation 4.3**

$$PS = 1.151 + 0.341CBP + 0.191SMP + 0.475PDP + 0.206MEP + 0.296GP + 0.394IT$$ **.....Equation 4.4**

Where: CBP = Capacity Building Practices,

SMP = Stakeholder Management Practices,

PDP = Project Design Practices,

MEP = Monitoring and Evaluation Practices

PS = Project Sustainability

GP = Government Policy

IT = MEP*CBP* SMP* PDP*GP

All the regression coefficients in Table 4.34 have the probability values below 0.05 at 5% level of significance indicating that the coefficients are significantly different from zero. This implies that PMPs {(capacity building practices (CBP), stakeholder management practices (SMP), project design practices (PDP), as well as project monitoring and evaluation practices (MEP)} positively predict project sustainability (PS). The models in the equations 4.2, 4.3, and 4.4 shows increasing values of regression coefficients which further confirm the significant moderation of the government policies on the effect of PMPs on project sustainability. The null hypothesis as postulated in hypothesis five was thus rejected.

The findings are in agreement with past studies (Ojiambo, 2018; Oyelakin and Kandi, 2017; Si-jeoung et al.., 2016), which established that government policies had a positive moderating effect on project success. However, these results contradict the finding by Ndachi and Kimutai (2018) who had concluded that Government policies had negative influence on execution of health projects in Nyeri County. Ochenge (2018) also reported that government policy had no significant influence on success of road projects.

4.8 Qualitative Data Analysis

The investigator wanted to get the views of the respondents on project management practice that was considered by respondents to be the biggest threat to project sustainability. The findings are presented as follows;

4.8.1 Weakest Area in Project Management Practices

From a pre-printed list the subjects were first asked to choose one of the project management practices which they considered as the biggest threat to project sustainability or indicate their preferred answer under any other. The outcome is as depicted in Table 4.35.

Table 4.35: Weakest Project Management Practice and Sustainability Biggest Threat

Threat	Frequency	Percentage
Capacity building practices	18	7%
Stakeholders management practices	75	28%
Project design practices	150	55%
Monitoring and evaluation practices	22	8%
Project leadership practices (any other)	7	3%
Total	272	100%

Source; Survey Data (2021)

As evident in Table 4.35, project design practices were considered to be one area with the biggest threat to project sustainability after being identified by 55% of the respondents. This was followed by stakeholders' management practices by 28% of the respondents,

monitoring and evaluation practices by 8% and capacity building practices being selected by 7% of the respondents respectively. Project leadership practices were identified by 3% of the respondents as an extra project management practice which could affect project sustainability. The findings concur with Amadi (2017) who singled out project planning and design as the most critical practices that affect the success of community projects. The outcome is also in concurrence with the findings of Musau (2018) who listed project plans, monitoring and evaluation as well as stakeholders' participation as practices that affected project implementation in Kenya.

4.8.1.1 Respondents Explanation

The subjects were further encouraged to explain the reason behind their choice in the previous question in their own words. The responses produced qualitative data that was grouped in line with main themes in line with Cooper and Schindler (2014). The outcome was as depicted in Table 4.36.

Table 4.36: Qualitative Data Analysis - Respondent's Views

Weaknesses in Project Design (150 Respondents	
Reason	**Explanation**
Farmers not involved in project planning and design	Many of the respondents (28%) reported that they were not involved in the initial design of the projects. This made them passive recipients of foreign prescriptions which were not necessarily appropriate. E.g. mandatory membership in a registered group as a precondition for joining the project without allowing individual or corporate entity membership. This exposed every member to challenges of group dynamics. When the groups collapsed, the projects could not continue as well.
Needs assessment not carried out	Some farmers (11%) indicated that their real needs were not identified in a consultative manner. They had to pick what was offered despite having other priorities. Consequently, they abandoned the project later to concentrate on their priorities.
Challenges in Farmer's cooperatives societies	Many respondents (36%) reported that though they contributed money for membership in cooperative society, the initiative did not materialise. Many bitterly complained of having lost their contributions as well as savings from sales produce at the hands of government officials. This led to loss of trust, fallouts among the group members, disintegration of the groups and eventual collapse of the projects.
Funding challenges	Some 10% of the respondents expressed that the donor money provided for trainers and consultants fees or allowances with nothing to cater for farm inputs as expected. Some farmers abandoned the project for lack of funds for the inputs affecting the sustainability of the project.
Over control by ministry of agriculture staff	Other respondents (15%) reported that the ministry of agriculture staff were too overbearing on various project operations. They were not accommodative of farmers opinions

Stakeholders Management Practices (75 Respondents)	
Poor coordination between national and county government	35% of the respondents decried the chaotic changeover of the project from national to county government purview. The project was started through the ministry of agriculture under the national government but was later handed over to respective regional county governments in 2015 after agriculture was decentralised in line with Kenya constitution 2010 requirements. The new regional county governments did not cater for the project activities. Some of the projects components such as formation of umbrella cooperative societies consequently did not materialise due to deficiencies in overarching coordination and support at the county level.
Lack of government support	20% of the respondents felt neglected by the national as well as the county government. They reported that there was no material or financial support from the government for the project.
Exploitation by stakeholders	45% of the respondents indicated that they continuously incurred losses due to exploitation by middlemen and brokers who offered low product prices. This presented a threat to financial sustainability of the projects.
Monitoring and Evaluation Practices (22 Respondents)	
Poor feedback systems	Most of the respondents (57%) reported that the sustainability of their projects was affected by lack of/or delayed feedback of monitoring and evaluation reports. Consequently, they could not asses the project performance on time or institute necessary corrective measures where things were getting out of hand.
Lack of follow up on correction measures	43% of the respondents in this category felt that there was no adequate follow up on issues raised in monitoring and evaluation activities.
Capacity Building Practices (18 Respondents)	
Minimal on farm demonstrations	Majority (83%) of the respondents felt that the composition of capacity building practices was largely skewed to theory work

	dispensed in endless seminars and workshops as opposed to practical on farm hands on exercises. This equipped them with theoretical knowledge which could not stand the test of sustainability in practical field activities.
Incompetent project expert consultants	Other respondents (17%) decried the quality of capacity building practices offered by the project consultants. The respondents felt that some of the consultants were incompetent and did not manage to impart adequate relevant knowledge and skills for the sustainability of the project.
Project Leadership Practices (7 Respondents)	
Poor coordination	Some respondents felt that the leadership in respective projects was wanting in terms of rallying members to a common goal.
Conflict of interest	Some leaders were accused of engaging in activities to serve their own interest at the expense of the project.

Source; Survey Data 2021

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The section contains a synopsis of the findings, conclusions, contributions to the body of knowledge, recommendations and suggestions for further future research.

5.2 Summary of Findings

The study results as established in chapter four are presented in brief in accordance with the objectives that guided the inquiry. First, the investigation desired to establish the effects of capacity building practices on the sustainability of KAPAP projects in selected counties in Kenya. From the findings, a variety of capacity building practices were utilised in the projects. The most popular capacity building practice was training in workshops, followed by extension services and farm field visits. Other capacity building practices included; presentation in groups, provision of farm inputs, involvement in project leadership and participation in project activities respectively.

The capacity building practices utilised in the projects were rated highly with majority of the informants strongly agreeing with the various statements on a five step Likert scale. The study demonstrated that capacity building practices statistically significantly affected the sustainability of KAPAP projects. However, the capacity building practices were noted by the respondents to be largely theoretical with minimal practical on farm demonstrations which are very crucial in agriculture. The competence of contracted expert consultants was also not to the expected standards in some projects.

The second objective was to assess the effect of stakeholder's management practices on the sustainability of KAPAP projects in selected counties in Kenya. The findings show that other than farmers, the projects had a varied range of stakeholders. These included; ministry of agriculture extension officers, consultant service providers, suppliers, traders and the donor. Government administrators as well as politicians were the least popular stakeholders in the project. From the findings, the stakeholder's management practices utilised in the project resonated well with the expectations of the respondents.

A majority of the respondents highly agreed with various statements on stakeholder's management practices as presented for rating on a five point Likert scale. The study confirmed that stakeholders' management practices statistically significantly affected the sustainability of KAPAP projects. The sustainability of KAPAP projects was however affected by structural changes in government when the coordination of the project was shifted from national government to regional County governments in line with Kenya constitution 2010 requirements. Other stakeholders practice issues that had an effect on the sustainability of the project include lack of government support as well as exploitation by middlemen and brokers.

The third objective of the project was to find out the effect of project design practices on the sustainability of KAPAP projects in selected Counties in Kenya. The respondents indicated that the project was largely designed on a top down approach and cascaded downwards for implementation by the farmers. The study findings show that the project was largely designed at the ministry of agriculture in conjunction with the donor and other

expert consultants. There was little input by farmers in this phase. The subjects highly concurred with the statements on various project design practices employed in the project. The investigation further showed that project design practices significantly affected the sustainability of KAPAP projects in Kenya. The respondents identified a few challenges in the project design practices including non-functional cooperative societies, challenges in the funding model, and micromanagement by ministry of agriculture staff.

The study also set to determine the effect of M&E practices on the continuity of KAPAP projects in selected counties in Kenya. Several M&E practices were evident in the project including; field visits by monitoring and evaluation staff, data collection, periodical progress reports and inspection. In addition to these, there was use of checklists, data analysis, dissemination of reports and interviews. The informants highly agreed with various statements on project monitoring and evaluation practices. The findings show that monitoring and evaluation practices significantly affected the sustainability of KAPAP projects in Kenya. The outcome also show that the M&E systems in the project had a weakness in the feedback and follow up systems.

Together with the above, the inquiry was set to assess the moderating effects of government policy on the association between PMPs and the sustainability of KAPAP projects in selected counties in Kenya. The findings demonstrated that there existed many government policies in form of rules, regulations and guidelines on various aspects of the project. Government policy was most prominent in project design phase, followed by project implementation phase, project financing as well in selling and trading activities

respectively. On a five notch Likert scale, the subjects highly agreed that government policies had an effect on the relationship between various project management practices and sustainability of KAPAP projects in Kenya.

From the regression analysis results, the independent variables (project management practices) had a positive joint effect on project sustainability before the moderator (government policy) was added. The results further show that when government policy is introduced, the sustainability of the projects was enhanced. This confirms that the government policies moderated the effects of project management practices on project sustainability. Through the interaction term, the study further established that government policy statistically significantly moderated the relationship between various project management practices and sustainability of KAPAP projects in Kenya.

From the findings, the projects were sustainable on each of the three conceptualised dimensions of sustainability with institutional aspects leading, trailed by financial aspects and finally, operational aspects. The favourable rating could be explained by the ease of understanding and identifying the traits by the respondents following disaggregation of the sustainability concept in the study. Overall, the respondents were highly agreed that the projects were sustainable. The respondents intimated that they were still applying the knowledge and skills acquired from the project in their farming enterprises even beyond KAPAP which may explain the overall favourable rating on sustainability.

5.3 Conclusions

The study set out to investigate the effects of project management practices on the sustainability of KAPAP projects in selected counties in Kenya. Specifically, the investigation looked at the effect of project capacity building practices, project stakeholders management practices, project design practices as well as project monitoring and evaluation practices on the sustainability of KAPAP projects in selected counties in Kenya. In addition, the study reviewed the moderating effect of government policy on the relationship between the project management practices and sustainability of the same projects. From the findings, it was established that each of the four project management practices statistically significantly had an influence on the sustainability of KAPAP projects. Project design practices had the greatest influence on project sustainability, followed by capacity building practices then M&E practices. Stakeholders' management practices and the least influence on project sustainability among the independent variables. The proportion of joint explanation of dependent variable by the explanatory variables improved on inclusion of government policy as a moderating variable. This confirmed that government policy statistically significantly moderated the association between the predictor and the predicted variables in the study. From these findings, the project management practices can be used to reliably predict project sustainability and this prediction is enhanced by implementation of government policies.

5.4 Contributions to Body of Knowledge

The study has provided a practical way of conceptualising project sustainability in the practice of project management. Past empirical studies have expressed reservations on

absence of clear indicators on which the sustainability of a project can be measured. In this study, project sustainability was disaggregated into the following three dimensions; organisational or institutional sustainability, economic or financial sustainability and operational sustainability. Through literature review, specific indicators for each of the three dimensions were established. The aggregate mean scores for these indicators provided an appropriate way of measuring the sustainability of KAPAP projects.

Project sustainability has been considered as a continuous variable which was measured through a five point Likert scale and analysed through multiple regression model. Past studies had considered sustainability as a dichotomous discrete variable which limited the range of possible responses to two and further rendered the data only amenable to logistic regression model for analysis. The five point Likert scale offered a bigger continuum necessary to capture the respondent's views more accurately thus contributing to the validity of the study.

The study contributes to the body of knowledge in management by confirming the need for a holistic approach to the analysis of project sustainability as opposed to independent analysis of various constituent elements. The findings demonstrated that various project management practices individually and jointly contributed to the sustainability of the project. Project sustainability was further enhanced when government policy as a moderator is factored in. It is thus essential to consider the effects of various project management practices simultaneously rather than each in isolation.

Through this study, project sustainability has been distinguished from sustainable development and expressed as a distinct concept worthy of academic inquiry. Most of the available empirical studies have largely assumed that project sustainability is about the interaction or balance of environmental, economic and social aspects in a development endeavour. While this approach is popular in sustainable development literature, it fails to appreciate the unique role of a project as a short term unique endeavour purposefully crafted for the attainment of specific desired goals. A project provides for the institutional or organisational framework along which resources are expended in predetermined operations. A discourse on project work or project management should thus be centred on the institutional, resources (economic or financial) and operations aspects of the endeavour. Project sustainability is thus not equivalent to sustainable development but rather may be viewed as a subset.

The study has aptly brought out the importance of government policy in the practice of project management. From the findings, the role of government policies at either national or regional/county level has been demonstrated to be critical both directly and as a moderator to the association between the predictor variables and sustainability. Practitioners in project management should thus pay due attention to existing government policies in form of laws, rules, regulations or even guidelines.

5.5 Recommendations

From the results, the following recommendations are prescribed for policy and practice considerations. To start with, the effect of various PMPs on sustainability should be

considered collectively rather than each in isolation. On project design it is important to incorporate the project beneficiaries from the initial design phase of a project. This not only generates project ownership but also unleashes the potential of project beneficiaries in providing practical solutions to their problems which they can identify with and sustain. The formation and management of cooperative societies as a project component should be streamlined to avoid rampant malpractices leading to intended beneficiaries losing their contributions and savings. This demoralizes the intended beneficiaries and may create apathy and hostility towards future project initiatives. The government officers from the ministry of agriculture should also allow the project beneficiaries some latitude in management of their projects and avoid micromanaging every aspect of the project.

On stakeholders' management, there is need for proper coordination between the national and regional/County governments on matters pertaining to development projects. A clear outline of the roles of each level of government would eliminate the confusion and back passing of responsibilities as was the case with KAPAP projects. The government should also support agricultural productivity and agribusiness projects through funding and provision of farm inputs. In addition, relevant legal regulatory frameworks should be established and enforced to mitigate against exploitation of farmers by middle men and brokers.

The capacity building practices should largely involve practical on farm activities as opposed to theoretical lessons in workshops and seminars. This would enable the farmers to acquire relevant skills for project success and sustainability. There is also need to engage

competent expert consultants in future projects. In M&E, the project promoters ought to ensure that the feedback systems are efficient to allow relevant corrective and improvement measures to be instituted in a timely manner in the projects.

5.6 Suggestions for Further Research

The investigation looked at PMPs and sustainability of agricultural productivity and agribusiness projects in selected counties in Kenya. It may be necessary to establish the role of PMPs on sustainability of projects in other sectors such as in construction or water sectors in the country. The study also focussed on the sustainability of KAPAP projects which were donor funded. In future, further research should be undertaken on PMPs and sustainability of projects funded exclusively by the beneficiaries. This may help to establish whether the sustainability of the project is affected by the source of the funds. The benefits envisaged to accrue from the formation of cooperative societies in KAPAP project were largely not realised. There is need for further studies to establish the cause of the dismal performance in the cooperative society component under KAPAP projects for both learning as well as for improvement in future projects.

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APPENDICES

APPENDIX I: INTRODUCTION LETTER

JOSEPH MIANO KABETHI
Email: Mianokabethi@Gmail.com
Tel. (Mobile): 0721479292

Dear Sir/Madam,

RE: APPEAL FOR INFORMATION ON KAPAP PROJECTS.

As part of my PhD studies, at Kenyatta University, I am undertaking an inquiry on Project Management Practices and Sustainability of Agricultural Productivity and Agribusiness Projects in selected Counties in Kenya.

As a leader/member in one of the Kenya Agricultural Productivity and Agribusiness projects, you have been identified as a respondent in this study. I'm here by requesting for your assistance to get information concerning your project through the attached questionnaire. Your feedback shall be handled with deserving professionalism for my academic work only. Your honest responses are highly appreciated.

Yours Faith fully,

JOSEPH MIANO KABETHI

APPENDIX II: QUESTIONNAIRE FOR GROUP LEADERS

Questionnaire No....

SECTION A: GENERAL INFORMATION

1.1 Group name..... County.....

1.2 Position held in the group.....

1.3 Sex: Male [ ] Female [ ]

1.4 Age bracket in years.

Less than 24 [ ] (b) 25-35 [ ]

35-60 [ ] (d) Over 60 [ ]

1.5 Highest level of Formal education: Primary [ ] Secondary [ ] Tertiary college (diploma/certificate) [ ]

University [ ]

1.6 Kindly indicate the Value chain carried out under KAPAP in your group. .....

1.7 In which year was your group started.....

1.8 Is your group still in existence Yes [ ] No [ ]

1.9 Who came up with the KAPAP project idea?

Members [ ] (b) Donor [ ] (c) Government officer [ ]

Any other (please indicate) .....

SECTION B: CAPACITY BUILDING PRACTICES

2.1 Indicate the capacity building practices used in the project (tick as many)

(a) Training in Workshops and seminars [ ]

(b) Extension services (by field officers) [ ]

(c) Farm field visits by group members [ ]

(d) Presentations in project/group meetings [ ]

(e) Provision of farm inputs/grants [ ]

(f) Involvement in projects leadership/governance [ ]

(g) Participation in project activities [ ]

(h) Any other (please indicate) .....

Please give an assessment of the extent to which you agree with these statements concerning the capacity building in your project. Apply a scale of i-v, where: i = Strongly disagree; ii= Disagree; iii= Undecided, iv= Agree and v = Strongly agree	**Strongly disagree**	**Disagree**	**Undecided**	**Agree**	**Strongly agree**
2.2 The capacity building activities helped the group members to carry out project activities					
2.3 The skills development/training activities were relevant for achievement of project objectives					
2.4 Members were given a chance to participate in the management of project activities					

SECTION C: STAKEHOLDERS MANAGEMENT PRACTICES

3.1. Who among the following was involved in your project (tick as many)

(a) Suppliers [ ]

(b) Government administrators (chief, assistant chief) [ ]

(c) Ministry of agriculture officers (extension officers) [ ]

(d) Consumers [ ]

(e) Traders/buyers [ ]

(f) Donors [ ]

(g) Service providers/consultant [ ]

(h) Politicians [ ]

(i) Any other.....

Please give an indication of the extent to which you agree with these statements on your project. Apply a scale of i-v, where: i = Strongly disagree; ii= Disagree; iii= Undecided, iv= Agree and v = Strongly agree	**Strongly disagree**	**Disagree**	**Undecided**	**Agree**	**Strongly agree**
3.2 Various stakeholders were identified for respective project activities					
3.3 The stakeholder were classified in line with their contribution/role in the project					
3.4 Various stakeholders took part in relevant project activities					
3.5 The project provided opportunities for stakeholders involvement					
3.6 The project leaders listened to stakeholders views					

SECTION D: PROJECT DESIGN PRACTICES

4.1 Who designed (planned) the KAPAP project (tick as many)

(a) Group members [ ]

(b) Donor [ ]

(c) Consultant/service providers [ ]

(d) Ministry of agriculture officers [ ]

(e) Any other (please indicate) .....

Please give an indication of the extent to which you agree with these statements on your project. Apply a scale of i-v, where: i = Strongly disagree; ii= Disagree; iii= Undecided, iv= Agree and v = Strongly agree	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
4.2 Situational analysis/needs assessment was done at the beginning(design) of the project					
4.3 The project goals were identified at the beginning(design) stage of the project					
4.4 Project strategies(i.e. how to achieve the project goals) were formulated at the beginning(design) stage of the project					
4.5 Resources(people, equipment, facilities..) relevant for the project implementation were identified at the beginning(design) stage of the project					
4.6 Contingency plans(or alternative plans) for achieving the project goals were identified at the beginning(design) stage of the project					
4.7 The project budget was developed at the beginning(design) stage of the project					
4.8 The project evaluation plan (i.e. criteria for measuring success) was developed at the beginning (design) stage of the project					

SECTION E: MONITORING AND EVALUATION PRACTICES.

5.1 Please identify various monitoring and evaluation activities applied in your project (tick as many).

(a) Data collection [ ]

(b) Field visits [ ]

(c) Inspection [ ]

(d) Use of checklist [ ]

(e) Interviews [ ]

(f) Periodical progress reports (daily, weekly, monthly) [ ]

(g) Data analysis [ ]

(h) Dissemination of M&E Reports [ ]

(i) Any other (please indicate) .....

Please give an assessment of the extent to which you agree with these statements on your project. Apply a scale of i-v, where: i = Strongly disagree; ii= Disagree; iii= Undecided, iv= Agree and v = Strongly agree	**Strongly disagree**	**Disagree**	**Undecided**	**Agree**	**Strongly agree**
5.2 The project had an M&E system in place					
5.3 The M&E system collected/captured data on various project activities					
5.4 The project provided for data analysis on project activities					
5.5 The project had M&E reports and feedback systems					
5.6 The M&E system was relevant for improvement of project activities					

SECTION F: GOVERNMENT POLICY

6.1 Please indicate whether there existed any government policies (rules, regulations or guidelines) that may have influenced the project in the following areas (tick as many).

(a) Group/project formation YES [ ] NO [ ]

(b) Group Agricultural activity operations (crop/livestock production) YES [ ] NO [ ]

(c) Group financing/funding activities YES [ ] NO [ ]

(d) Selling and trading in project agricultural products YES [ ] NO [ ]

Please give an assessment of the extent to which you agree with these statements on your project. Apply a scale of i-v, where: i = Strongly disagree; ii= Disagree; iii= Undecided, iv= Agree and v = Strongly agree	**Strongly disagree**	**Disagree**	**Undecided**	**Agree**	**Strongly agree**
6.2 The project design practices were influenced by existing Government policy (laws/rules/regulations).					
6.3 The project capacity building practices were influenced by the Government policy (laws/rules/regulations).					
6.4 The project stakeholder's management practices were influenced by Government policy (laws/rules/regulations).					
6.5 Government policy (laws/rules/regulations) had an influence on monitoring and evaluation practices.					
6.6 The continuity/sustainability of the project has been affected by the government policy (laws/rules/regulations).					

SECTION G: PROJECT SUSTAINABILITY

7.1 What was the main purpose (or objective) of starting your project.....

....

7.2 In your view was the main purpose (objective) of the project achieved? Yes [ ] (go to 7.4) No [ ] (see 7.3)

7.3 If NO in 7.2 above, what was the reason for not achieving the objective (tick as many)

(a) Inadequate project budget/finance [ ]

(b) Group leadership problems [ ]

(c) Lack of commitment by group members [ ]

(d) Weaknesses in the project design structure [ ]

(e) Lack of product market [ ]

(f) Lack of government support [ ]

(g) Lack of support by OTHER stakeholders [ ]

(h) Low quality products [ ]

(i) Low volume of products [ ]

(j) Any other (please indicate) .....

Kindly express your level of agreement with the following statements on the status of your project in year 2021. Apply a scale of i-v, where: i =strongly disagree; ii= disagree; iii= Undecided, iv=agree v = strongly agree	**Strongly disagree**	**Disagree**	**Undecided**	**Agree**	**Strongly agree**
7.4 The group/project leadership/management structure was in existence in year 2021 (e.g. chairperson, secretary, treasurer).					
7.5 The group/project leaders were effective in their roles in year 2021					
7.6 The group/project leaders concentrated on activities that were relevant or related to the KAPAP project in year 2021					
7.7 The group/project leaders had the ability (skills and knowledge) to manage the project in year 2021					
7.8 The project was able to generate money from its activities in year 2021					
7.9 The project had several sources of money(more than one) in year 2021					
7.10 The project was able to operate without donor support in year 2021					
7.11 The group was able to produce a product to sell in the market in year 2021					
7.12 The project members produced good quality products as compared with others in the market in year 2021					

7.13 Kindly identify **ONE** area of weakness in project management practice that you would consider as the biggest threat or challenge to the sustainability (continuity) of your project

(a) Capacity building practices [ ]

(b) Stakeholders management practices [ ]

(c) Project design practices [ ]

(d) Monitoring and evaluation practices [ ]

(e) Any other (please indicate) .....

7.14 Please explain your choice in 7.13.....

.....

Your valuable responses are highly appreciated. Thank you very much.

APPENDIX III: SOME AGRIBUSINESS PROJECTS IN KENYA

Source: - https://kilimo.go.ke/ministry-projects/
- https://projects.worldbank.org/en/projects-operations/projects/Kenya
- www.ifad.org/nl/web/operations/w/country/kenya

1. National Agricultural and Livestock Extension Program (NALEP)
2. Small Scale Irrigation and Value Addition Project (SIVAP)
3. Drought Resilience and Sustainable Livelihoods Programme (DRSLP)
4. Kenya Cereal Enhancement Programme (KCEP)
5. Regional Pastoral Livelihoods Resilience Project (RPLRP-Kenya)
6. Agricultural Sector Development Support Programme (ASDSP)
7. Kenya Climate Smart Agriculture Project (KCSAP)
8. National Agricultural and Rural Inclusive Growth Project (NARIGP) and Aquaculture Business Development Programme (ABDP)
9. Kenya Livestock Commercialization Project
10. Aquaculture Business Development Programme
11. Kenya Cereal Enhancement Programme Climate Resilient Agricultural Livelihoods Window
12. Upper Tana Catchment Natural Resource Management Project
13. National Agricultural and Rural Inclusive Growth Project
14. Kenya Agricultural Carbon Project
15. Kenya Agricultural Productivity and Sustainable Land management Project (KAPSLMP)
16. Enhancing Agricultural Productivity Project
17. Kenya Agricultural Productivity and Agribusiness Project(KAPAP)
18. Kenya Agricultural Input Supply Program
19. Kenya Agricultural Productivity Project(KAPP)
20. National Agricultural Research Project (NARP) (02)
21. National Agricultural Extension Project (02)
22. Aquaculture Business Development Programme
23. Kenya Cereal Enhancement Programme Climate Resilient Agricultural Livelihoods Window
24. Smallholder Horticulture Marketing Programme
25. Smallholder Dairy Commercialization Programme
26. Southern Nyanza Community Development Project
27. Mount Kenya East Pilot Project for Natural Resource Management
28. Western Kenya District-based Agricultural Development Project
29. Second National Agricultural Extension Project
30. Eastern Province Horticulture and Traditional Food Crops Project
31. Farmers' Groups and Community Support Project
32. National Extension Project
33. Second Integrated Agricultural Development Project

APPENDIX IV: UNIVERSITY APPROVAL OF RESEARCH PROPOSAL

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: kubps@yahoo.com
dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 57530

Internal Memo

FROM: Dean, Graduate School

DATE: 4th August, 2021

REF: D86/CTY/23614/12

TO: Kabethi J. Miano
C/o Department of Management Science
Kenyatta University

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

We acknowledge the receipt of your revised Research Proposal entitled **"Project Management Best Practices and Sustainability of Agricultural Productivity and Agribusiness Projects in Selected Counties in Kenya"** as per recommendations raised by the Graduate School Board of 25th June, 2021.

You may now proceed with your Data collection, subject to clearance with the Director General, National Commission for Science, Technology & Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed supervision Tracking and Progress Report Forms. The Forms are available at the University's Website under Graduate School webpage downloads.

By copy of this letter, the Registrar (Academic) is hereby requested to grant you substantive registration for your Ph.D. studies.

Thank you.

fr REUBEN MURIUKI
FOR: DEAN, GRADUATE SCHOOL

c.c. Registrar (Academic) Att; Mr. Richard Chweya
Chairman, Department of Management Science

Supervisor

1. Dr. Lucy Ngugi
   C/o Dept of Management Science
   Kenyatta University
2. Dr. James Maingi
   C/o Dept of Management Science
   Kenyatta University

RM/cao

APPENDIX V: NACOSTI RESEARCH LICENSE

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **186609**

Date of Issue: **23/August/2021**

RESEARCH LICENSE

This is to Certify that Mr.. KABETHI JOSEPH MIANO of Kenyatta University, has been licensed to conduct research in Busia, Embu, Garissa, Homabay, Kakamega, Kilifi, Kisii, Kwale, Makueni, Meru, Nakuru, Nyandarua, Nyeri, Siaya, Taita-Taveta, Tanariver, Transnzoia, Wajir, Westpokot on the topic: PROJECT MANAGEMENT BEST PRACTICES AND SUSTAINABILITY OF AGRICULTURAL PRODUCTIVITY AND AGRIBUSINESS PROJECTS IN SELECTED COUNTIES IN KENYA for the period ending : 23/August/2022.

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