

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

COLLAGE OF COMMERCE

DEPARTMENT OF PROJECT MANAGEMENT

The Mediating Effect of Beneficiary Engagement on the Relationship between Project Management Practices and Project Sustainability Outcomes: A Study of PACT and CARE Ethiopia

SUBMITTED BY: Nigist Livi

ADVISOR: Bahran Asrat (PhD)

A Final Thesis Submitted to Addis Ababa University, School of Commerce BAIS Department in Partial Fulfillment of the Requirements for the Degree of Master of Arts in Project Management

April 2026 Addis Ababa, Ethiopia

DECLARATION

This research paper, titled - The effect of project management sustainability practices and beneficiary engagement on project sustainability outcomes in NGO development projects in Ethiopia in the case of Pact and Care Ethiopia is my original work and was completed under the supervision of **Barhan Asrat (PhD).** All sources of information used in the thesis have been properly credited. I further confirm that the thesis has not been submitted in part or in whole to any other institution of higher learning for the intention of receiving a degree.

Name; Nigist Livi Filipo Signature----------

Addis Ababa University April, 2026

TITLE OF THE THESIS

The Effect of Project Management Sustainability Practices and Beneficiary Engagement on Project Sustainability Outcomes in NGO Development Projects in Ethiopia: in Case of Pact Ethiopia And Care Ethiopia

Approval Sheet by the Board of Examiners

Student:

Nigist Livi Filipo Signature: _____Date: April, 2026

I.D.NO: GSD/4782/16

Approved:

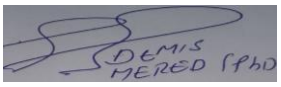
The Thesis Advisor

Bahran A. (PhD) Signature: _____ Date: _____

The Internal Examiner

Name: _____Signature: _____ Date: _____

The External Examiner

Name: __Demes Mered (PhD) Signature: __

Date: June 11, 2026

ENDORSEMENT

This thesis has been submitted to AAU-School of Commerce for examination with my approval as a university advisor.

Bahran Asrat (PhD) Signature

Advisor _____

AAU-School of Commerce April, 2026

ACKNOWLEDGEMENT

First and foremost, I express my special gratitude to my Savior and Redeemer, Almighty God; Lord Jesus Christ; and the Holy Spirit for providing me guidance, strength, and steadfast support throughout my life journey, enabling me to accomplish this achievement.

I am particularly expressing my genuine and sincere appreciation to my advisor Dr. Bahran Asrat (PhD) for his commitment to supporting me through every step of this research project. His guidance, insightful comments, and continuous encouragement throughout the entire process was invaluable. I am truly grateful for the time he dedicated to reviewing my work and for his constructive feedback, which significantly contributed to the quality and completion of this paper.

In addition, I would like to extend my deep appreciation to those who assisted me in many different ways along my educational journey. In particular, I would like to extend a very big "Thank You" to each respondent who took the time to participate in the survey questionnaire(s), for graciously providing your valuable insight and knowledge.

Last but certainly not least, I would like to take this opportunity to express my deepest and most sincere appreciation to my family. I would be remiss if I did not specifically express a great deal of appreciation to my loving husband for his continued support, encouragement, and confidence in me during this long journey. Likewise, I would like to extend a huge "Thank You" to my children for their love, patience, and encouragement. Additionally, I would like to extend an extremely heartfelt "Thank You" to my mother for her ongoing care and support, as well as to my extended family members for standing behind me and contributing to my overall success.

.

Table of Contents

LIST OF TABLES ix

LIST OF FIGURES x

LIST OF DIAGRAMS x

ACRONYMS/ABBREVIATIONS xii

ABSTRACT xiv

CHAPTER 1: INTRODUCTION 1

1.1. Background of study 1

1.2. Statement of the problem 4

1.3. Research Questions 6

1.4. General Objective 7

1.4.1. Specific Objectives 7

1.5. Purpose of the Study 8

1.6. Significance of the study 8

1.7. Scope of the study 9

1.8. Limitations of the study 10

1.9. Organization of the study 11

1.10. Definition of key terms 12

CHAPTER 2: REVIEW OF RELATED LITERATURE 15

2.1. Conceptual Ground of the Study 15

2.1.1. Sustainable Development Definitions and Evolution 15

2.1.2. The Shift from Traditional to Sustainable Project Management 18

2.1.3. Embedding Sustainability in the Project Cycle 21

2.1.4. Sustainability Framework: A Hybrid Conceptual Framework for Sustainable Development in Project Management 23

2.1.5. Mediating Factors Affecting Project Sustainability 27

2.2. Theoretical Grounds for the study 30
2.2.1. Systems Theory 30
2.2.2. Stakeholder Theory. 31
2.2.3. Sustainability (Triple Bottom Line) framework. 32
2.2.4. Integration and Relevance of Theoretical Framework 33
2.3. Review of Empirical Studies 33
2.3.1. Global Evidence 34
2.3.2. Empirical Evidence from Ethiopia 35
2.3.3. Evidence from Comparable Contexts 37
2.4. Conceptual Framework of the Study 39
CHAPTER 3: RESEARCH METHODOLOGIES 43
3.1. Research Design 43
3.2. Research Approach 45
3.3. Description of Study Variables 46
3.3.1. Mediating Variable 47
3.3.2. The dependent variable 48
3.3.3. Summary of Variable Relationships 48
3.4. Description of Study Area and Target Population 49
3.4.1. Study Area 49
3.4.2. Target Population 51
3.5. Sampling Technique and Sample Size Determination 52
3.5.1. Sampling Technique 52
3.5.2. Sample Size 53
3.6. Data collection source & types, instruments 54
3.6.1. Data Sources and Types 55
3.6.2. Data Collection Instruments 56

3.6.3. Data Collection Procedure 57
3.6.4. Data Analysis Model and Techniques 58
3.7. Reliability and Validity of the Measurement Instrument 61
3.8. Ethical Consideration 64
CHAPTER 4: DATA ANALYSIS, INTERPRETATION & DISCUSSION 65
4.1. Introduction 65
4.2. Response Rate and Data Screening 65
4.3. Socio-Demographic Characteristics of Respondents 66
4.4. Descriptive analysis of Study Variables 68
4.4.1. Project Management Practices (PMP) 68
4.4.2. Beneficiary Engagement (BE) Mediating Variable Analysis 71
4.4.3. Project Sustainability Outcomes (PSO) 74
4.5. Analysis of Central Tendency and Data Distribution 77
4.6. Correlation Analysis 79
4.7. Regression Analysis 81
4.7.1. Diagnosis Test 82
4.7.2. Linear Regressions Analysis on Mediation Effect Model Analysis 85
CHAPTER 5: SUMMARY, CONCLUSION & RECOMMENDATION 103
5.1. Introduction 103
5.2. Summary of Findings 103
5.3. Conclusion 105
5.4. Recommendations 107
5.5. Research Limitations and Areas of Further Research 109
5.5.1. Limitations of the Study 109
5.5.2. Areas for Further Research 109
REFERENCE 111

Appendix A: Regression Diagnostics 114

Appendix B: Normality Test 118

Appendix C: Reliability Test Results (Cronbach's Alpha) 123

Appendix D: Correlation Matrix 123

Appendix E: Mediation Analysis Using PROCESS Macro (Model 4) 124

Appendix F 1: Survey Questionnaire-Beneficiary 125

Appendix F 2: Survey Questionnaire-Staff/Stakeholder 131

LIST OF TABLES

Table 1: Key Definitions of Sustainable Development (1987–2023) 16
Table 2: Target Population and Sample Distribution 51
Table 3: Reliability Statistics 62
Table 4: presents the distribution and return of questionnaires by study area. 65
Table 5: Demographic Profile of Respondents (N=432) 67
Table 6: Descriptive Statistics of Sustainable Project Management Practice Indicators (N = 432) 69
Table 7: Composite Project Management Practices (PMP) Index 70
Table 8: Descriptive Statistics of Beneficiary Engagement Indicators (N = 432) 72
Table 9: Composite Beneficiary Engagement Score (N = 432) 72
Table 10: Descriptive Statistics of Project Sustainability Outcome Indicators (N = 432) 74
Table 11: Descriptive Statistics of Project Sustainability Outcomes 76
Table 12: Measures of Central Tendency and Normality (N=432) 77
Table 13: Interpretation of Pearson Correlation Coefficient (Bartz, 1999) 79
Table 14: Pearson Correlation Matrix (N=432) 79
Table 15: Individual Normality Statistics (N=432) 82
Table 16: Tests of Normality 83
Table 17: Multicollinearity Diagnostics 84
Table 18: Model Summary-PMP→SPO 86
Table 19: ANOVA Results for the Regression Model 1 PMP→SPO 86
Table 20: Coefficients of the Regression Model PMP→SPO 86
Table 21: Model Summary PMP→BE 89
Table 22: ANOVA Results for the Regression Model PMP→BE 89
Table 23: Coefficients of Regression Model PMP→BE 90
Table 24: Model Summary-PMP→BE→SPO 92
Table 25: ANOVA Results for the Regression Model PMP→BE→SPO 93
Table 26: Coefficients of Regression Model PMP→BE→SPO 93
Table 27: Summary of Baron & Kenny Mediation Steps 100
Table 28: Hayes PROCESS Macro Mediation Results (Model 4) 100
Table 29: Reliability Statistics of Study Variables 123
Table 30: Total, Direct, and Indirect Effects of PMP on PSO 124

Table 31: Indirect Effect (Mediation via Beneficiary Engagement) 124
Table 32: Survey Questionnaire for Beneficiaries 127
Table 33: Survey Questionnaire for Beneficiaries 133

LIST OF FIGURES

Figure 1: Histogram of Standardized Residuals for the Regression Model 1 (PMP→SPO 114
Figure 2: Normal Probability Plot (P–P) of Standardized Residuals Model 1 (PMP→SPO) 114
Figure 3: Scatterplot of Standardized Residuals against Standardized Predicted Values Model 1 (PMP→SPO) 115
Figure 4: Histogram of Standardized Residuals for the Regression Model 2 (PMP→BE) 115
Figure 5: Normal Probability Plot (P–P) of Standardized Residuals Model 2 (PMP→BE) 116
Figure 6: Scatterplot of Standardized Residuals against Standardized Predicted Values Model 2 (PMP→BE) 116
Figure 7: Histogram of Standardized Residuals for the Regression Model 3 (PMP→BE→SPO) 117
Figure 8: Normal Probability Plot (P–P) of Standardized Residuals Model 3 (PMP→BE→SPO) 117
Figure 9: Scatterplot of Standardized Residuals against Standardized Predicted Values Model 3 (PMP→BE→SPO) 118
Figure 10: Histogram of PMP for Normality Test 118
Figure 11: Normal Q-Q Plot of PMP 118
Figure 12: Detrended Normal Q-Q plot of PMP 119
Figure 13: Histogram of BE for Normality Test 120
Figure 14: Normal Q-Q Plot of BE 120
Figure 15: Detrended Normal Q-Q of BE 121
Figure 16: Histogram of SPO for Normality Test 121
Figure 17: Normal Q-Q Plot of SPO 122
Figure 18: Detrended Normal Q-Q Plot of SPO 122

LIST OF DIAGRAMS

Diagram 1: The Three Shifts of Sustainable Project Management 19
Diagram 2: Embedding Sustainability in the Project Cycle 21

Diagram 3: Author's Interpretation of the Hybrid Sustainability Framework (SPM–USAID Integration 26
Diagram 4: Conceptual Framework Illustrating the Relationship between Project Management Practices, Beneficiary Engagement, and Project Sustainability 41

ACRONYMS/ABBREVIATIONS

APA	American Psychological Association
APM	Association for Project Management
BE	Beneficiary Engagement
CDF	Comprehensive Development Framework
CEWRR	Conflict Early Warning and Rapid Response
COSA	Committee on Sustainability Assessment
DAC	Development Assistance Committee
DV	Dependent Variable
EU	European Union
FSP	Financial Sustainability Practices
GPM	Green Project Management
INTRAC	International Non-Governmental Training and Research Centre
IPM	Institute of Project Management
IV	Independent Variable
JICA	Japan International Cooperation Agency
KII	Key Informant Interview
MEAL	Monitoring, Evaluation, Accountability, and Learning
MFA	Ministry for Foreign Affairs
NGO	Non-Governmental Organization
ODI	Overseas Development Institute
OECD	Organization for Economic Co-operation and Development
PM	Project Manager
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
PM4DEV	Project Management for Development
PMSP	Project Management Sustainability Practices
PSO	Project Sustainable Outcome
PSAT	Program Sustainability Assessment Tool
RWVL	Renewed Women Voice Leadership

SDGs	Sustainable Development Goals
SE	Southern Ethiopia
SNNPRS	Southern Nations, Nationalities, and Peoples' Region State
PMP	Strategic Project Management Practices
SPSS	Statistical Package for the Social Sciences
TBL	Triple Bottom Line
UN	United Nations
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Program
UNEP	United Nations Environment Program.
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development
WCED	World Commission on Environment and Development
WHO	World Health Organization
WWF	Worldwide Fund for Nature

ABSTRACT

Although there are many development interventions in Ethiopia, there is little evidence that explains how the use of technical management practices results in a sustainable success by using the human aspect of participation. The current research seeks to find this by exploring the relationship between Project Management Practices (PMPs) and Project Sustainability Outcomes (PSOs) and how Beneficiary Engagement (BE) mediates this relationship in PACT and CARE Ethiopia projects. Based on systems theory and the Triple Bottom Line (TBL) framework, the research envisages the nature of sustainability as an interactive relationship between environmental, social, institutional, and economic parameters. A quantitative cross-sectional explanatory study design was employed. Data was obtained from 432 stakeholders in Oromia, Southern Ethiopia, and Addis Ababa by use of a well-validated 30-item questionnaire, which was analyzed by using SPSS v26 and Hayes' PROCESS macro (Model 4). These findings indicate that, while PMPs can have an indirect and positive impact on sustainability when functioning well, the positive impact is greatly amplified if the beneficiaries themselves are active decision makers at all levels of the project. However, a critical gap in the capacity building of low-literacy populations is the failure of technical approaches to adapt to real-world needs, demanding participatory and context-sensitive approaches. Finally, the report's major argument is that the outcome of the project is not simply technical but human: sustainable projects are possible through adaptive governance, shared capacity-building, and pervasive, humanistic institutionalizing.

Keywords: Sustainable Project Management, Beneficiary Engagement, Project Sustainability Outcomes, Mediation Analysis, Ethiopia, Systems Theory

CHAPTER 1: INTRODUCTION

This chapter is organized in a way to provide an overall introduction about the research and covers the background of the study, problem statement, research questions, research objective, significance of the study, scope of the study, potential limitations of the study, and organization of the study. hypothetical research questions, and the significance of the study.

1.1. Background of study

In development works, sustainability is increasingly becoming a central concept, particularly within sustainability objectives underdeveloped conditions in which project outcomes don't just stop once the project has been implemented. A shift towards long-term sustainability commitment decision-making is spreading even beyond output related short-term decision-making in these projects, and thus it is becoming the center of attention for project management decision making (Orieno et al., 2024). It reflects a heightened understanding that interventions in development should be sustainability-oriented throughout their full lifetimes and should account for long-term consequences.

Thus, organizations are increasingly evolving to be more integrated in their strategy, taking more and more responsibility concerning the environment in the project while providing social equity and economic viability so that an integrated model can be formed for genuinely sustainable development. Integration of environmental, social, and economic aspects in the planning-execution-evaluation of a project is regarded as sustainability within project management (IPM, 2021). In so doing, it aims to highlight not only the importance of achieving the project's immediate objectives, but also the benefits that are still to be observed and will benefit well-being after the project has been completed.

In 1987, in its Our Common Future, the World Commission on Environment and Development (WCED) re-stated the concept of sustainable development as well as emphasized the relevance of context-specific approaches to sustainability (WCED, 1987). With its ability to translate both policies and sustainability principles by creating actionable

initiatives that are responsive to local context, NGOs facilitate operationalization of sustainability within this framework.

NGOs provide sustainable development services, organize communities, build capacity. In addition to meeting existing development needs, such interventions increase communities' ability to sustain the implementation of the project outcomes over time (Aritia et al., 2018; Orieno et al., 2024). In Ethiopia, NGOs work in the provision of critical services in the community (healthcare, education, and livelihood support), but also to build community resilience to environmental and socioeconomic difficulties (Lemma, 2020).

Even with these contributions, NGOs operate in complex and sometimes constraining contexts. Institutional resources and abilities, regulatory systems, and local contexts impact the success and sustainability of development projects (Hassan, Lee & Mokhtar, 2018; Lemma, 2020). Moreover, one of key measures of effectiveness in the long-term is the alignment of sustainability into the project delivery process. Instead, sustainability is often integrated into NGO project management only fragmentarily and on a very small scale. Donor needs rather than internally driven goals are often at play as drivers of sustainability (Aarseth et al., 2017; Silvius & Schipper, 2014). So, since traditional project performance metrics, which include just scope, time, and cost, fail to take into account the contextual factors of sustainability, they are not only becoming outdated but are becoming less and less effective (Elkington, 1997; Martens & Carvalho, 2016).

The problems above highlight the need to integrate sustainability techniques into project management processes more systematically and into implementation practices specifically designed for a context. It is suggested by WCED (1987) that sustainable development is concerned with reconciling the economic, social and environmental considerations - in other words, the triple bottom line (Elkington, 1997). NGOs continue to play a critical role in putting sustainability into practice through capacity building, community mobilization and service delivery. Organizations not only address current and urgent needs, but they assist communities in sustaining development outcomes over the long run (Aritia et al., 2018; Orieno et al., 2024). NGOs play important role on the provision of the basic service such as

health, education and livelihoods to the population in Ethiopia by increasing the community resiliency to numerous environmental and social-economic conditions (Lemma, 2020). They advocate sustainable development in that the communities develop the ability to ensure project sustainability in the long term through beneficiary participation, service delivery and capacity building.

For this purpose, the goal of the current research is to examine the dynamic interaction between Project Management Practices (PMP), Beneficiary Engagement (BE) and Project Sustainable Outcome (PSO) within NGO development projects in Ethiopia.
There is much academic discussion around the 'missing link' for project sustainability. On one hand, supporters of Sustainable Project Management (SPM) have argued that the integration of sustainable principles throughout the project life cycle is the key determinant to sustained success (Silvius & Schipper, 2014) whilst the opposing viewpoint states that in development settings technical management is not enough to be beneficial. There is thus a scholarly conflict between top-down, management-led and bottom-up stakeholder-driven processes, with academics like Martens and Carvalho (2017) arguing that management is simply the enabling structure for the realizing of sustainability by the active agency and ownership of local actors.

The paper contributes to the debate by developing an integrated framework where PMP, as an independent driver, directly affects PSO, but its effect is significantly mediated by BE. Combining a sustainability approach of management with USAID Local Systems framework, the paper examines the case where the management actions create sufficient conditions for sustainability while beneficiaries' engagement build up sufficient social capital to sustain the results even after the closure of intervention. The paper contributes to shifting away the separate analysis of PMP and BE by placing them into an integrative framework in which management and beneficiaries' engagement synergize and connect what are often called a 'sustainability gap' after the completion of NGOs interventions.

Using a comparative case-study design, this research examines several projects of PACT Ethiopia and CARE Ethiopia at differing stages of the project cycle. In this context, this

research aims to investigate sustainability practices and participant engagement and their practice from project planning through implementation to post-project completion to determine whether these contribute to sustainable development in the long run.

1.2. Statement of the problem

Sustainable development has also become a key concern in project management with reference to acknowledgement of social, economic, and environmental long-term effects of the development interventions. Modern project management practices integrate sustainable aspects throughout each phase of the project life cycle, i.e., planning, implementation, monitoring and evaluation, and completion (IPM, 2025). It implies the greater understanding of importance of triple- bottom- line approach to sustainable development with reference to the current and future generations (Molaei et al., 2020).

Notwithstanding the increased awareness of sustainable development, sustaining sustainable development post completion of the project is a significant challenge in the development practice. Generally, positive outcomes attributed to projects appear to erode at a fast pace as soon as funds associated with the project run out, yet donors and other development partners expect sustainability to be achieved (Atnafu, 2024). This expectation prompts integration of sustainability aspects in project proposals; however, empirical evidence of consistent actualization of planned sustainability is scarce (Aarseth et al., 2017; Silvius & Schipper, 2014).

However, one significant drawback of contemporary practices, sustainability is understood as an indispensable element in project proposal planning rather than a systematized investigation throughout the project life cycle. Consequently, the vast majority of project appraisals focus on project outcomes during the limited timeframe of a project; sustainability concerns beyond the project close-down are ignored and there is a gap between expected and experienced sustainability of a project (Atnafu, 2024).

Moreover, most research conducted in project management literature investigates separate parts of sustainability, namely; environmental, economic, and governance sustainability, without considering how they contribute to realizing sustainable development. In addition, there is inadequate research regarding influence of behavior factors such as voluntary participation on social participation. In Ethiopian context, most evaluation approaches used for assessing sustainability is OECD/DAC evaluation criteria which assesses the appropriateness, effectiveness, impact and sustainability of the development project. However, these criteria do not consider complex interrelationships of project management, institution and resource capacity and stakeholder interaction (Atnafu, 2024).

Consequently, sustainability is often treated as an outcome rather than as a process, whose sustainability is determined by interrelated systems. A number of development projects are still framed and implemented around immediate outputs and reporting requirements to donor agencies as opposed to sustained long-term sustainable outcomes (Tilahun, 2021). Whereas instruments such as USAID's sustainability framework are developed to help in planning for sustainability, constraints still exist when in the case of application of these instruments and empirical validation in practice.

Another serious constraint involves timing of evaluating sustainability. Mostly, evaluators take time to do an evaluation of the sustainability of a project soon after completion. Actually, the timing might not be representative of long-term sustainable outcomes, and indeed research has shown that it takes relatively long to have a substantive sustainability analysis. Thus, organizations such as Japan International Cooperation Agency (JICA) conduct a follow up evaluation several years, sometimes up to seven years after completion of a project (JICA, 2010).

Many of the NGOs in Ethiopia have found it difficult to conduct the long-term evaluation of sustainability because of limitations set on their ability to do so. Thus, they often depend on short-term assessments performed post-completion of projects (World Bank IEG, 2015). In so doing, their perceptions on sustainability, which is more or less a dynamic process over time, become restricted.

Because of these reasons, the scope for this study, 'sustainability,' is thus defined as a product of a combination of intertwined project management practices in which beneficiaries have a mediated role in a facilitative sense rather than as independent components. These propositions have been supported by empirical evidence by Aga et al. (2018) showing project sustainability as an indirect outcome mediated by psychological ownership and beneficiary involvement. Carvalho and Rabechini (2017) empirically show that the inclusion of sustainability management practices and stakeholder orientation are significant determining factors for the success and legacy of a project.

To explain such patterns, a comparative case-study approach has been adopted in this study: comparing three projects managed by PACT Ethiopia and CARE Ethiopia across three project phases: beginning, implementation, and post-completion. The analysis over time is derived from the Life Cycle Assessment (LCA) method as stated to be crucial by several researchers in understanding how sustainability performance change and variability evolve over time (Liu et al., 2024; Lueddeckens et al., 2020). The comparison of projects at different phases, i.e., (1) completed in the recent past (1-3 years); (2) in progress; and (3) recently begun, helps to place the study in the context of the comparative case study tradition of research in the field of sustainability (e.g., Savaya et al., 2008), which allows a clear comparison over time of how project management practices and community involvement are related to the outcome, or non-outcome, of sustainability.

1.3. Research Questions

The overall goal of this research is to explore the degree to which PMP and BE have an effect on the sustainable long-term project sustainability outcomes (PSO) of NGO-driven development projects in Ethiopia. This hybrid framework uses both the USAID local systems framework as well as the principles of sustainability in project management and viewing sustainability as an emergent quality of both the technical structure and relation-based community participation. While primary data was gathered from both the projects implemented by both PACT Ethiopia and CARE Ethiopia, this research aims to contribute to a larger understanding of the common 'sustainability gap' that occurs in projects once they

are complete, where the engagement aspect of the project can be seen as mediating between technical management outputs to the creation of socially sustainable outcomes.

Four research questions below have been developed to lead the study in meeting the research objectives and tackling the research problem:

1 To what extent do Project Management Practices (PMP) that involve planning, implementing and monitoring have a direct effect on project sustainability outcomes (PSO) of development project in Ethiopia?

2 To what extent do Project Management Practices (PMP) influence the level and quality of Beneficiary Engagement (BE) within the project lifecycle?

3 To what degree does beneficiaries' engagement (BE) through participation in decision-making and capacity building affect the achievement of the Project Sustainability Outcomes (PSO)?

4 To what extent does beneficiary engagement (BE) mediate the relationship between Project Management Practices (PMP) and the subsequent long-term Project Sustainability Outcomes (PSO)?

1.4. General Objective

The overall objective of this study is to examine the extent to which the Project Management Practice (PMP) and the Beneficiary Engagement (BE) affect the Project Sustainability Outcomes (PSO) of selected development projects implemented by PACT Ethiopia and CARE Ethiopia. The study focuses on Beneficiary engagement as an essential mechanism through which the project management practices can contribute to sustainability. In this case the study will examine the extent to which Beneficiary Engagement can serve as mediation for a project to sustain in a hybridized framework.

1.4.1. Specific Objectives

Based on the overall objective of the study, the specific objectives of the study are four:

- To analyze the direct effect of Project Management Practices (PMP) namely planning, execution and monitoring on the long-term Project Sustainability Outcomes (PSO).
- To analyze the effect of Project Management Practice (PMP) on the level of beneficiary's engagement (BE).
- To examine the extent to which the Beneficiary Engagement (BE) that entails participation in decision making, M&E and Capacity building, affect the Project Sustainability Outcomes (PSO).
- To examine the extent to which Beneficiary Engagement (BE) mediated the effect of Project Management Practice (PMP) on Project Sustainability Outcomes (PSO).

1.5. Purpose of the Study

This research aimed at examining the combined effect of PMP and BE on the sustained PSO of NGO-led development projects in Ethiopia. This involved examining how management practices should be formulated in order to promote local ownership through the mechanism of BE as the mediating variable to address the sustainability gap which happens when an organization exists.

This research used a hybrid conceptual model combining the USAID Local Systems Framework with the principles of sustainability-focused project management, and aimed at:

- Evaluating the extent to which the principles of sustainability were integrated throughout the project cycle in PACT Ethiopia and CARE Ethiopia projects.
- Determining the mediating role of BE between technical management practices and sustainable outcomes within the community, and
- generating empirical data that would help practitioners and policymakers of NGO's in determining how the balance between bottom-up participation and top-down management can be ensured to ensure post project success.

1.6. Significance of the study

This study aims to produce empirical evidence of the drivers of development project sustainability by implementing a blended approach of the USAID Local Systems framework

and Project Management Practices. This blended approach will be used to demonstrate the application of the project management component at key junctures of the project life cycle in the strengthening of sustainable project outcomes and stakeholder engagement processes.

In a practical sense, the study is expected to shed light on and advise NGOs implementing development projects on effective ways of increasing sustainability in projects by emphasizing the significance of beneficiary engagement at all project stages: the design, implementation, and completion phases, emphasizing the need for the strengthening of beneficiary system capacity and MEAL mechanisms to ensure project sustainability after the donor fund expires.

From a theoretical standpoint, this study adds to the literature on project management and development by proposing a holistic sustainability model showing the correlation between Project Management Practices, beneficiary engagement, and project sustainability outcomes; furthermore, the study expands theoretical understanding of the generation of sustainability outcomes in development projects and identifies further questions for research into system-based and participatory sustainability approaches.

1.7. Scope of the study

This research was based upon the development projects undertaken by PACT Ethiopia and CARE Ethiopia; each of these projects was located at various points within the project life cycle. The inclusion of completed, active, and upcoming projects will provide a fuller analysis of sustainability practice, beneficiary involvement, and actual versus potential project outcomes.

The completed project utilized as data for this research is Enhancing the National Conflict Early Warning and Rapid Response Upgrade and Reform Architecture of the Ethiopian Ministry of Peace, which was conducted by PACT Ethiopia from 2019 to 2021. The project had dual national and subnational elements, providing coverage over both Addis Ababa and the peace and security components of the Oromia Region, Addis Ababa, and the East Shoa Zone. Since this project concluded one to three years prior to the time frame of the research,

the findings also indicate to what extent sustainability practices translate into longer-term outcome(s) subsequent to project conclusion.

In addition, the data to be used for this research is the data from the SELAM, EKisil II (SEEK II) Program, Advancing Peace and Stability in the Horn of Africa Initiative, being implemented by PACT Ethiopia with funding from 2021 to 2025. The SEEK II Program targets pastoral communities throughout the South Ethiopia Regional State (previously known as the Southern Nations, Nationalities, and Peoples' region). More particularly, target geographical areas are the regions of Hamer, Nyangatom, and Dasenech. Adding an ongoing project allows assessing how the considerations of sustainability, institutional setup, and beneficiaries' participation have been integrated during the project implementation phase.

This research also uses data collected from the Renewed Women's Voice and Leadership (RWVL) project, which is about to be initiated by CARE Ethiopia. The RWVL project will utilize interventions established in Addis Ababa and focused upon enhancing women's-led organizations and networking. While the project has not commenced or concluded as yet, including it in this research will allow for an evaluation of institutional preparedness, intended sustainability strategies, and proposed beneficiary participatory mechanisms prior to its initiation.

These case studies together highlight a number of phases of a project life cycle, enabling a close study of the complexities associated with sustainability practices and beneficiary participation at each pre-implementation, implementation, and post-implementation stage.

1.8. Limitations of the study

The research was carried out in three geographically diverse locations, and this might have resulted in logistical and coordination difficulties when gathering data. The dispersed geographical distribution of research locations may have resulted in challenges in accessing participants, collecting data on schedule, and completing the overall fieldwork efficiently. It may have also taken more time and resources to gather the necessary data on schedule. Moreover, though an effort was made to use the same data collection methods at all sites,

there may have been contextual variations in the circumstances of the respondents that influenced their responses and, as such, may have led to context-related variation in the data. Local enumerators were used in each study location, and they gathered data on an individual basis to cater to the cultural context. Kobo Toolbox was also used as the data collection mechanism, as it can also be used to collect data offline for regions that do not have or cannot maintain connectivity.

1.9. Organization of the study

The organization of this dissertation was structured in a series of interconnected chapters; collectively providing an orderly and consistent progression of discussion from conceptual development through to empirical investigation and recommendation.

Chapter One introduces the background of the dissertation; provides a clear articulation of the problem being investigated; sets out the specific research questions; outlines the research objectives; defines the importance of conducting this study; delineates the boundaries of the dissertation; identifies some potential limitations of the dissertation; and explains what is meant by each of the key terms used within this dissertation.

Chapter Two is a comprehensive literature review that considers both conceptual/theoretical and empirical underpinnings for project sustainability and beneficiary engagement.

Chapter Three discusses the methodology adopted for this dissertation, and will include descriptions of the research design and methodology employed for this dissertation, descriptions of study variables, a detailed explanation of the study area and target population, explanations of how samples were selected (sampling techniques) and how sample sizes were determined, details regarding where data are located (data sources), information on tools used to collect data (collection instruments), explanations of how data were collected (data collection methods/procedures), explanations of how data will be analyzed (analysis techniques/models), assessments of reliability/validity, and ethical issues associated with collecting, analyzing and reporting the results of this dissertation.

Chapter Four contains an overview of data analysis, including data presentation, interpretation, and discussion of results.

Chapter Five provides an overview of findings presented throughout Chapter Four; discusses those findings; presents conclusions based upon findings discussed within Chapter Four; and offers recommendations.

1.10. Definition of key terms

Beneficiary engagement refers to the proactive involvement and participation of the individuals or groups who stand to benefit from a project's outcomes throughout its lifecycle. This approach moves beyond simply informing stakeholders to actively involve them in decision-making, implementation, monitoring, and evaluation processes (World Bank. 2018).

Capacity building refers to the process of identifying and developing the necessary skills, resources, and systems for an organization to achieve its project objectives and sustain its mission. It involves assessing gaps and building human capital (training), improving organizational structure and processes, and developing institutional and legal frameworks to enhance long-term success (UNDP, 2009).

Dependent Variable: the variable being measured or tested in a study, which is expected to change in response to a manipulated independent variable (American Psychological Association. n.d.).

Development Project: is a structured, time-bound initiative designed to deliver outputs that contribute to long-term, outcome-level improvements in socio-economic conditions, environmental sustainability, or the creation of physical assets (UNDP n.d.).

Independent Variable: A variable that is changed or controlled in a scientific experiment to test the effects on a dependent variable. It is the presumed "cause," while the dependent variable is the presumed "effect" (American Psychological Association, 2007).

Local Ownership: This refers to an approach where the local stakeholders take the lead and responsibility for the design, implementation, and monitoring of a project or activity. generally understood as the control over a project or program and the commitment to its success. It emphasizes the active involvement of members of a defined community or local actors in key project decisions and management, leading them to perceive an externally

funded project as their own. The core idea is that projects managed and sustained by local people or institutions are more likely to achieve long-term, sustainable impact than those implemented from the outside (USAID, 2017).

Non-Governmental Organization (NGO): A non-profit, voluntary citizens' group organized at local, national, or international, to address public concerns (UN, 2003).

Post-Completion Sustainability: refers to the ability of a project's benefits and outcomes to continue and endure after the project has been formally completed and the initial capital investment has concluded. It moves the focus beyond the immediate project delivery (on time, budget, and scope) to the long-term, ongoing positive impacts on the environment, society, and economy (Silvius and Schipper, 2014).

Project: a temporary endeavor undertaken to create a unique product, service, or result. This widely accepted definition comes from the Project Management Institute (PMI, 2021).

Project development is the systematic and strategic process of identifying, designing, planning, and preparing a project to transform an initial concept into a tangible outcome. This phase precedes the core execution and monitoring activities, effectively setting the stage for the entire project life cycle (PMI, 2-21).

Project Lifecycle: Sequential phases a project undergoes from initiation to closure, including proposal formulation, planning, implementation, monitoring, and post-completion follow-up (PMI, 2021).

Project Management: Application of knowledge, skills, tools, and techniques to project activities to meet project requirements, including planning, execution, monitoring, and closure (PMI, 2021).

Project Management Practices: Project management practices are the application and integration of the project management processes, which typically fall into five process groups: initiating, planning, executing, monitoring and controlling, and closing (PMI, 2021).

Project Sustainability: refers to an approach that integrates environmental, social, and economic considerations throughout a project's entire lifecycle to ensure the project meets present needs without compromising the ability of future generations to meet their own needs (WCED, 1987).

Stakeholders: Individuals, groups, or organizations with an interest in or affected by a project's activities and outcomes, including staff, beneficiaries, authorities, and partners (PMI, 2021).

Stakeholder Management: Process of identifying, analyzing, planning, and implementing actions to engage stakeholders effectively to support sustainable outcomes (PMI, 2021).

USAID Sustainability Framework: Model developed by USAID assessing long-term viability of programs across organizational, financial, institutional, social, and environmental dimensions (USAID, 2017).

CHAPTER 2: REVIEW OF RELATED LITERATURE

This chapter reviews relevant literature with regard to sustainability in development projects conceptually, theoretically, and empirically in order to establish a robust analytical framework to explore the relationship between PMP, BE, and PSO. The chapter is divided into three sections.

The first section is the conceptual review. It reviews the nature and evolution of the practice of project management within the NGO sector; the concept of sustainable development and its integration into the project cycle; and hybrid sustainability conceptualizations and project sustainability dimensions, driving forces, and mediators to explain project outcomes.

The second section discusses the theoretical review where the primary theories guiding the study are discussed. It discusses systems theory, stakeholder theory, and the USAID local systems framework. It further explores how these theories collectively describe sustainability as a system-oriented and participatory process.

The third section contains the empirical review where evidence, beginning from global literature through to research from Ethiopia and comparable developing countries, is analyzed. It concludes with a summary of key research findings and research gaps, leading to the establishment of the conceptual framework underpinning this study.

2.1. Conceptual Ground of the Study

2.1.1. Sustainable Development Definitions and Evolution

Within the fields of project management and development studies, the definition proposed by the Brundtland Report, Our Common Future (WCED, 1987), appears to be widely cited. This pioneer definition states: sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It was defined as a basis on

which to plan future strategies, as well as being the concept at the center of studies in development studies, environmental policy and project management research.

However, the definition of sustainable development is not solely unique. Over the years the concept of sustainable development has transformed, many authors and organizations have articulated it in terms of economic, social, environmental, political, and systemic dimensions. As a result of these varied perspectives the definition has changed from a normative stance to a more integrated, context-specific conceptualization applicable to a range of disciplines.

Originally, the key factor within development studies researchers was to balance the relationship between economic growth and the environment when defining sustainable development. Over time, subsequent definitions also have integrated social and institutional sustainability and systems thinking. It can be considered as an integrated management approach (more recent definition within the scope of project management), that focuses on whole resource cycles, has stakeholder involvement, and long-term system impact anticipation.

This progression has been summarized in Table 1 that illustrates selected definitions of sustainable development proposed by major international organizations and researchers over the period from 1987 to 2023.

Table 1: Key Definitions of Sustainable Development (1987–2023)

Author/sources	Definitions
WCED, 1987	*Defined sustainable development as an approach that aims to meet the present need without compromising the ability of future generations to meet their own needs. Brundtland Report ("Our Common Future")*
Pearce et al., 1989	*Defined sustainable development as Creating a social and economic system to advance quality of life overtime"*
IUCN, UNDP & WWF, 1991	*Defined Sustainable Development as improving the quality of life while living within the carrying capacity of ecosystems.*
USAID, 1994	*Frame Sustainable Development concept as an organizing principle and a process.*
UNDP, 1997	*UNDP describe Sustainable development as expanding the richness of human life, not just the economy.*

Cerin, Pieter. (2006	*Defined Sustainable Development as integrating environmental, social, and economic concerns into decision making,*
Canepa. N, 2007	*Described Sustainable Development as a process of change, in which it reconciles the exploitation of resources, technological investment management, and institutional changes within the present and the future.*
PMI, 2014	*Described Sustainable Development as a new project management paradigm where practitioners will find insights on how to initiate and manage projects following sustainable development principles.*
Marcelino, Sadaba et al., 2019	*Defined Sustainable project management is the managerial practice aiming at pursuing project objectives by maximizing economic, social, and environmental benefits through the proactive involvement of stakeholders, the consideration of the extended life cycle of resources, processes, and effects, and continuous organizational learning.*
APM 2019	*Defined Sustainable project management as an approach to business that balances the environmental, social, economic aspects of project to meet the current needs of stakeholders without compromising or overburdening future generations.*
GPM, (n.d.)	*Defined Sustainable project management as the application of methods, tools, and techniques to achieve a stated objective while considering the project outcome's entire lifecycle to ensure a net positive environmental, social, and economic impact*
WHO, 2023	*Defined Sustainable Development as broader term that describe policies, projects, and investments that provide current benefits without harming future environmental, social, or personal health.*

The recent advances, primarily by project management institutes, also build on this scope by evolving the concept beyond the policy context into an operational domain. A good example is the definition of sustainable project management as 'a practice to include economic, social, and environmental aspects of a project throughout its lifecycle, ensuring stakeholders' engagement and long-term value creation' (APM, 2019; GPM, n.d.). This shows the

evolution from sustainability as a desired goal toward sustainability as an engineered aspect of the project system.

On the whole, sustainable development is clearly evolving from an encompassing normative guideline into a formalized, functional, and system-based domain. This trajectory lays the conceptual framework for the present study, with reference to the adoption of sustainable development principles into project management and stakeholder mechanisms.

2.1.2. The Shift from Traditional to Sustainable Project Management

According to traditional project management practice, success was evaluated with respect to what has been termed the "iron triangle of time, cost, and scope"; being effective was thus primarily linked with producing the specified outcomes and efficiency (while social and environmental externalities were overlooked) (Aarseth et al. 2017; Martens & Carvalho 2016). However, as development practices evolve, project stakeholders are demanding projects that have lasting, broad, and sustainable impact. Project management has consequently shifted its emphasis from short-term efficiency to long-term development impact.

The increased attention on impact beyond project boundaries has led to the emergence of sustainable project management (SPM) as a conceptual and pragmatic progress of the field. SPM focuses on generating value on the three dimensions of sustainability economy, social, and environment, widely known as the Triple Bottom Line (Elkington, 1997; Silvius & Schipper, 2014), and viewing the successful delivery of projects is then related not only to their time and budget performances but also to the capability of the project to produce long-term benefits for both stakeholders and society (Gareis et al., 2013).

The change has dramatically impacted on the definition of the role of project managers. Past researchers have envisioned project managers to be the driver for sustainability agendas within companies (Tharp & Chadhury, 2008). This reality has thus resulted in broadening project managers' roles from planning and controlling time, cost, and scope to integrating sustainability into the various project management phases. The Triple Bottom Line (TBL), which has been widely used, is also commonly represented as "3Ps": people, planet, and

profit. It is a conceptual tool used to aid project managers to systematically measure and balance the social, environmental, and financial consequences of project choices (Waring et al., 2014). As the organization integrates sustainability into its strategies, project managers have been challenged to set the sustainable objectives of the project, implement and enforce the sustainability policies, and report against international standards (PMO365, 2021).

In this sense, SPM is not just an additional aspect to traditional PM but a transformation of the way we conduct project management. Sustainable project management is, according to Silvius and Schipper (2021), "the application of sustainability principles to project planning, monitoring, and control in considering all environmental, economic, and social effects on all stages of the project's lifecycle, with a high commitment to transparency, accountability, and the proactive involvement of all project stakeholders." From this definition it becomes clear that sustainability is not just one aspect of the project.

The mindset and the project scope shift far beyond the technical. The project managers should extend the scope of their responsibility from mere efficiency toward responsible, sustainable development. The responsibility at the mindset level contains the increased stakeholder involvement, the responsibility for actions, and the short-term and long-term consequences of decisions. At the scope level, a project is beyond output: "Projects are concerned not just with immediate outputs but also with broader societal and intergenerational consequences of actions" (Silvius et al., 2021).

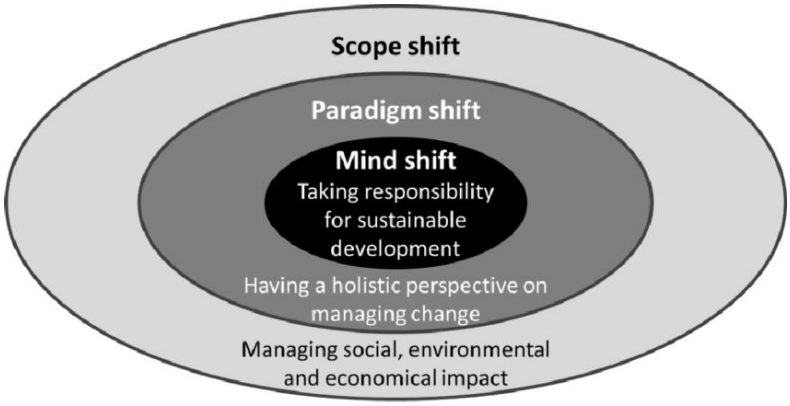


Diagram 1: The Three Shifts of Sustainable Project Management

Source: Adapted from Silvius et al. (2021).

In addition to a paradigm shift in technical process, both the managerial mindset and project scope are changed. The managerial mindset demands that project managers transcend the focus of pure efficiency toward taking responsibility for sustainable development results by collaborating more extensively with stakeholders, bearing ethical accountability, and understanding the short-term and long-term effects of project decisions; meanwhile, the scope is expanded beyond only the direct outcomes toward including broader social and intergenerational effects (Silvius et al., 2021).

Importantly, stakeholders, including the beneficiaries, are no longer perceived as external objects that the project managers have to control but are given a more participative role as co-creators of sustainable development results, which underlines that not only structural embedding by systems and processes but also social embedding through stakeholder interaction leads to sustainability in projects.

This change is also apparent in current standards and frameworks of project management. Standards such as IPMA ICB4, ISO 21505, the PMBOK Guide (PMI, 2021), and PRINCE2 embed sustainability criteria into governing principles, competence structures, and expected behaviors (IPMA, 2015; ISO, 2017; PMI, 2021; People Cert, 2023). Altogether these frameworks evidence the change from an output-oriented view to that of social, environmental, and ethical accountability in the long run.
This paradigm shift has also been reflected in project appraisal and justification. The current trend appears to push away from solely focusing on financial or efficiency-based appraisal in favor of a multi-criteria decision making (MCDM) approach incorporating political, social, environmental and economic dimensions (Silvius, 2015b; Zwikael & Huemann, 2023). This is indicative of a larger consideration on what "true" project success is.

In summary, the transition from classic to sustainable project management reflects the paradigm shift from a limited, output-oriented project to an all-encompassing, impact-oriented one by moving sustainability from the 'add-on' concept to that of the fundamental

criterion guiding the entire life cycle of the project (from the initial phase to the evaluation phase).

2.1.3. Embedding Sustainability in the Project Cycle

Sustainability in project management has been generally seen as the integration of the three environmental, social and economic dimensions throughout the project cycle. This perspective of sustainability derives from the Brundtland Report definition which emphasizes "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987). Therefore, in project management practices this conception will mean making decisions which will be guided not only by the traditional measures of performance, i.e. Scope, time, cost, but also on long term environmental responsibility, social fairness, and economic sustainability (PMI, 2021; IMP, 2025).

The project cycle represents a coherent framework which is the most appropriate way to introduce sustainability practices. The phases of the project cycle are commonly identified as project identification, project design, implementation, monitoring, evaluation and closure, and they outline the standard framework for the management of resources, decision-making and project activities in a logical and purposeful manner (European Commission, 2004; Project Management Institute, 2021) with sustainability as the primary and not a complementary issue.

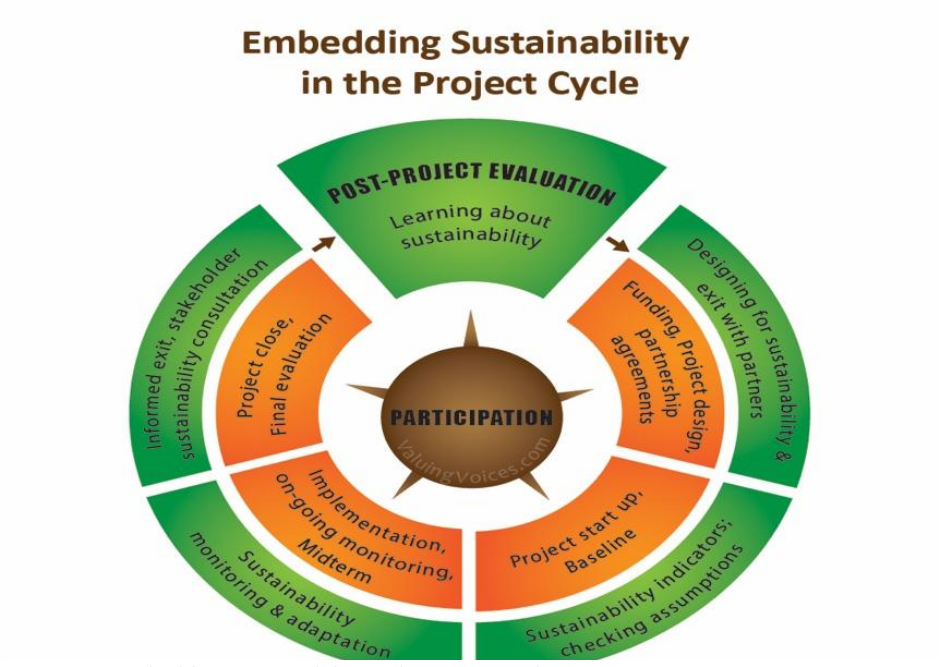


Diagram 2: Embedding Sustainability in the Project Cycle

***Source**: Adapted from J Cekan, 2015 "Fostering Values-Driven Sustainability Through an Ex-Post Evaluation Capacities Lens," Journal of MultiDisciplinary Evaluation, Valuing Voices at Cekan Consulting LLC*

In practical application, the project cycle integrates sustainability by assigning each project stage with defined sustainability actions, such as defining sustainability indicators during the design stage; adapting implementation methods according to contextual variations during the implementation phase; including stakeholders in both project implementation and the exiting phase; and finally, making an ex-post evaluation of long-term results. As such, stakeholders' involvement is placed at the core position of the concept to further strengthen the impact made by beneficiaries, communities, and institutions on project results.

The participative dimension of sustainability is heavily stressed in the literature; involvement of beneficiary groups is considered a major factor to sustainability outcomes. Cekan (2015) states that a significant degree of beneficiaries' participation during the whole project cycle increases the possibility of sustainable development impacts. Following the same thread, Finsterbusch and Van Wicklin (1989) note that both the effectiveness and longevity of a development project are influenced by beneficiary participation in the project identification, design, and implementation stages. This helps develop local ownership, better community relevance, and increased local capacity building.

Therefore, sustainability integrated into the project cycle indicates that it is not an outcome, but rather a part of a project lifecycle. Integrating into project cycle enables practical

application of sustainability principles by including sustainable management processes within the project management activities, thereby making sure that project would lead to outcomes, which are sustained in the long run in the three dimensions- economic, social and environmental, as well as develop institutions and communities (Aarseth et al. 2017, World Economic Forum 2023).

2.1.4. Sustainability Framework: A Hybrid Conceptual Framework for Sustainable Development in Project Management

2.1.4.1. SPM Framework

Sustainable Project Management (SPM) is the term that emerged in the literature to describe how principles of sustainable development are incorporated in traditional project management practices. Unlike the conventional 'iron triangle' consisting of scope, time, and cost, SPM enlarges the concept of project success to encompass the three dimensions of environment, society, and economy as described by the Triple Bottom Line (TBL) perspective (Elkington, 1997; Gareis et al., 2013). Consequently, project success is then understood not in terms of time, cost, and efficiency, but in terms of their potential long-term contribution toward society, the environment, and the economy (Project Management Institute, 2017; Gareis et al., 2013).

SPM states that sustainability is not to be regarded as an exogenous or additional factor but should be addressed in all stages of the project lifecycle (from the starting phase through implementation and monitoring to the final closure of the project) (Association for Project Management, 2019). Accordingly, project managers must explicitly take into account the social, economic, and environmental sustainability implications while making decisions, planning, assessing risks, managing stakeholders, and measuring project performance.

Also related to SPM is the principle that projects should be evaluated using various performance dimensions and that it is not just about economic profit, but also about environmental stewardship, social fairness, and institutional sustainability. As evidenced in the newest standards on project management, sustainability is already part of project

governance frameworks, project management competencies, and evaluation criteria (Project Management Institute, 2021; Association for Project Management, 2019).

2.1.4.2. USAID Sustainability Framework

Contrary to the project-centric view of SPM, the USAID concept of sustainability reflects a systems perspective, whereby sustainability is seen as an emergent feature of healthy and interlinked local systems (USAID, 2014; USAID, 2016). The USAID Local Systems Framework states that sustainable development results are achieved not at the project level, but through the interaction between local actors, institutions and resource flows. These local actors include state institutions and non-state organizations (civil society organizations and private actors) as well as local communities; their interaction ensures the sustainability of the results.

Key to the framework is the concept of locally led development where both decision-making power and ownership move from external partners to local actors, supported by capacity development activities to enhance local technical, managerial and institutional capacity, thereby ensuring sustainability of projects after external funding terminates (USAID, 2016). A key characteristic also advocated by the framework is the concept of adaptive management, which encourages continuous learning and flexibility as environments evolve (ALNAP, n.d.). Therefore, sustainability is seen as an ongoing process that evolves with interactions within a system and with the availability of resources and institutional capacity to support them. Three critical factors for sustainability are identified by USAID: 1. Strong local capacity; 2. Sustained resource flow; and 3. Local ownership (FANTA, 2016).

2.1.4.3. Sustainability Framework: A Hybrid Approach

Although a focus on sustainability is increasingly recognized and integrated into both the management practice of projects and the practice of development, a critical gap has yet to be addressed in the literature. There appears to be an existing division between the perspectives presented on sustainability within project management processes, such as that discussed

under the topic of SPM and a system-based view on dynamics in development, as seen in the USAID Local Systems Framework. These perspectives do not sufficiently build upon each other (Silvius, 2015; Eskerod & Huemann, 2013).

The management practice of projects and especially Sustainable Project Management is mainly concentrated on embedding sustainability within the process of projects design, planning and execution (lifecycles thinking, stakeholders involved) (Elkington, 1997; Gareis et al., 2013; PMI, 2021), but focuses relatively less on the impacts of external institutional environments and systemic relationships to the final sustainability results.

The USAID Local Systems Framework on the other hand offers a comprehensive insight into required conditions to support sustainability, such as; institutional capacity, relationships among different stakeholders and the flow of resources among them; however, fails to provide sufficient information as to how project level management can ensure that projects implement activities on the ground so that these systems can operate sustainable day-to-day.

Therefore, it could be argued that each framework separately does not encompass the entirety of the development project sustainability dynamics and hence produces a gap in concept and practice particularly in relation to NGO managed interventions, where both projects and systems should be able to support each other.

To overcome this shortcoming, this study uses a hybrid sustainability framework combining the process-oriented view of Sustainable Project Management and the systems-oriented view of the USAID Local Systems Framework, which provides the foundation to have a holistic understanding of the process by which sustainability outcomes are produced through internal project mechanisms and their interaction with external systems. Specifically, the Project Management Practices (PMP) act as the structural/operational perspective to how sustainability is produced whereas the USAID Local Systems provides the institutional/contextual system in which this process happens.

Crucially, BE is framed as the key relational process bridging these two domains and translating practices at the project level to outcomes at the system level by fostering participation, ownership, accountability, and learning.

As seen in Diagram 3, within the frame work sustainability outcomes are conceptualized as a result of interplay between: Structural aspects (project management practices), System-level condition (local systems & institutions), and relational processes (beneficiary engagement). The holistic perspective enables us to view sustainability as system-level outcomes produced through the co-evolution of technical, institutional and participatory processes over project lifespan.

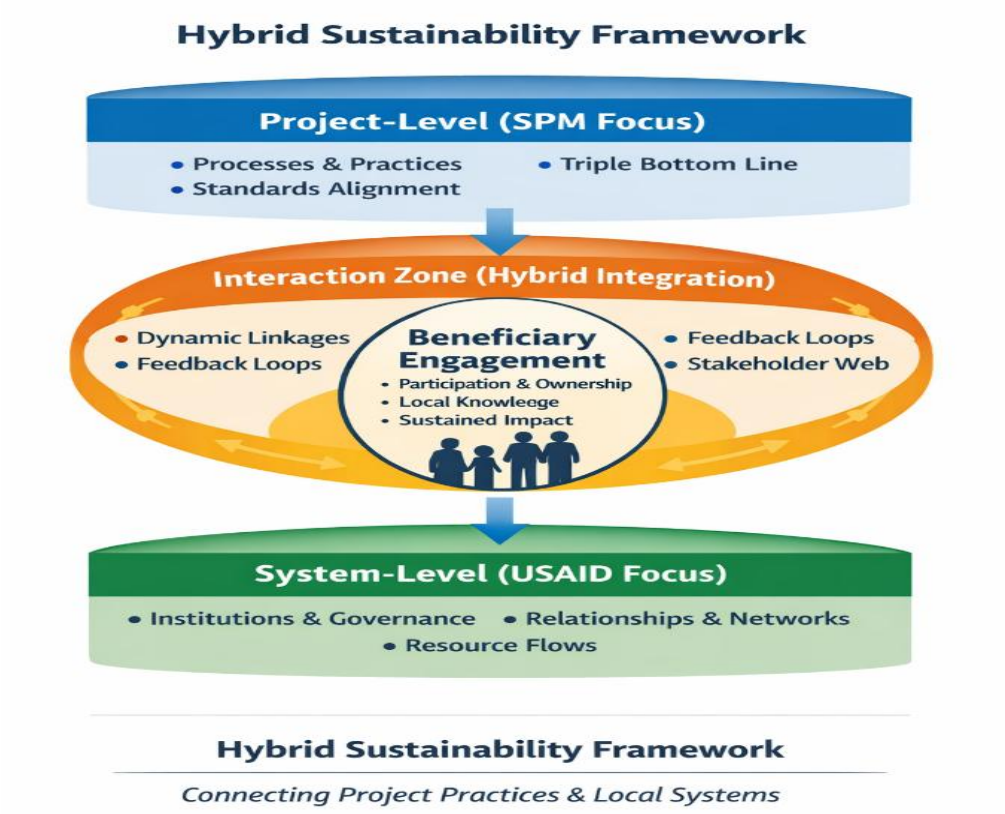


Diagram 3: Author's Interpretation of the Hybrid Sustainability Framework (SPM–USAID Integration

Source: Author's own synthesis based on Silvius et al. (2021) and USAID (2016) frameworks

2.1.5. Mediating Factors Affecting Project Sustainability

A project's sustainability is not merely about structural factors such as project design, governance, or resource mobilization. Rather, literature increasingly emphasizes that sustainability outcomes are also shaped by intermediary social and organizational mechanisms through which project inputs are translated into long-term results. These mechanisms include beneficiary participation, stakeholder engagement, capacity building, and monitoring and evaluation systems, which function as relational and operational bridges between project processes and sustainability outcomes. So, in this research, these factors are considered as mediating variables, which explain how and through which pathways project management and sustainability-oriented practices influence Project Sustainability Outcomes (PSO). This view is in line with systems thinking, which views development outcomes as the result of interactions between structural conditions and behavioral processes rather than direct linear effects.

2.1.5.1. Community Participation and Ownership

The importance of community participation to sustainable development cannot be overemphasized. USAID (2004) states that "Participation is an active process that enables the intended beneficiaries of a project to affect the design and implementation of the project and also influence decision-making for the duration of project implementation. This recognizes that communities have specific needs and priorities which must be taken into account if the project is to be most relevant and effective". Similarly, Paul (1987) has described participation as "active process".

As Samaranayake and Saeed (2012) argue, "Because participation engenders cooperation, joint decision-making, and shared responsibility, it strengthens ownership and increases the likelihood of enduring project benefits." By the same token, Finsterbusch and Van Wicklin (1989) stress that participation turns beneficiaries from passive recipients into active agents of development, which is how project legitimacy and long-term continuity are enhanced.

However, literature also points out that participation is not uniformly distributed from consultation all the way to full ownership. Its effectiveness depends, therefore, on issues

such as capacity of communities, openness of institutions, and the extent to which the power to make decisions is transferred to local actors.

2.1.5.2. Beneficiary Engagement

Beneficiary engagement is simply beyond inclusion; it is a planned, long-term process that actively involves beneficiaries in the project cycle (Urgessa, 2020). It concentrates on the direct beneficiaries' voices being heard and taken into account at the level of decision-making, implementation, evaluation, and feedback in order to make projects more responsive, equitable and contextually appropriate by ensuring they tackle felt needs.

When combined with participatory monitoring and feedback mechanisms, it builds accountability, transparency, and trust between the implementer and beneficiaries. Such type of participation, according to Urgessa (2020), 'builds project relevance on a wider front; it enhances the ownership and empowerment which have an impact on sustainability.

2.1.5.3. Stakeholder Engagement

Stakeholder engagement is the deliberate actions taken by actors such as government bodies, donors, private partners, and civil society organizations in working within the project processes. Stakeholder engagement strengthens the sustainability process in terms of provision of resources, technical knowledge, and institutional legitimacy (Africa Sustainability Matters, 2020).

The engagement further plays a role in risk management as well as ensures that project outcomes are institutionally accepted and socially viable. Additionally, projects that align with stakeholder interests continue to attract continued financial and institutional backing, thus strengthening their long-term sustainability (Lee, 2025; USAID, 2019).

2.1.5.4. Institutional and Human Capacity Building

Capacity building is also acknowledged as an important determinant of sustainable project success (Milen, 2001). Milen (2001) identifies capacity as an entity's capability to realize its

goals, whereas capacity building is defined as increasing such capability through knowledge, skills, systems, and resources.

Institutional capacity includes an organization's structure, systems, leadership, and management mechanisms that help it perform continuously. Institutional capacity helps sustain outcomes by creating an enabling environment that ensures operation, accountability, and coherence (Milen, 2001).

Human capacity is also an element in organizational performance. UNDP (2009) recognizes that organizations are composed of people, and hence organizational capability depends on their skills, knowledge, and leadership. Human capacity not only ensures project execution but also learning and community empowerment needed for sustainability.

2.1.5.5. Project monitoring and evaluation practice

M&E systems are fundamental aspects of the project cycle that ensure learning, accountability, and adaptability of projects. Monitoring is an ongoing tracking and supervision of project implementation activities and actions needed to maintain adequate progress, while evaluation is a periodic, systematic assessment of impact and outcomes of projects (WHO & UNICEF 2012). Monitoring is a key driver to ensuring sustainability through its ability to offer real-time learning, engage stakeholders, and foster accountability.

Evaluation offers insights to the overall effectiveness and appropriateness of project interventions for long-term sustainability (OECD 2010). M&E systems, when properly designed and applied, contribute towards enabling evidence-based decision-making, and sustainability should not be presupposed but constantly monitored and re-evaluated.

In the existing literature, community participation, beneficiary engagement, stakeholder engagement, capacity building, and monitoring & evaluation have repeatedly been cited as contributing factors for sustainability. However, in this thesis, the concept is utilized to explain intermediary mechanisms, rather than standalone causes.

The justification being that the intermediary mechanisms are conversion processes that translate the effects of structural and managerial input into those of sustainability outcome factors. Take participation: an input into the decision-making process is transformed into ownership, an intermediary mechanism between the input and an outcome factor; monitoring & evaluation converts development efforts into accountability; capacity building converts external aid into sustainable institutions and the like.

In this way, from a system viewpoint, the intermediary mechanisms account for how sustainability is produced and not what factors contribute to it. This is integral to the analytical framework of the thesis.

2.2. Theoretical Grounds for the study

The research is based on mutually reinforcing and supplementary theoretical perspectives that explain the multidimensional characteristic of sustainability in development projects. As sustainability is complex and multidimensional, the research uses System theory, Stakeholder theory and Triple bottom line (TBL) framework in order to analyze the interplay of managerial, institutional, financial, environmental, social and participation variables determining project sustainability outcomes (PSO). These together provide a holistic view on the sustainability construction: they explain how sustainability can be constructed in interdependent ways rather than by separate variables.

2.2.1. Systems Theory

Systems theory gives us an explanation of organizations and projects as a collection of interrelated parts that interact with one another (Meadows, 2008). Originally proposed by Bertalanffy (1968), systems theory is of the opinion that the whole is greater than the sum of its parts, as the way the various parts interact generates a result that is not present when the part is isolated (Meadows, 2008).

In view of this systems theory paradigm, a development project is a dynamic, multi-directional process of various components that constantly interact. In the context of this

research, sustainability is viewed as an emergent property resulting from the interaction of PMS, PIM, IOS, FSP, ESSF, PRA, and BE.

These elements reinforce each other, e.g., a greater capacity of the institution may enhance financial viability; and increased engagement by beneficiaries may strengthen the operational process and increase ownership. Negative outcomes in one subsystem also have negative effects on other subsystems and on the system as a whole. This conforms with Checkland (1999) and suggests that the performance of a system as a whole depends on the integration and interaction of its elements rather than the elements themselves.

Systems Theory, therefore, substantiates the core argument of this study, that the sustainability results emerge from the interplay between the different dimensions of sustainability, not from a single variable as independent.

2.2.2. Stakeholder Theory.

Stakeholder Theory was developed by Freeman (1984) to stress that for a corporation to be successful in terms of performance it needs to be able to understand and address the interests of all possible stakeholders involved. Unlike traditional management theories (which are top-down), Stakeholder Theory focuses on participation, integration and joint value creation (Freeman, Harrison & Wicks, 2007).

In development projects the stakeholders may be the beneficiaries, local communities, government agencies, donors and project implementing organizations, each playing a specific role and affecting in some way the projects impacts and the overall paths to sustainability.

In the context of this research, Beneficial Engagement (BE) is perceived as the application of Stakeholder Theory. When Beneficiaries are engaged in the processes of planning, implementation, monitoring, and evaluation; project activities will be more attuned to local priorities and the sense of ownership enhanced to ensure sustainability (Reed et al., 2009).

Furthermore, stakeholder engagement interacts with other sustainability dimensions: it not only influences efficiency of implementation (PIM), enhances trust in and accountability of the institutions (IOS), and helps achieve policy coordination (PRA), but it is also linked with their effects (as noted by Donaldson and Preston, 1995 in stakeholder participation literature). This means that stakeholders' inclusion in projects could increase both process efficiency and outcome effectiveness. Thus, Stakeholder Theory serves as theoretical foundation for the concept of Beneficiary Engagement as an intermediate variable and for the process whereby practices toward sustainability achieve long-term impacts in projects.

2.2.3. Sustainability (Triple Bottom Line) framework.

The Triple Bottom Line (TBL) Framework was developed by Elkington (1997) and frames sustainability as balancing three perspectives: economic, social and environmental sustainability. It contends that it is only possible to evaluate the success of development with reference to these social equity and environmental protection aspects, in addition to economic performance.

In this research study, the TBL framework has been conceptualized into the following critical constructs:

In the present work, the TBL framework is put into practice through the following core constructs: The economic component is Financial Sustainability Practices (FSP). Environmental and Social Sustainability Framework (ESSF) represents environmental and social dimensions. The Institutional and Organizational Sustainability (IOS) and the Policy and Regulatory Alignment (PRA) provide governance and institutional stability. Project Management Sustainability Practices (PMS) and Project Implementation (PIM) translate sustainability principles into practice. Taking the well-established TBL framework as a base, this paper aligns with Bansal and DesJardine (2014) in their call for an inclusion of governance and institutional dynamics to the existing economic, social and environmental factors in sustainability studies. The TBL framework thus reflects that a sustainability performance is a result of interplay between various dimensions.

2.2.4. Integration and Relevance of Theoretical Framework

Collectively, each theory offers a partial account of sustainability. But, to a greater extent, by unifying them, project sustainability in development-related contexts is enriched.

- For Systems Theory, sustainability is considered to be an emergent, system-level result shaped by interdependent dimensions.
- Stakeholder Theory describes how beneficiary involvement acts as a relational mechanism influencing sustainability processes.
- Triple Bottom Line Framework structures sustainability into economic, social, and environmental dimensions.

Collectively, these constructs validate the analytical methods of the research analysis involving direct effects (i.e., sustainability dimensions → PSO) and indirect impacts (i.e., beneficiary engagement) at the level of use of regression and mediation analysis. Last but not least, this study's theoretical framework is consistent with the main argument that project sustainability is not the result of discrete interventions, but rather a function of an interconnected system in which structural factors and participatory processes combine to influence long-term outcomes.

2.3. Review of Empirical Studies

This empirical review provides critical insights into how sustainability practices and beneficiary engagement are operationalized in NGOs' development projects and identifies factors that contribute to the continuation of project benefits after external support ends. For this study, focus will be made on global evidence, empirical studies from Ethiopia and comparable developing country context to situate this study within existing knowledge and to identify key gaps. While these studies underscore the importance of project management practices and beneficiary engagement, a comparison with this study's conceptual framework reveals critical gaps in understanding the mediating role of engagement and post-intervention persistence, which are detailed at the conclusion of this section.

2.3.1. Global Evidence

It has been globally observed and empirically found through many empirical studies that the pattern for understanding the conception and execution of sustainability and the involvement of beneficiaries in the execution of NGO development projects is largely the same from various regions of the world. The same key determinants of NGO development project sustainability have always remained throughout various regions, i.e., institutional capacity, community participation, stakeholders' participation, sources of funding, M&E, and correspondence to social, environmental, and economic norms as a determinant for a sustainable project outcome (Silvius & Schipper, 2014; Gilbert & Ron, 2014; Milosevic & Patanakul, 2005).

Silvius et al. (2012) emphasize that sustainable project management is more than only about economic goals; it deals with the balancing of social, environmental, and economic impacts during a project lifetime. Thus, it highlights the fact that the triple bottom line approach is appropriate. Gilbert and Ron (2014) added this aspect further when viewing sustainability as a continuous process that is the outcome of deliberate planning, systematic monitoring, and adaptive management during project conception and development as well as execution and beyond the completed project cycle and by placing stakeholders as partners throughout the cycle with responsibility and transparency.

In humanitarian and development settings, researchers have looked at which drivers of sustainability were used. Arnaud (2015) has argued that one has to watch the alternative paths and not limit oneself to one discipline. Therefore, it indicates how systems thinking and an interdisciplinary approach are important to sustainability, particularly in dealing with the governance and cultural and institutional aspects (Arnaud, 2015). Morfaw (2014) identified a few key aspects of sustainability: strong institutions, functional infrastructure, sustainability of benefit streams, environmental sustainability, sustainability of benefit distribution, and community participation (Morfaw, 2014). All of these are key factors for sustainability, and it is not possible to achieve it only through a project approach.

Furthermore, such views have also been echoed by international development agencies. UNDP (2016) stresses that capacity building at the local level, environmental integrity, and economic sustainability are essential preconditions of sustainable development (UNDP, 2016). Likewise, USAID (2015) also identifies the essential aspects of the sustainability of the project as local ownership, institutions, and finances that keep the benefits sustained long after donors disengage. From examining the works of scholars and the global evidence at large, we can see that sustainable outcomes of projects emerge from the interplay of the social, economic, environmental, and institutional spheres, strengthened with good project management skills and involvement of relevant stakeholders. Such a perspective provides a basis to examine how sustainability practices are adopted by the NGOs working in Ethiopia.

2.3.2. Empirical Evidence from Ethiopia

In relation to sustainability, several studies have been conducted in Ethiopia where projects driven by NGOs were examined and tested. However, their results were well supportive and clearly proved that participation of the community, institutional capacity building, financing mechanisms, involvement of stakeholders, and M&E were influencing variables related to project sustainability. Below, a few pieces of evidence have been provided to show the idea of project practices responsible for project sustainability.

> Workneh and Aga (2022) tested how M&E practices influence the sustainability of NGO projects using a cross-sectional study of 92 NGO projects in Ethiopia. It showed that adequate M&E systems, well-trained M&E staff, enough money dedicated to M&E, and stakeholder participation are important to ensure the sustainability of the projects. The authors thereby inferred that if NGOs invested in the improvement of M&E systems and built the capacities of the staff, then projects would be sustainable. Project sustainability would be achieved through an improved monitoring and evaluation system and meaningful community participation to make projects accountable, relevant, and resilient even after grants expired.

In another similar study conducted in the West Arsi zone of Ethiopia, Hamda and Kebede (2021) had a survey that investigated projects' sustainability using a mixed-method approach. Their research showed that community participation, financial participation, and stakeholder participation are positive influencing variables in project sustainability. Authors thereby recommended that NGOs must invest in the establishment of good exit strategies, institutional linkages, stakeholder and community participation so as to improve ownership and project sustainability.

Tilahun (2021) carried out research that assessed project sustainability on projects managed by Farm Africa Ethiopia in Amhara and SNNPRS. He observed that participation of the community, institutional capacity, and monitoring and evaluation had a contribution to the variance in the project sustainability by 26%. Therefore, the study advised project implementers to improve M&E systems and practices through a standardized project planning and implementation process, with effective stakeholder and community involvement to ensure long-term sustainability.

The rural environment education project was assessed by Zikargae, Woldearegay & Skjerdal (2022); they concluded that the greater the share of participation and information, the higher the feeling of ownership and the sustainability of the project, and in line with that, Blen Damtew (2019) suggested clear planning, information, administrative competence, and solid management and application of the legal frame as important things. Rahel Fitane (2018) for the small-scale business in Addis Ababa also had pointed out that access to resources and financial stability and obeying rules and regulations are key in determining the long-run stability of the business.

Empirical research in Ethiopia as a whole highlighted the critical roles of sound project management, institution building, financial management, community involvement, and organized M&E to maintain NGO development projects consistent with the USAID multidimensional sustainability framework.

2.3.3. Evidence from Comparable Contexts

These are clearly trends we saw, and there is even an empirical case to support them from elsewhere. Sustainability projects elsewhere: reports indicate that projects succeed where there's a good exit plan, a government partner, and a long-term engagement.

A review of twelve Food for Peace projects by USAID across Bolivia, Honduras, India, and Kenya indicated various levels of outcomes after their three- to four-year close-out (Value Voices, 2015). Four years post closeout, three to four years after project closure, a project by India showed the best result due to the presence of a government partner and good supply chain links. The same USAID project review also showed other projects, such as one run in Niger, that were less successful; for example, PROSAN's activities ended once incentives were removed. The other project in Niger run by CRS Niger reported that it retained around 80 percent of its outcomes at 3 years after closeout. Meanwhile, CIDA's project in Peru reported it as important to build shared responsibilities and participatory engagement between national authorities and the local communities for lasting results (Value Voice, 2015). These cases point out the importance of harmonizing donors', implementers', and government's goals while mobilizing the participants and other key stakeholders in order to make sure outcomes are enduring and that responsibility shifts from the funder to the participants and beneficiaries (Value Voices, 2015).

Evidence for local ownership ensures continued effectiveness of the project. Pact's WORTH project in Nepal is a good example of long-term sustainability through local ownership. The WORTH project was implemented between 1999 and 2001 and was focused on women's economic groups and village banks. The banks promoted women to be change agents within their communities, thereby enabling grassroots sustainability. An ex-post evaluation study was carried out in 2006 and shows that almost 2/3 of the village banks were functional eight years after the start of the project and showed strong asset development and growth on their own (Pact, 2006).

Again, the work CARE has done with Village Savings and Loan Associations (VSLA) in

Zanzibar is another example of sustainable impact through community empowerment. A study conducted four years after project end concluded that 'total membership had increased by 258% with remarkable increases in incomes, housing, and livelihood, despite concerns over longer-term sustainability, government ownership, and institutional handover' (CARE, 2026).

The OECD, evaluating long-term projects in Indonesia, Sri Lanka, Tanzania, and Zambia, "found the overall living condition of target groups improved in all 4 countries, based on sustainable outcomes including health, education, food security, incomes, and employment and contributed to improvements in their standard of living." These outcomes and improvements were associated with infrastructure developed through project support, private sector development, agricultural techniques, etc." (OECD, 2024).

Conversely, the report pointed out limitations in institutional capacity; weak internal organization and low levels of funding and coordination among state institutions have compromised outcomes in certain contexts, thus compromising sustainability and demonstrating development benefits' precariousness without sound institutions (OECD, 2004).

These post-project evaluations support recurrent themes such as the need for strengthening institutional capacity, involving and empowering the communities from the outset in order to achieve ownership, involving governments and other stakeholders in the joint planning and handover, integrating sustainability issues throughout the project design and implementation, and assessing what stays beyond the donor funding through post-project evaluation. These together prove that sustainability results can be achieved only by coupling empowerment with institutional strengthening and continuous learning to have resources allocated and benefit prolonged (OECD, 2004; Pact, 2006; CARE, 2006; USAID/Food for Peace, 2009).

Identification of Research Gaps

Based on the empirical review on global, local, and comparable contexts, the following research gaps have been identified:

- Temporal Gap of Post-Project evaluation: While studies by Workneh and Aga (2022) and Tilahun (2021) provide valuable insights into M&E and community participation, the evaluations are mostly cross-sectional or during the projects. The research gap in empirical evidence about how sustainable benefits have actually lasted after the complete withdrawal of donor funds after 3-5 years in the Ethiopian NGO sector has a long way to go.
- Conceptual integration gap: Most empirical studies in Ethiopia consider PMP (M&E, financial management, planning etc.) as separate activities in relation to project delivery and ignore studies that combine these practices into a comprehensive strategy aiming to guarantee sustainability of NGO interventions in the long-term.
- The Relational Mediation Gap. Despite widespread recognition of participation (Hamda and Kebede, 2021) there is a methodological void regarding the mediating effect of the BE. The contribution of BE to the mediating role, linking technical PMP to long term sustainability is inadequately detailed in the literature.
- Contextual and Organizational Gap: This research gap exists on comparative empirical work that investigates the contribution of operational project management models of INGOs such as Pact and CARE Ethiopia to sustainability in the Ethiopian context.

2.4. Conceptual Framework of the Study

The study's conceptual framework has been established as a mediation model to test the managerial and relational antecedents of Project Sustainability Outcomes (PSO) within development projects. Moving beyond the "Iron Triangle" framework of time, cost and scope for project management, this framework integrates sustainability aspects into the full cycle of a project. Based on Project Management Practices, Stakeholder Theory, and the USAID Local Systems framework, it hypothesizes that sustainability development outcomes

result not solely from project management processes, but from stakeholder involvement with beneficiaries of the project.

Three components of the framework are linked to research variables and the measurement instrument.

- Independent Variable (IV): Project Management Practices (PMP) refers to the management aspect of project sustainability. Similar to the research instrument, the PMP are conceptualized as a multidimensional construct of three integrated sub-dimensions: pre-project planning, sustainable execution and governance, and project monitoring, learning and exit. Together, these practices form the building blocks of the structure enabling effective project design, execution, monitoring and learning.

- The second element is the Mediator Variable (MV) as the relationship dimension of the framework-Beneficiary Engagement (BE). Beneficiary Engagement serves as the key driver in the transformation of management practices into long-term outcomes. It encompasses the level of participation of beneficiaries in all project phases, including decision-making, implementation, monitoring and evaluation, and capacity development activities. Through such engagement, beneficiaries achieve a sense of ownership and accountability over the project and are empowered to maintain benefits following external intervention.

- The third dimension is the Dependent Variable (DV), which is called Project Sustainability Outcomes (PSO) and is considered as the degree to which the project outcomes persist following the withdrawal of donor or implementing agency support. This dimension of the project outcomes is used and interpreted through dimensions such as persistence of benefits, institutional sustainability and financial and economic viability in this research. The three dimensions have been examined collectively as sustainability of the development interventions.

Conceptual Framework of the Study (diagram)

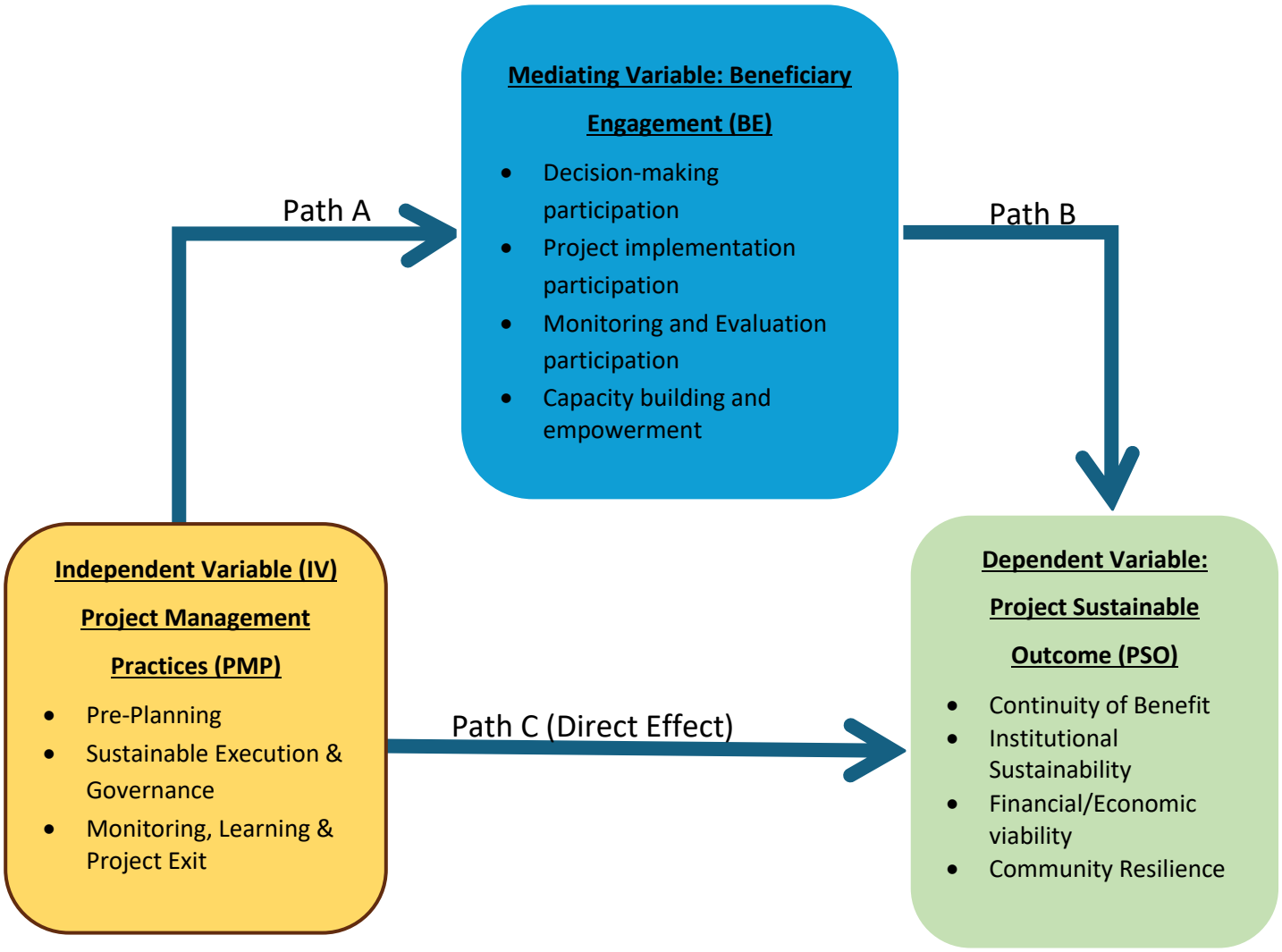


Diagram 4: Conceptual Framework Illustrating the Relationship between Project Management Practices, Beneficiary Engagement, and Project Sustainability

Based on this understanding, sustainability project outcomes are hypothesized to be a result of the synergy between project management practices and the degree to which the beneficiaries participate in the project. This is in agreement with the USAID Local Systems Framework which posited that, Sustainable development outcomes are products of the

interplay between management systems, local agents, institutional relations and community ownership, and not the output of interventions in a project context (USAID, 2014, 7). Also consistent with the stakeholder theory is the prediction that a project's sustainability of results will be high if the beneficiaries participate throughout the project, that is, beginning with the conception phase, through the planning and execution phases until the project is finalized, thereby leading them to establish ownership over the project processes and results.

In summary, the conceptual framework establishes that sustainability can be conceptualized as the result of project management and beneficiary engagement. This conceptual framework provides the basis for a discussion about the effects of project management on project sustainability, direct and indirectly through beneficiary engagement. Diagram 4 shows the hypothesized relationships between project management, beneficiary engagement and project sustainability outcomes, and is the basis on which the regression and mediation analysis presented herein are conducted.

CHAPTER 3: RESEARCH METHODOLOGIES

This chapter outlines the research methodology employed in this study and the approaches and procedures utilized to analyze the association between Project Management Practices (PMP), Beneficiary Engagement (BE) and Project Sustainability Outcomes (PSO) in NGO led development projects in Ethiopia. The methodology used is consistent with the research objectives, conceptual framework, research hypothesis put forward in Chapter One, and the empirical result provided in Chapter Four.

This chapter includes research design and approach, study area and population, sampling methods, data sources and collection techniques, measurement of variables and data analysis techniques. Data analysis procedure regarding how to guarantee the study validity, reliability and ethics is also addressed in this chapter.

The study was performed in certain development projects implemented by PACT Ethiopia and CARE Ethiopia. For the purpose of the research, the development projects implemented by these two NGOs were chosen on a purposive basis reflecting various stages of projects' life cycle, which include one latest finished project (last 1-3 years), one active project (over the last 2-3 years) and one project at preparation stage.

3.1. Research Design

The study used a descriptive and explanatory study design to investigate the associations of Project Management Practices, sustainability dimensions, beneficiary engagement, and project sustainability outcomes in development projects of PACT and CARE Ethiopia. A descriptive research design is adequate for collecting data when phenomena need to be described as they are, without control for variables, and an explanatory one for explaining the relationships between variables and explaining the causal relationships among them (Creswell & Creswell, 2018; Saunders et al., 2019).

The descriptive nature of the design served to provide a clear image of the sustainability strategies, institutional environment, and stakeholder involvement in the chosen projects. This allowed the research to capture the real-world implementation conditions of sustainability in the natural setting without impacting the natural environment of the projects (Bryman, 2016).

The explanatory part was utilized to determine the extent to which the different dimensions of sustainability and project management practices contribute to project sustainability performance. This approach is suitable when theories are to be tested in terms of the relations between variables and with the use of statistical modeling (Creswell & Creswell, 2018).

In this research, the use of the explanatory design provided the opportunity to examine the influences of the independent variables (project management sustainability practices, institutional and organizational factors, financial factors, environmental and social factors and policy & regulatory alignment) on the dependent variable (project sustainability performance) and the mediator variable (beneficiary participation).

Regarding the scope, the research design was used case study approach which involved three chosen development interventions implemented by PACT and CARE Ethiopia in Ethiopia. The case study method is widely adopted in social science research when examining and understanding the intricate real-life situations which are characterized by the effect of interaction among multiple factors (Yin, 2018). This could permit for more comprehensive understanding of the dynamic relationship to sustainability in different implementation sites.

As for the time horizon, the design chosen for the study was cross-sectional, that is, data was collected only once. Cross-sectional designs are suitable for studying relationships among variables and not for tracking the variables across time (Bryman, 2016; Saunders et al., 2019). Therefore, this design was adequate to record the perceived perceptions of

sustainability practices and effects among the respondents for projects in progress or completed.

In summary, the design provided a useful structure for relating the theoretical concepts of sustainability to empirical information and was instrumental in both describing the present situation and in statistical explanation of relationships between the variables of interest in the context of development projects.

3.2. Research Approach

This research utilized quantitative research approach and was based on positivist research philosophy. Quantitative approach is best suited for research studies that seek to measure variables in numeric form and examine relationships between variables through statistics (Creswell & Creswell, 2018; Bryman, 2016). Objectivity, precise measurement, structured instruments and testing of hypotheses based on observations are the core features of quantitative approach.

Following the quantitative approach, the present study endeavors to translate conceptual ideas of the hybrid sustainability framework into measurable variables i.e., Project Management Practices (PMP), dimensions of sustainability (institutional, financial, environmental, social and policy alignment), Beneficiary Engagement (BE) and Project Sustainability Outcomes (PSO) and investigate the relation between them.

The approach has facilitated the application of statistics (in particular, multiple regression and mediation analysis) to the variables to ascertain direct and indirect effect relationships between them. This is in line with the purpose of explanatory research where the aim is to explain the causes of an action or phenomenon in terms of variable relationships, not just to observe patterns of occurrence (Saunders et al., 2019).

In addition, the approach mirrors the method of previous researches conducted in sustainability and project management whereby tangible measurements and uniform tools were utilized to quantify complex phenomena like the extent of sustainability performance

and stakeholders' engagement (Field, 2018). The study ensures the ability to make a generalization among contexts on similar development project particularly NGO-initiated intervention through this approach.

Ultimately, it facilitated the establishment of a connection between conceptual model of sustainability and observed data as the study tested hypotheses of Systems Theory, Stakeholder theory and Triple bottom line with the method of approach.

3.3. Description of Study Variables

As proposed in the conceptual framework of the study, this part highlights the core variables under analysis. The study adopts a mediation model that examines the relationship between Project Management Practices (PMP), Beneficiary Engagement (BE) and Project Sustainability Outcomes (PSO). PMP, BE and PSO are considered based on the concepts of Sustainable Project Management, Stakeholder Theory and the USAID Local Systems Framework (USAID, 2014) which collectively suggests that the PSO can be defined through the interaction between the management system and the engagement of the stakeholders (Creswell & Creswell, 2018; Bryman, 2016).

3.3.1. Independent Variable

Project Management Practices (PMP)

Project Management Practices represent the independent variable of the study and capture the managerial dimension of project sustainability. PMP refers to the extent to which sustainability-oriented management approaches are integrated throughout the project lifecycle, from initiation to closure.

Consistent with the research instrument, PMP is understood as a multidimensional construct including 3 interconnected sub-dimensions:

A. Pre-project Planning: it covers the integration of sustainability issues into project design, needs assessment, stakeholder analysis and resource planning. The project should be planned in such a way as to reflect its likely long-term consequences and contexts.

B. Sustainable Execution and Governance: This refers to how the projects will be implemented and governed, covering mechanisms for coordination, arrangements for

leadership, structures for accountability and mechanisms for adaptive management that enable responsive and sustainable project execution (Silvius & Schipper, 2021; PMI, 2021).

C. **Monitoring, Learning, and Exit strategies:** this dimension measures how projects are accompanied with ongoing monitoring and learning mechanisms, as well as organized exit strategies with a view to ensure knowledge transfer and continuity**.**

These three dimensions collectively frame the managerial foundation of sustainability of a project, ensuring that projects are not only efficiently delivered but also designed for long-term viability.

3.3.1. Mediating Variable

Beneficiary Engagement (BE)

Beneficiary Engagement acts as the mediating variable within this study, encompassing the relational aspect of the framework. Beneficiary engagement refers to the extent to which the beneficiary actively engages in the processes of a project, from the decision-making stage through the implementation and monitoring & evaluation stages and capacity-building stages.

In this model, BE represents the primary way by which PM practices affect the Project Sustainability Outcomes by representing the transmutation of management inputs into persistent results via empowerment and ownership of beneficiaries. This model is also congruent with Stakeholder Theory arguing that the results of a project are enhanced when actors, particularly beneficiaries, are participants throughout the project's life cycle (Freeman, 1984). The model is also consistent with the USAID Local Systems framework highlighting that sustainability can best be obtained by strengthening local actors and systems, rather than just by an intervention (USAID, 2014).

This beneficiary engagement takes the following forms:

- Participation in decision-making process.

- Participation in project activities implementation.
- Participation in monitoring & evaluation.
- Participation in capacity building processes.

3.3.2. The dependent variable

Project Sustainability Outcomes (PSO)

Project Sustainability Outcomes (PSOs) are the dependent variable and define the degree of which the impact of project objectives or benefits is sustained when the donor agency or the implementing agency disengages itself from the project intervention.

PSOs are seen as a measure of development intervention sustainability over time, which is evaluated by:

- Persistence of benefits beyond the project implementation;
- Persistence of the project through Institutional sustainability as demonstrated through the sustainability of the project-introduced systems, structures and practices;
- financial and economic viability of the system continues functioning with less or no external support.

Overall, these dimensions indicate the extent to which project results last beyond the implementation period.

3.3.3. Summary of Variable Relationships

This research is built around a mediation model where Project Management Practices (PMP) can affect Project Sustainability Outcomes (PSO) both directly, and indirectly, through the engagement of Beneficiaries (BE). This states that not only does sustainability depend upon how projects are managed but also to the degree to which beneficiaries have been involved in the shaping, implementation and perpetuation of project outputs.

This model is also congruent with the USAID Local Systems Framework which states that development outcomes are a result of the interplay between management systems, local agents and institutional relationships rather than the isolated project inputs themselves (USAID, 2014), and Stakeholder theory which argues that involvement from stakeholders

improves the legitimacy of and ownership over project outputs, ensuring a greater likelihood of long term sustainability (Freeman, 1984).

3.4. Description of Study Area and Target Population

This section described the study area and the study population of this research. The research took place in certain selected areas in Ethiopia, where the development projects have been carried out by PACT and CARE Ethiopia. Involving various project sites in different locations and socio-economic backgrounds was the way the researchers used to obtain an in-depth and comprehensive understanding of factors affecting project sustainability outcomes.

3.4.1. Study Area

The study was conducted in Ethiopia with different project sites in Oromia regional state, South Ethiopia regional state and Addis Ababa City Administration. Ethiopia is a federal democratic republic consisting of various regional states and city administrations that are diverse and heterogeneous in socio-economic factors, culture, livelihood strategy, institutional frameworks and development challenges (FDRE, 2023; World Bank, 2024). The context differences are suitable for exploring factors that influence sustainability results of a project.

Oromia Regional State is the biggest in terms of area and population in Ethiopia, with diversified systems of livelihoods including agricultural, pastoral, agro-pastoral, and the major target of several intervention strategies focused on improvements in governance, livelihoods, social cohesion and service provision (CSA, 2024). . South Ethiopia Regional State, one of the youngest regional states of Ethiopia is characterized by significant cultural, livelihood and ethnic heterogeneity and includes farming, pastoral and mixed farming communities and faces several developmental issues including resource management, social cohesion and the resilience to shock. (FDRE, 2023; UNDP, 2023).

The Addis Ababa City Administration, being the capital of Ethiopia and forms a predominantly urban area with a stronger set of institutional capacities, more public

services, and an overwhelming density of public, NGO, and international development agencies (World Bank, 2024). Thus, it constitutes a different institutional and development context in relation to predominantly rural contexts of Oromia and South Ethiopia.

The study sites were selected on a purposive basis since there are either complete or at the implementation stage development projects managed by PACT and CARE Ethiopia. Moreover, the two locations offer different implementation settings that make them ideal for evaluating development projects and outcomes sustainability. The fact that study was carried out in urban and rural settings enabled comparison between governance systems, community participation, institution capacity, socio-economic setting and community engagement which can impact on project outcomes sustainability.

The research conducted focused on projects implemented by PACT and CARE Ethiopia; two of the international development organizations with the longest implementation history in Ethiopia. Both PACT and CARE Ethiopia have been providing development and humanitarian programming assistance in Ethiopia for over three decades, implementing projects and activities in the areas of peace building, governance, livelihoods, women's empowerment, resilience, and community development. Given their presence, scope of operation and long history of working across different socio-economic and institutional contexts, their programs serve as suitable case environments to investigate the drivers of project sustainability outcomes. In addition, completed and mature projects in their portfolios were an appropriate basis for determining projects sustainability in post-implementation phase.

Selection of these study areas was based on their relationship to research aims; presence of development interventions with sustainability elements; accessibility of project documentation and respondent; and the desire to cover a wide variety of implementation contexts for a comparative analysis of project sustainability performance.

3.4.2. Target Population

The target population for this study was all persons whose lives were impacted, directly or indirectly, by the projects developed and implemented by PACT and CARE Ethiopia. To the extent that this research was concerned with such projects and within the context of the study objectives the target population consisted of the project beneficiaries, the project staff, implementing partners and key government partners and partner organizations who have involvement in the project development life cycle, planning, implementation, M & E, and post completion.

In order to define a study population that is manageable and relevant, a study population that includes the project sites and intervention areas of the study was defined. That includes the project sites and intervention areas under Supporting Peaceful Coexistence and Enhanced Knowledge Exchange (SEEK II) project in Hamer, Nyangatom, Dasenech Woredas, South Ethiopia Regional State, intervention areas under Conflict Early Warning and Response Reform (CEWRR) project in some areas of Oromia regional state and Addis Ababa city administration, stakeholders participating in Renewed Women's Voice and Leadership (RWVL) project implemented in Addis Ababa.

These stakeholders were chosen as they were involved in project implementation, how benefits were delivered to beneficiaries, and the results of the project. This enabled stakeholders to present information relating to project management, participation and sustainability of the results of the project.

The total target population of the study was 4,685. This population is the group of accessible beneficiaries and stakeholders involved in the three project cases from which the sample was selected and to which the study results are generalized.

Table 3.1 presents the distribution of the target population and achieved sample across the three project case studies.

Table 2: Target Population and Sample Distribution

Project Case Study	Intervention Area	Target Population (N)	Achieved Sample (n)
SEEK II (PACT)	South Ethiopia Regional State (Hamer, Nyangatom, and Dasenech Woredas)	3,436	293
CEWRR (PACT)	Oromia Regional State and Addis Ababa	1,234	124
RWVL (CARE Ethiopia)	Addis Ababa	15	15
Total		**4,685**	**432**

Source: SEEK II Year 3 Annual Progress Report (PACT, 2024); CEWRR Learning Review Summary (PACT, 2021); CARE Ethiopia RWVL Project Database (2023).

It is to be highlighted that respondents for CEWRR consisted of Oromia regional state and Addis Ababa residents and important stakeholders within the implementation of national conflict early warning and response system strengthening program. These respondents collectively offered rich information on issues related to project management practices, beneficiaries and outcomes regarding project sustainability.

3.5. Sampling Technique and Sample Size Determination

This section covers sampling methods and sample size determination for the quantitative component

3.5.1. Sampling Technique

The definition of sampling is to choose or extract a subset of individuals from an accessible population in order to draw conclusions about that population (Creswell & Creswell, 2018). The probability sampling design was adopted in this study since it gives every individual of the target population the probability of non-zero of being selected.

Using the probability design the chances of drawing a representative sample and generalizing it is higher (Taherdoost, 2016). Because the areas involved in this study are

spread over several areas cluster sampling design was used, treating the project locations that were under study (i.e. South Ethiopia Region State, Oromia Region State and Addis Ababa) as three clusters. From each cluster the individual respondents have been chosen randomly from the project people list derived from the data base of PACT and CARE Ethiopia. Cluster sampling was chosen for this research as:

- The population was spread across a large geographic area
- Project beneficiaries and stakeholders tended to naturally fall into locations, and,
- it was manageable within time and budget constraints, while remaining representative (Saunders et al., 2019)

3.5.2. Sample Size

The size of the sample used in this research was determined using the formula derived by Cochran (1977) for large populations, and the FPC was then used to correct this, as the population size was finite.

1) Initial sample size using Cochran's formula
   The initial sample size (n_0) is calculated as:

$$n_0 = \frac{z^2 \cdot p \cdot (1 - P)}{e^2}$$

Where:

Z = 1.96 (95% confidence level);

p = 0.5 (assumed proportion for maximum variability)

e = 0.05 (5% margin of error)

$$n_0 = \frac{(1.96)^2 \cdot (0.5) \cdot (1 - 0.5)}{(0.05)^2}$$

$$n_0 = \frac{3.8416 \cdot 0.25}{0.0025} = 384$$

Thus, the initial sample size was **384** respondents.

2) Finite population correction (FPC)

Because the total population was finite, (n_0=4,685) the adjusted was calculated using Population Correction formula:

$$n_0 = \frac{n_0}{1 + \frac{n_{0-1}}{N}}$$

Where:

n_0 = adjusted sample size

N = Total population (4,685 staff, partners & key stakeholders)

$$n_0 = \frac{384}{1 + \frac{384 - 1}{4685}} \approx 355$$

$$n_0 \approx 355$$

Therefore, this produced an adjusted sample size approximately **355** respondents.

3) Final achieved Sample.

The study achieved a final sample size of 432 respondents. This exceeds the minimum statistical requirement of 355, thereby enhancing statistical power the findings, reduce potential sampling error, and ensuring robust representativeness across the diverse project clusters.

3.6. Data collection source & types, instruments

This research employed a quantitative data collection strategy to investigate the relationship between sustainability practices, beneficiary's involvement and sustainability performance outcomes of a project. It collected primary structured data and focused on one snapshot of the environment; to investigate how the respondents view the variables across the

development projects. The data collection was conducted over a period of one time. This study had a cross-sectional design hence data was collected at one point in time (Creswell & Creswell, 2018).

3.6.1. Data Sources and Types

The survey relied on primary quantitative data collected from persons who were directly or indirectly engaged with or exposed to the respective development projects implemented by PACT and CARE Ethiopia. Project beneficiaries, project staff, implementers, and associated stakeholders in governmental and coordination offices were included as respondents so that views from various levels (community, institutional, and implementation) were obtained and the findings strengthened.

The data were obtained through the administration of a well-designed questionnaire within the three study areas: Southern Ethiopia Regional State, Oromia Regional State and Addis Ababa City Administration. Since the study design was cross-sectional, data were collected from the three study areas at a time point and a perception study was conducted with respect to what extent the selected projects contributed and how sustainability was addressed.

The dataset generated through this consisted of quantitative variables aligned with the conceptual framework of the study such as project management sustainability practices, beneficiary engagement, and project sustainability outcomes. Likert-scale items were utilized to operationalize these variables to allow for statistical analysis.

Outside of primary survey data, secondary data sources were used to give context and interpret findings. Project documents such as proposals, monitoring and evaluation reports, sustainability frameworks and policy-related materials were included. The incorporation of primary and secondary data provided valuable complementary data for the robustness of the study, establishing empirical observations in correlation to project best practices and institutional landscape.

3.6.2. Data Collection Instruments

The data for this research was obtained through use of a closed questionnaire, adapted from available frameworks on sustainability assessment, including the Program Sustainability Assessment Tool (PSAT) (Measurement & Evaluation, 2012) and the COSA Resilience and Sustainability Indicators (COSA, 2012). The selection of these frameworks was made due to their suitability and previous use in development project sustainability assessments.

The questionnaire was developed based on the study conceptual framework and research objectives. The structure of the questionnaire was arranged in thematic sections and in line with each construct's variable; the study variables are project management sustainability practice, institutional sustainability, financial sustainability, social & environmental sustainability, policy & regulatory consistency, beneficiary participation, and sustainability of project outcome.

All items were rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Use of Likert scales is common in quantitative research, providing a reliable way of assessing the respondent's viewpoint, and they are amenable to statistical testing, such as regression analysis (Field, 2018).

Before the data were gathered, a pilot test on the data collection instrument was done. The instrument was tested on a small sample (N=20) drawn from a population similar to the participants in this research. The pilot study enabled us to check the clarity of the questionnaire, relevance of the questions, and internal consistency of questionnaire items. After the results of the pilot study had been revealed, the wording and format of the questionnaire were modified.

In addition, preliminary statistical analysis was carried out on pilot data so as to identify the potential for multicollinearity and item redundancy to occur. Inter-item correlations were high as indicated by higher Variance Inflation Factor (VIF) values for several items. This suggested that some items were measuring overlapping constructs. Hence, the questionnaire

was refined by reducing the items' length from 52 to 30 to increase the parsimony and suitability of the instrument for regression analysis.

After these adjustment measures, reliability of the final instrument was evaluated using Cronbach's alpha during the primary data analysis process. Results showed that all constructs had acceptable internal consistency and alpha coefficients at levels higher than 0.70 (Hair et al., 2019). This is testament that the new instrument was considered reliable and appropriate for the measurement of the study factors.

3.6.3. Data Collection Procedure

In order to gain a systematic and accurate collection of data with a reliable data source, this research was using a structured quantitative method of collecting data. Data were collected from the respondents of the selected study areas at one point in time according to the cross-sectional research design.

3.6.3.1. Preparatory Phase

Prior to data collection, authority was taken from PACT and CARE Ethiopia to access the sites and interviewees. Similar authority was taken from the pertinent institutions: Oromia Peace and Security Bureau, South Omo Zonal Peace and Security office, and Ministry of Peace.

Information regarding the objectives of the study was disseminated to and trust established with local leaders and actors; suitable interviewees were selected, and availability for data collection was negotiated through these contracts.

To effectively capture the data and improve on contextual understanding, an enumerator from each study region (Southern Ethiopia Regional State, Oromia Region, and Addis Ababa) was recruited. Enumerators were trained on the purpose of the study, ethics, informed consent, and how to ask questions using a structured questionnaire.

KoboToolbox was adopted as the data collection tool to avoid manual data entry and minimize errors as well as facilitate efficient and more accurate data collection, especially with intermittent or no access to internet connectivity.

3.6.3.2. Quantitative Data Collection

Quantitative data collection: Primary data collected through a structured questionnaire from sample respondents such as project beneficiaries, project staff, partners, and other stakeholders. Before the response, all respondents were informed about the study, and their willingness to participate in the study and written consent were obtained. In all the study areas, the questionnaire was administered consistently. The enumerator gave explanations to the respondents wherever needed to clarify the question but not to force them to answer, and no personal information was recorded by using the unique code number for respondents to ensure confidentiality.

3.6.3.3. Document Review.

Besides questionnaire-based data collection, a structured document review was carried out to further support and contextualize the primary data. Documents relating to project proposals, M&E reports, sustainability plans, and policy documents were consulted in order to gain more insights into the project implementation.

3.6.3.4. Data management:

The information obtained by KoboToolbox was saved in protected passwords of a database to which only members of the research team could have access. Data were cross-checked for completeness, accuracy, and consistency before analysis. These were subsequently cleaned and coded prior to the preparation of data for analysis using statistical software packages. Confidentiality, anonymity, and informed consent and voluntariness were rigorously adhered to during the management of the data.

3.6.4. Data Analysis Model and Techniques

This study employed a quantitative data analysis method for investigating the impact of sustainability-oriented project management practice on project sustainability performance and testing the role of beneficiary participation on these impacts as a mediating effect. The analyses were performed in light of the explanatory nature of the research design. This explanatory design fits well to investigate hypothesized relationships among variables and mechanisms of causation from already established theory by statistically testing model(s) (Creswell & Creswell, 2018; Saunders et al., 2019). The tests were carried out using SPSS version 26.

3.6.4.1. Preliminary Data Screening and Preparation:

Before the inferential analysis was carried out, the data were screened for missing values, accuracy, and suitability for statistical modeling. Descriptive statistics such as frequencies, mean values, and standard deviations were produced for the variables in order to describe the sample, detect missing values, and examine variable distributions (Field, 2018). This step of the process helped the data meet initial criteria required for regression. The measures used in the study were also examined for reliability using Cronbach's alpha score, where values of 0.70 or higher are required for acceptable internal consistency (Hair et al., 2019), and the measure proved to be reliable in this instance.

3.6.4.2. Multiple Regression Analysis

The main tool applied for testing the direct relationship between sustainability indicators and sustainability outcomes was the use of multiple regression analysis. Multiple regression analysis is a set of statistical techniques used to analyze and predict dependent variables with more than one independent variable (Field, 2018). The sustainable outcome was taken as the dependent variable, while project management sustainability practices, institutional and organizational sustainability, financial sustainability practices, environmental and social sustainability, and policy and regulation were taken as the independent variables.

The general form of the regression model is expressed as:

$$Y = \beta_0 + B_1X_1 + \beta_2X_2 + \beta_3X_3 \ldots \beta_nX_n + \varepsilon$$

Where

Y= Project sustainability outcome (dependent variable)

β_0= Intercept

$\beta_{1....}$ β_n = Regression coefficients

$X_{1...}$ X_n = Independent Variables (Project management sustainability practices)

$\boldsymbol{\varepsilon}$ = Error term

Using this model was possible to assess the size and sign of each relationship among sustainability practices and project sustainability outcome. Mediation analysis was conducted after the extension of the regression model.

3.6.4.3. Mediation Analysis:

In order to find the underlying mechanism between the influence of sustainability practices on project sustainability, beneficiary engagement was added as a mediation variable. Mediation analysis was used to test whether or not the impact of sustainability practices on project sustainability is mediated by beneficiary engagement (Baron & Kenny, 1986; Hayes, 2018).

The mediation analysis used a regression-based methodology. First, the direct effect of the independent variable(s) on the dependent variable was estimated; second, the effect of the independent variables on the mediator (beneficiary engagement) was tested; and third, the effect of the independent variable(s) and the mediator on the dependent variable was tested.

The mediation model is expressed as:

$$Y = \beta_0 + \beta_1X + \beta_2M + \varepsilon$$

Where

Y= Project sustainability outcome

X = Project management sustainability practices

M = Beneficiary engagement (Mediator)

Where Y stands for the sustainability outcomes of the project, X for the practices of sustainability, and M stands for beneficiary involvement. The significance of the indirect effect was assessed through bootstrapping method of 5,000 resamples. If the confidence intervals do not contain zero, the mediation is statistically significant. Bootstrap is recommended as it estimates the indirect effect reliably (Hayes, 2018). If the indirect effect is statistically significant, it suggests that beneficiary involvement mediates partially or fully between the practice of sustainability and project outcomes.

3.6.4.4. Assumption Testing

Before evaluating the regression results, some of the assumptions for multiple regression analysis were tested. These included assumptions of linearity, normality of the residuals, and absence of multicollinearity.

VIF and tolerance values were used to test for multicollinearity. All VIF values were lower than the acceptable limit of 10, suggesting that the regression had no multicollinearity present (Hair et al., 2019).

3.6.4.5. Software Utilization

The SPSS software program. It is a tool used in data management and statistical procedures (descriptive, reliability analysis, regression, mediation analysis, and diagnostic), which makes the statistical tests reliable, systematic, and repeatable as suggested in quantitative analysis (Field, 2018).

3.7. Reliability and Validity of the Measurement Instrument

Reliability and validity of the measurement instrument are fundamental to guarantee the quality, consistency, and accuracy of research results. Reliability, or the degree to which the measurement instrument consistently produces stable and uniform results over repeated use, is complemented by validity, the extent to which the measurement instrument accurately measures the intended constructs and supports meaningful interpretations of the findings (Kothari, 2004; Mohajan, 2017).

Reliability Test

Reliability and validity of the measurement instrument are essential, as they assure quality, consistency, and accuracy of the results in research work. Reliability, which is a test's consistency in producing similar results when applied repeatedly, is accompanied by validity, which ensures a measure is taken to indicate whether a measure actually measures what it is intended to measure and thus meaningful interpretations can be made from the findings (Kothari, 2004; Mohajan, 2017).

For measurement scales, the internal reliability was tested with Cronbach's alpha coefficient, which is widely used as a coefficient in testing surveys on Likert scales (>0.70 suggests acceptable and >0.80 good reliability) (Field, 2018; Hair et al., 2019).

The final questionnaire has reduced from 52 items to 30 items through the pilot study and subsequent revision. Such revision has overcome a portion of redundancy and multicollinearity. Reliability was subsequently examined on the completed dataset from the sample of 432 respondents as follows:

Table 3: Reliability Statistics

Reliability Statistics

Cronbach's Alpha	N of Items
.932	3

The combined Cronbach's alpha of all the study variables reached 0.932. Cronbach's Alpha value of 0.932 was found to be an excellent indicator of internal consistency, implying that all the measures of Project Management Practices (PMP), Beneficiary Engagement (BE), and Project Sustainability Outcomes (PSO) had consistency and were successful in measuring the intended latent variable.

Item-level consistency indicators (item-total correlations) were found to be between 0.848 and 0.888, indicating that each construct contributes reliably to the overall measurement model. The Alpha if item deleted statistics showed that Alpha if construct removed was less

than Alpha if all constructs were included, which demonstrated that all constructs were meaningful and should remain in the model.

The above reliability results show that the instrument is stable and can be used for inferential statistical analysis such as regression and mediation.

Validity Test

Validity means how far an instrument measures what it is intended to measure and how far the conclusions drawn from data obtained are accurate and meaningful (Mohajan, 2017). There are many different types of validity that were maintained in this study to give a stronger ground to the measurement instrument.

Content & Construct Validity: The questions for the questionnaire were formulated considering theoretical and empirical works. The major concepts derived for the questionnaire construction were based onTriple Bottom Line (TBL) (Elkington, 1997) and USAID Local Systems framework (USAID, 2016). Based on the theory and empirical evidences of these frameworks, sustainability practices, institutional factors, financial sustainability, environmental and social dimensions, policy fit, beneficiary involvement and project sustainability outcomes were used as constructs.

Face Validity: Face validity was achieved by expert and field-level review of the instrument once it was developed. The questionnaire was reviewed for clarity, relevance and appropriate language for NGO project-based respondents.

Construct Refinement through Pilot Testing: To ensure clarity, relevance and internal consistency, 20 respondents' representative of the final sample was used to pilot test the instrument. Redundant and overlapping items were eliminated following this pilot test, and the instrument was trimmed from 52 to 30 items. The pilot also minimized multicollinearity and refined the construct, where a scale measured each individual dimension of the conceptual framework.

In summary, the conclusion reached from pilot testing and instrument refinement plus final reliability analysis assures that the instrument in this research is reliable and meaningful, therefore adequate for regression and mediation analysis as required for an explanatory study.

3.8. Ethical Consideration

All the steps taken during the course of the research are under the framework of ethical considerations in social research studies. The purpose of the study, the research design, and the role of the respondents were clarified before conducting the data collection. Written consent of all the participants was taken before they became a respondent of the study.

The participation in the study was voluntary, and each respondent had the right to pull out from the research at any time during the study with or without giving any reason. Confidentiality of the response is taken into consideration; all responses are anonymous, and there is no identifying information about any participant.

Furthermore, the data gathered in this study was stored safely on computer files that were password protected so only the researcher and authorized team members were able to access the data, so participant privacy could be maintained, and research data was handled in an appropriate manner. All of the above safeguards helped the researcher to adhere to good research ethics practice and ensure that the research produced credible and reliable data (Bryman, 2016; Creswell & Creswell, 2018).

CHAPTER 4: DATA ANALYSIS, INTERPRETATION & DISCUSSION

4.1. Introduction

This chapter presents the result of empirical analysis performed based on the objective of the study, specifically analyzing the relationship between project management sustainability practices, beneficiary involvement and project sustainability impact in certain PACT and CARE Ethiopia projects. Quantitative data gathered from beneficiaries, project staff, implementing partners and main stakeholders have been analyzed using descriptive, sociodemographic characteristics, diagnostic and inferential statistical tests (correlation, regression, and mediation analysis). Results are interpreted against the objective and theoretical evidence.

4.2. Response Rate and Data Screening

This section highlights the response rate obtained from the data collection process and data screening process applied to the raw data before statistical analysis.

Total of 500 questionnaires were distributed to the intervention sites where PACT and CARE Ethiopia were implementing the selected project interventions. Out of these, 432 complete questionnaire forms were received and made ready for analysis. This leads to a response rate of 86.4 percent. Babbie (2016) argued that a response rate of more than 70 per cent is acceptable for survey research and provides a sufficient basis for statistical analysis.

Table 4: presents the distribution and return of questionnaires by study area.

Region / Site	Project	Questionnaires Distributed	Valid Questionnaires Returned
Addis Ababa (Ministry of Peace and RWVL)	CEWRR / RWVL	40	27
Oromia (Adama, Ziway, and Oromia Peace and Security	CEWRR	130	112

Bureau)			
South Ethiopia (Dassenech, Hamer, and Nyangatom)	SEEK II	330	293
Total		**500**	**432**

The disparity in number of questionnaires distributed and returned (68) was due to two categories of non-responses and unusable questionnaires: those that were not returned during the data collection time period and those that had a considerable number of missing items or response sets so that they were considered unusable statistically.

The initial stage of the analysis involved cleaning and preparing the collected data. The processes of cleaning and screening included examination for missing values, detection of out-of-lying cases, check for data entry mistakes, and consistency check for response patterns. Questionnaires where a large proportion of the key variables for this study were absent were deleted and not included in the analysis. A closer look at the remaining responses was needed to confirm if they were free from the violations of regression assumptions and mediation assumptions.

After screening the data, 432 complete questionnaire entries were kept carrying out all the subsequent analyses. The dataset was considered sufficiently large and complete to allow for the execution of the proposed analyses.

4.3. Socio-Demographic Characteristics of Respondents

This section outlines the socio-demographic profiles of the 432 study respondents, in an effort to establish an understanding of the backdrop of the participants which may influence the interpretation of results pertaining to the sustainability and beneficiary involvement in PACT and CARE Ethiopia. Variables included: sex, age, marital status, educational status, and occupation as summarized in the table below

Table 5: Demographic Profile of Respondents (N=432)

Demographic Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	280	64.8%
	Female	152	35.2%
Marital Status	Married	298	69.0%
	Others	134	31.0%
Education Level	No Formal Education	162	37.4%
	Higher Education	82	19.0%
	Other Levels	188	43.6%
Occupation	Business Activity	184	42.6%
	Others	248	57.4%

Socio-demographic profiles of the 432 respondents are summarized in Table 5. It indicates that among the respondents, the male category is dominant where there are 280 male (64.8%) respondents and 152 female (35.2%) respondents.

Majority of the respondents, 298 (69.0%) were married whereas 134 (31.0%) fell into other category such as single, divorced and widow respondents. As far as education level is concerned, out of total 432 respondents, 162 respondents (37.4%) have no education. 82 respondents (19.0%) have higher education whereas 188 respondents (43.6%) belong to other education categories like primary and secondary education level.

Similarly, in case of occupation of the respondents, there are 184 respondents (42.6%) engaged in business whereas the others 248 respondents (57.4%) were engaged in other income earning activities like agriculture, employment and casual labor.

The predominance of males in the sample (64.8%) can partially be explained by the type of respondents. Most of them were from the SEEK II project in the pastoralist areas (Dassanech, Hamer, Nyangatom etc.). In these areas, traditionally it is predominantly men that are involved in structures related to peace building and conflict resolution such as the elder's council and local peace committees (LPCs). Hence the structure and norms within these traditional systems are reflected in the number of males and females within the sample of respondents for the study. It should also be mentioned that according to the PACT annual report, there have been efforts to ensure women participation in activities relating to projects, but participation in these peace structures is still relatively low (PACT, 2024) . Also, the RWVL project has a greater emphasis on women participation, but this aspect of the study contributes a relatively low number of respondents to the sample.

4.4. Descriptive analysis of Study Variables

In this part the data collected by the 432 respondents was analyzed using SPSS on the tendencies and variation of the constructs under study.

The Mean scores were employed to establish the trend among respondents on Project Management Practices (PMP), Beneficiary Engagement (BE) and Project Sustainability Outcomes (PSO), while standard deviation was used to determine consistency in the response of respondents. Based on these descriptive statistics, we were able to check the health of the project interventions and test for data reliability for the upcoming analysis of inference and mediation.

4.4.1. Project Management Practices (PMP)

In this paper, Project Management Practices (PMP) were used as multidimensional construct affecting Beneficiary Engagement (BE) and Project Sustainability Outcomes (PSO). PMP is considered from three stages, namely pre-project planning activities, execution and governance activities, and monitoring, learning and exit activities. According to theory, PMP will directly impact the PSO via efficiency in the implementation and PMP directly impact the BE and the BE will impact PSO indirectly through Ownership, Capacity and sustainability outcome for beneficiaries.

The descriptive statistics of PMP indicators obtained from 432 respondents indicate empirically the practice of PMP in projects. The average means scores are high overall (generally > 4.00 out of 5.00) and infer that PMP practice is good for all project life stages as far as perception is concerned. Therefore, it appears that the core aspects of project planning, execution and closure are managed well by all project managers, creating a sound basis for BE and PSO.

Table 6: Descriptive Statistics of Sustainable Project Management Practice Indicators (N = 432)

Indicator	**Mean**	**SD**
Project design was based on a formal assessment of community needs and environmental risks	4.11	0.950
Initial proposal included a strategy for post-donor self-funding	3.97	1.093
Local government and community leaders were involved in project design	4.10	0.966
Project design included safeguards for gender equity and social inclusion	4.05	1.016
Project plan aligned with local cultural and social systems	4.01	1.053
Proposal identified systemic barriers to sustainability	3.98	1.088
Activities were adjusted based on changing local conditions and feedback	4.19	0.874
Learning systems documented and applied lessons	4.00	1.071
Activities were integrated into local institutional frameworks	4.21	0.857
Local labor and resources were prioritized	4.08	0.986
Personnel with required technical and ethical capacity were allocated	3.95	1.108
Governance and accountability structures were maintained	4.20	0.867
Exit strategy and handover plan were finalized before completion	4.10	0.966
Skills were transferred to communities	4.10	0.966
Systems for future operational costs were established	4.23	0.845
Participatory monitoring tracked sustainability prospects	4.18	0.884
Local structures were empowered for oversight after project exit	4.00	1.071
Exit timing was based on verified readiness of local systems	4.18	0.884

This focus on setting up systems for the future running costs (M=4.23) clearly complements the long-term financial sustainability required by PSO. A focus on incorporating activities within local institutions (M=4.21) and sustaining structures for governance and accountability (M=4.20) is important to underpin BE through local ownership and involvement and appropriate

management and controls. These practices complement the study's argument that appropriate PMP ensures projects are locally anchored and beneficiary driven leading to more sustainable impacts. Likewise, high results in participative monitoring and learning and the adaptation to local context highlight a key factor in responsive PMP essential for proactive BE and strong PSO.

On the other hand, the low mean scores for each indicator suggest which elements PMP may have performed less well, leading to less optimal BE and PSO.

The slightly lower mean scores given to selecting technically and ethically able staff (M=3.95) and identifying the structural barriers for sustainability (M=3.98) could show where the weakest part of the foundations of PMP are, the part which could affect both BE and PSO. If the human resources do not have technical or ethical expertise, they cannot successfully implement projects, and skills may not be transferred to beneficiaries in the most effective way so capacity can be increased and project activities continue. Also, if structural barriers are not examined in the planning phase of a project, new ones will inevitably crop up. The lowest score was awarded to the planning phase and specifically for developing post-donor self-funding strategies (M=3.97) which shows a direct problem for the financial aspect of PSO, where projects must be self-sustainable. Though these are all mid-range scores (3.0 or above), the slightly weaker scores should be used to plan interventions that will improve overall PMP effectiveness.

Table 7: Composite Project Management Practices (PMP) Index

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
PMP Composite Index	432	1.89	5.00	4.0899	.62445
Valid N (listwise)	432				

The Composite PMP Index average was 4.09 (SD=0.624), which reiterates that practices of sustainability management are widely adopted. As indicated by a small standard deviation, there was an agreement in respondents on how well the practices are generally implemented, which further shows that though some practices need further work, sustainability integration with

project management is a concept well-received by the project. Overall findings conclude that, despite being fairly effective in fostering both BE and PSO, PMP requires improvement in areas such as HR development, identification of barriers upfront, and reliable self-funding system for long term achievement and sustainability.

Overall, the result of this study highlights that the effective implementation of Project Management Practice (PMP) is fundamental in the achievement of Beneficiary Engagement (BE) and Project Sustainability Outcomes (PSO). Empirically, through 432 respondents, this study confirmed the high overall implementation level of PMP (Composite PMP index of 4.09; SD=0.624). From its indicators with a higher score that proved effectiveness, it indicates that it is effective on financial mechanism and sustainability, integration of the project with the local institutions and the maintenance of good governance, that could lead the increased levels of BE and PSO. All the factors proved to embed the project effectively with its surroundings to guarantee the sustainability of the project. Nonetheless there is still some weak areas in which it needs improvement; human resource development on sufficient capacity (technical and ethical), comprehensive post-donor self-funding strategy formulation and identification of systemic barrier of sustainability. It is therefore important that these relatively weak indicators should be addressed in order to further improve PMP, BE and PSO.

4.4.2. Beneficiary Engagement (BE) Mediating Variable Analysis

Beneficiary Engagement (BE) is considered as a key mediating variable in the theoretical framework of this study, and it is suggested to link Project Management Practices (PMP) and Project Sustainability Outcomes (PSO). BE is treated as being intermediate to both PMP and PSO, suggesting that effectiveness of management inputs in bringing out the sustainability is dependent on the extent of and the intensity of interaction between project system and community (Creswell & Creswell, 2018). Such idea is in line with many earlier works that point out the participative nature of project activities in bringing about sustainability.

Descriptive statistics from the 432 respondents indicated that overall Beneficiary Engagement within sampled projects was good to excellent across all sampled projects. Scores on all six BE indicators ranged from 4.13 to 4.23 (average BE composite score=4.19, SD=.60) on a 5-point

Likert scale. High mean scores indicate that beneficiaries were likely participants in all parts of the projects, not simply the end users.

Table 8: Descriptive Statistics of Beneficiary Engagement Indicators (N = 432)

Beneficiary Engagement Indicator	**Mean**	**SD**
Community members had the final authority to influence or change key decisions during the project lifecycle	4.19	0.874
Beneficiaries were trained and actively involved in monitoring the project's performance and quality	4.20	0.862
Capacity-building activities focused on empowering local leaders rather than just providing one-way information	4.13	0.922
Clear channels existed for community feedback, and project management acted on that feedback	4.23	0.839
The community had a strong sense of ownership and responsibility for the long-term success of project results	4.17	0.890
Community participation evolved from passive attendance to active leadership by the end of the project	4.18	0.880

Composite BE Score

Table 9: Composite Beneficiary Engagement Score (N = 432)

	N	Minimum	Maximum	Mean	Std. Deviation
BE	432	2.00	5.00	4.1860	.59992
Valid N (listwise)	432				

Overall, consistently high mean scores for BE indicators give positive preliminary support to the research questions. Specifically concerning Research Question 2 (What is the impact of PMP on the quantity and quality of BE?), there are good indications from this data that PMP applied in these projects were effective at generating meaningful community participation. The high mean scores on indicators for transparent feedback processes (M=4.23), beneficiaries participating in monitoring efforts (M=4.20), and community impact on decision making processes (M=4.19),

strongly suggests that project management proactively created, institutionalized, and implemented processes that supported substantial participation, thereby moving away from a standard top-down project implementation method. While descriptive statistics cannot prove a causal relationship, the positive relationship between reported PMP and high BE scores is an important piece of preliminary evidence that supports effective participatory implementation.

The significant level of BE as seen above is also highly pertinent to Research Question 3 (What is the BE's contribution to the PSO). Indicators like strong ownership by beneficiaries (M=4.17), meaningful involvement in quality assurance and monitoring (M=4.20) and the change from passive participant to active leader (M=4.18) constitute important components for sustainability practices. This indicates that, with active involvement, beneficiaries gained adequate skills, knowledge and motivation to enable the sustainability of project benefits beyond the period of project implementation and external intervention thus directly contributes to PSO.

High BE also provides initial support for RQ1 (Are PMPs directly contributing to PSOs?). Although it requires structural testing for the direct causal relation, the omnipresent and high-quality beneficiary participation indicate that PMP used in this study were appropriate in providing space for sustainability by involving beneficiaries. Lastly, uniformly high ratings on all of the BE indicators including the involvement of beneficiary in decisions, feedback, building capacity and ownership provide substantial initial evidence for the main hypothesis of this study (RQ4). The relationship that BE mediates PMP and PSOs seems evident based on these findings, as it appears beneficiary involvement to project process is an important mechanism by which PMPs produce positive outcomes at the beneficiary level. To determine the extent of the mediation, a mediation analysis needs to be performed.

Overall, this study reveals the significant mediating role that BE plays in explaining how PMP affects PSO. Results from descriptive statistics (432 samples) confirm that Beneficiary Engagement levels are exceedingly high in the observed projects (total mean score=4.19; SD=0.60). Strengths identified at this level were strong feedback mechanisms (M=4.23), beneficiary involvement in monitoring(M=4.20), and community decision-making power (M=4.19). It appears that the PM practices in these projects created truly participative conditions with a focus on active engagement, which is in line with the argument that management input enhance sustainability through a high quality of engagement. The fact that ownership,

monitoring, and leadership development are strongly correlated with high levels of BE helps provide evidence that BE contributed to PSOby building local capacities. Although descriptive statistics do not offer evidence of causality, they do strongly suggest the presence of a relationship between PMP and BE, and between BE and PSO. The consistently and thoroughly integrated BE of such high quality suggests that BE plays a critically central role in delivering sustainable results in the observed projects.

4.4.3. Project Sustainability Outcomes (PSO)

Project Sustainability Outcome (PSO) is the most important measure and the dependent variable of this research. Within the framework of this research PSO is the enduring nature of the outcomes and benefits to the project after the termination of formal intervention and closure of external fund source from PACT and CARE Ethiopia. Theoretically PSO is founded on the systems approach, which states that it's not "fixed end-state" but emergent characteristic resulting from interaction between structures, people, and institutions (Bertalanffy, 1968; Meadows, 2008). According to USAID Local Systems Framework (2016) outcome of system, especially the 1-3-year window immediately after the NGO's departure depends on local ownership and system's financial viability.

Table 10: Descriptive Statistics of Project Sustainability Outcome Indicators (N = 432)

Sustainability Outcome Indicator	**Mean**	**SD**
The core project benefits have persisted for 1–3 years after completion	4.21	0.857
The community is better equipped to handle environmental or economic shocks without external aid	4.03	1.039
The project successfully addressed underlying structural causes of community problems	4.04	1.025
Local institutions are managing project activities without external technical support	4.00	1.071
Positive changes continue to benefit the community and future generations	4.21	0.857
The project has become a permanent part of the local community or government system	4.16	0.895

Composite PSO Score

Table 11: Descriptive Statistics of Project Sustainability Outcomes

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
SPO	432	1.67	5.00	4.1092	.66442
Valid N (listwise)	432				

With regard to the descriptive statistics for Project Sustainability Outcomes (PSO), there appears to be a high degree of perceived sustainability in all six of the projects assessed. In all six categories, mean ratings of 4.00 to 4.21 were recorded (5-point scale). The composite PSO score of 4.11 (SD=.66) also shows that the respondents feel that these projects are already sustainably implemented and thus has transitioned from a donor dependent program to a locally anchored one. More specifically, two highest rated questions included the continued viability of the central project benefits for at least 1 to 3 years beyond project completion (M=4.21, SD=.857) and continued positive change in the lives of both current and future generations (M=4.21, SD=.857) of the 6 different indicators measured. These results clearly suggest that respondents feel that these programs have already achieved sustainability beyond the life of the project implementation phase and also that project results are being mainstreamed into community and government processes (M=4.16, SD=.895).

There were slightly lower mean scores but still positive for local institutions taking sole control of implementation of the activities in absence of technical support from outside (M=4.00, SD=1.071) and an increased capacity on the part of the community to deal with environmental or economic shocks on their own without help from outside (M=4.03, SD=1.039). Although there is some progress the same aspects may require further development on the part of local systems in order for them to have even greater long-term capacity building. It can be concluded that for the most part, the project continues to be of benefit, local systems are continuing to grow into their responsibility, and positive changes have become part of the community.

4.5. Analysis of Central Tendency and Data Distribution

As a prelude and to check the viability of the subsequent parametric procedures such as linear regression and Pearson correlation, descriptive statistical measure of centrality and distribution was explored for each variable under the study, i.e., PMP (Sustainable Project Management Practices), BE (Beneficiary Engagement) and PSO (Project Sustainability Outcomes). This precautionary statistical step allows for checking the shape of the data, ensuring it is sufficiently normally distributed. (Field, 2018).

Table 12: Measures of Central Tendency and Normality (N=432)

Statistic	PMP	BE	SPO
Mean	4.0899	4.1860	4.1092
Median	4.2222	4.3333	4.2500
Std. Deviation	.62445	.59992	.66442
Skewness	**-.838**	**-.804**	**-.994**
Kurtosis	**.393**	**.435**	**.868**
Minimum	1.89	2.00	1.67
Maximum	5.00	5.00	5.00

Table 12 indicates that the mean scores for all three constructs are all quite high (PMP=4.09; BE=4.19; PSO=4.11), above the scale midpoint of 3 for a 5-point scale. This means that generally among the 432 respondents the projects implementation was found to have high quality in each dimension and the level of sustainability in that dimension was high. The median values are all just higher than the means. This demonstrates a slight negative skew-a larger number of responses are in the upper range of the scale. The means being close to the higher end of the scale means that opinions are clustering toward the high quality of the interventions. The extent of the skewness and kurtosis values were investigated to formally evaluate if the data distribution would be appropriate for use with parametric analyses:

Skewness: all constructs present skewness scores between-0.804 and-0.994. As suggested by Hair et al. (2017), skewness scores within-1.0 and+1.0 values indicate that a normal distribution can be assumed. Although the scores are negative, they are in an acceptable range and show a

slight leftward distribution (more higher scores) that would indicate a roughly symmetric distribution.

Kurtosis: Kurtosis values range between 0.393 to 0.868, which are considered to be within the safe margin of ±3.0 (Field, 2018) which is known as mesokurtic demonstrates the data are neither too peaked nor too flat and that parametric analyses will therefore be appropriate.

The constant value across the variables for standard errors (skewness: 0.117, kurtosis: 0.234) shows consistency in data variation across all of the variables. As the central tendency measures and distribution statistics (skewness and kurtosis) are very close to each other and are within the academical acceptable limit, data is stable and there is high confidence in moving forward with inferential statistical test.

4.6. Correlation Analysis

The Pearson Correlation Coefficient (r) was calculated to test the strength and direction of correlation between Project Management Practices (PMP), Beneficiary Engagement (BE), and Project Sustainability Outcomes (PSO). This is required to satisfy the objectives of the study and also to ensure the prior conditions for mediation.

A correlation analysis is a statistics procedure that takes into consideration the relationship between the variables in terms of strength. A Pearson coefficient of correlation falls between the two boundaries (-1) and (+1), with a close association to (+1) showing a strong positive relation between variables, closer to (-1) showing a strong negative relation between variables, and near (0) showing no relation between the variables. In this study, the relation of the variables was tested in relation to the scale defined by Bartz (1999); a coefficient greater than 0.80 was considered as having a very strong association.

Table 13: Interpretation of Pearson Correlation Coefficient (Bartz, 1999)

Correlation Coefficient (r)	Strength of Relationship	Interpretation
0.00 – 0.19	Very Weak	Negligible or no relationship
0.20 – 0.39	Weak	Low level of association
0.40 – 0.59	Moderate	Noticeable relationship
0.60 – 0.79	Strong	High association between variables
0.80 – 1.00	Very Strong	Very high association; potential multicollinearity concern

Table 14: Pearson Correlation Matrix (N=432)

Correlations

		PMP	BE	SPO
PMP	Pearson Correlation	1	.845**	.837**
	Sig. (2-tailed)		.000	.000
	N	432	432	432
BE	Pearson Correlation	.845**	1	.791**

	Sig. (2-tailed)	.000		.000
	N	432	432	432
SPO	Pearson Correlation	.837**	.791**	1
	Sig. (2-tailed)	.000	.000	
	N	432	432	432

**. Correlation is significant at the 0.01 level (2-tailed).

In all variables, the correlation matrix shows a positive relationship indicating statistical significance at the significance level of 0.01 ($p < 0.01$). According to Bartz (1999), the relationships are interpreted as very strong for PMP and BE ($r = 0.845$) and PMP and PSO ($r = 0.837$) and strong for BE and PSO ($r = 0.791$). This point indicates strong interdependence of Project Management Practices, beneficiary involvement, and sustainability outcomes. Specifically:

PMP & BE ($r=0.845$, $p<0.01$): Very positive significant correlation between Project Management Practices and beneficiary involvement. It shows that higher implementation of systems-based, sustainability-oriented, and integrative management principles (in line with systems theory and Triple Bottom Line) correlates with significant increases in beneficiary involvement and participation.

PMP and PSO ($r = 0.837$, $p < 0.01$): There is a highly significant positive correlation between Project Management Practices and project sustainability outcomes, meaning greater inclusion of environmental, social, institutional, and governance issues in all stages of project management is correlated highly with higher sustainable outcomes over time.

BE and PSO ($r=0.791$, $p<0.01$): There is a significant positive correlation between beneficiary engagement and project sustainability outcomes. It seems that beneficiaries are key to sustainable outcomes, especially in terms of mechanisms for coordinating their activities, participating in activities, and enhancing beneficiary capacity.

The findings provide substantial evidence for the study's analytical framework (PMP→ BE→ PSO).

Evidence for mediation (in response to research question 4) shows significant correlation among PMP, BE, and PSO, fulfilling the minimal requirements for mediation analysis, and thus it can be concluded that the degree of the beneficiary engagement might have a mediating effect that translates the PMP into sustainable outcomes. Relevance for research questions 1-3, the strong positive links between PMP and PSO provide clear evidence of how sustainability-oriented management practice affects the long-term outcome (of the project) in all its dimensions: environmental, social, institutional, economical, and governing.

Although the correlation is high, it does not exceed the recommended value of 0.90 (Hair et al., 2017), meaning the multicollinearity is not alarming. The findings provide a clear indication that the two variables (PMP BE) are highly correlated as a result of a strong conceptual linkage between them; however, they maintain sufficient discriminant validity to be used in regression and mediation analysis.

The strong correlation shows the level of integration of the PMP with BE in the examined NGO projects. As these two variables are meant to support each other in a systems perspective of sustainability, this outcome is strongly predicted; however, its value maintains enough of a gap with other values for the multiple regression and mediation analysis.

4.7. Regression Analysis

After assessing the strength and direction of these relationships via Pearson Correlation, this section presents the multiple linear regression analysis performed to complement the correlation analysis. Where correlation measures the relationship between variables, regression can determine the degree to which predictors explain variance in the dependent variable and help us test our hypotheses (Field, 2018). In this study, regression

is used to test the degree to which Project Management Practices (PMP) and Beneficiary Engagement (BE) can be significant predictors of Sustainability Project Outcomes (SPO).

The analysis is set out in two main parts to ensure the coefficients and their corresponding inferences are reliable. Firstly, Diagnostic Tests are carried out to determine whether the data meets the assumptions necessary for parametric testing, such as the normality of data, absence of multicollinearity, and homoscedasticity. Secondly, the Linear Regression Model is run, interpreted and, with the contribution of PMP and BE assessed, its capacity to predict SPO will be established.

In order to answer the research questions a set of regression models were run, using a mediation model consistent with the principles outlined by Hayes (2022). We ran a total of three regression models: a direct effect model predicting the effect of sustainability dimensions on PSO; a mediator model predicting the effect of sustainability dimensions on BE; and a mediation model testing the effect of both sustainability dimensions and BE on PSO.

4.7.1. Diagnosis Test

A series of diagnostic checks were carried out on the data before the main regression was run, in order to determine whether the data were suitable for a linear model. This process is very important, otherwise "Type I" or "Type II" errors could result from a violation of the assumptions about mathematics underpinning the regression.

4.7.1.1. Normality Test

The assumption of normality was assessed for all study variables, namely Project Management Practices (PMP), Beneficiary Engagement (BE), and Project Sustainability Outcomes (PSO), using descriptive statistics, skewness, kurtosis, and visual inspection of histograms and normal probability (P–P) plots.

Table 15: Individual Normality Statistics (N=432)

Variable	Mean	Median	Skewness	Kurtosis
PMP	4.0899	4.2222	-0.838	0.393

BE	4.1860	4.3333	-0.804	0.435
SPO	4.1092	4.2500	-0.994	0.868

A Mean and median comparison of all variables indicated that all were quite close to one another (e.g. PMP = 4.08 vs BE = 4.22) which showed that there are not many extreme values present skewing the distribution.

All the variables appeared to have negative skew (PMP = -.838; BE = -.804; PSO = -.994) and indicate that the responses are skewed to the high end of the scale. However, all values were below the maximum allowable skew of 1 indicating that the distributions did not present themselves as severely skewed. In comparison, all three kurtosis variables were below the maximum allowable value of 3 (PMP = .393; BE = .435; PSO = .868) and indicate that none of the distributions were heavily peaked or flat. According to Hair et al (2017), "acceptable values for skewness are pm 1 and for kurtosis are pm 3". All three variables met these requirements (Table 11) as the highest observed skew was for PSO (-.994), and all variables still appeared fit for parametric statistics.

Table 16: Tests of Normality

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PMP	.107	432	.000	.944	432	.000
BE	.116	432	.000	.940	432	.000
SPO	.132	432	.000	.925	432	.000

a. Lilliefors Significance Correction

Although both tests showed statistical significance ($p < 0.001$), this is not surprising when dealing with such a large N (432), since even small variations in perfect normality are likely to be detected. Tests like these are extremely sensitive with a large number of data points (Field, 2018), so more weight was put on skewness, kurtosis and visual inspection.

It was further visually assessed using histograms and normal probability plots that the data are approximately normally distributed. It was concluded based on these findings that normality can be assumed.

4.7.1.2. Multicollinearity Test

Multicollinearity is a statistical phenomenon when two or more independent variables in a regression model are correlated, thus explaining some same variation of dependent variable. Therefore, regression coefficients can unstable and inflation or not possible to interpret. The aim of this study is testing multicollinearity between Project Management Practices (PMP) and Beneficiary Engagement (BE), which are key explanatory variables of Project Sustainability Outcomes (SPO), to ensure that independent variables are independent of one another before they proceed to regression analysis. Andy Field (2018) has explained the test for multicollinearity is based on the use of Tolerance and Variance Inflation factor (VIF). The tolerance less than 0.10 or VIF greater than 10 signals that there is a serious multicollinearity problem.

Table 17: Multicollinearity Diagnostics

Variable	Tolerance	VIF
PMP	0.286	3.492
BE	0.286	3.492

From the multicollinearity diagnostics, PMP and BE obtained same value for tolerance (.286) and VIF (3.492). The tolerance values of .10 and VIF values of 5 are accepted as "good values for the absence of significant multicollinearity. Thus, PMP and BE have the same value, and the above two factors do not have significant multicollinearity problems. This means, though PMP and BE are similar in nature and related statistically, they do not overlap too much in their explanation of the dependent variable (SPO) within the model, which means both have significant individual explanation value in the model.

Systematically, this conclusion shows PMP and BE as the linked but separate parts of sustainability. The "structure of managed system and planning mechanisms" refers to the PMP, and the "participatory and relational part in the beneficiaries" refers to the BE.

Non-existence of multicollinearity gives support for the two constructs as functioning as interdependent, but non-redundant, subsystem functioning in contributing to the Project Sustainability Outcomes without having their coefficients (the estimates of effects on project sustainability outcomes) distorted by other variables included in the regression.

It is indicated from the multicollinearity test that the regression model itself is statistically acceptable. Independent variables are distinct enough to provide reliable estimations about their effects and combined effect on project sustainability outcomes. Hence the dataset is well appropriate for carrying out the multiple linear regression analysis.

4.7.2. Linear Regressions Analysis on Mediation Effect Model Analysis

This section explains the multiple linear regression analysis used to investigate the hypothesized relationships among Project Management Practices (PMP), beneficiary engagement (BE) and project sustainability outcomes (PSO). The regression is implemented using a mediation process (based on Hayes, 2022) with PMP as the independent variable, BE as the mediator and PSO as the dependent variable.

This analysis is suitable, as it not only explores the direct effect of PMP on PSO, but also investigates whether it operates through BE that acts as the behavioral and institutional mechanism transforming management practices into sustainability results. Hence, 3 regression models were estimated:

- Model 1 (Direct Effect model): PMP→ PSO
- Model 2 (Mediator Model): PMP→ BE
- Model (Full Mediation model): PMP+BE→ PSO

This sequential stepwise testing of the regression models accords with traditional meditation logic (Baron & Kenny, 1986; Hayes, 2022) to test for direct and indirect relationship between parameters in the sustainability system.

4.7.2.1. Effect of Sustainability Dimensions on PSO (Direct Effect) Model 1

The direct effect relationship of PMP on PSO is explored in this model. From the viewpoint of Systems Theory (Bertalanffy, 1968; Meadows, 2008), PMP is defined as structural subsystem

that impact PSO through the interplay of the plan, governance, and implementation sub-systems. Meanwhile, this model is consistent with the Triple Bottom Line concept (Elkington, 1997) where PSO results from combined environmental, social, and economic dimensions in project management systems.

Table 18: Model Summary-PMP→SPO

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.837[a]	.700	.699	.36444

a. Predictors: (Constant), PMP

b. Dependent Variable: SPO

The regressions revealed a significant and strong correlation between PMP and PSO (R = .837). PMP accounted for approximately 70% of the variability in the Project Sustainability Outcomes (R = .700). It shows a good capacity to predict the future status of the project sustainability outcomes based on current project management approaches in place. The adjusted R (.699) also assures the stability of the model as there are no effects of sample size or overfitting issues.

Table 19: ANOVA Results for the Regression Model 1 PMP→SPO

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	133.155	1	133.155	1002.526	.000[b]
	Residual	57.112	430	.133		
	Total	190.267	431			

a. Dependent Variable: SPO

b. Predictors: (Constant), PMP

The ANOVA result showed that the model is statistically significant ($F=1002.526$, $p<0.001$) which is enough to say that PMP has significant improvement over a null model. PMP is statistically significant, it suggests that PMP is a good explanatory variable for the system.

Table 20: Coefficients of the Regression Model PMP→SPO

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.469	.116		4.030	.000	.240	.697
	PMP	.890	.028	.837	31.663	.000	.835	.945

a. Dependent Variable: SPO

The coefficient estimate for PMP shows it has a powerful positive and statistically significant impact on PSO: PMP (= 0.837, t = 31.663, p < 0.001). This suggests that a one-unit improvement in PMP is strongly related to an improvement in PSO by 0.837 units. The unstandardized coefficient B = 0.890, showing that improved PMP practices are strongly positively associated with environmental, social, institutional, and governance dimensions of sustainability outcomes.

This results answers research questions 1-3 (regarding impact of sustainability-oriented project management on long term sustainability outcomes). It shows that PMP is a strong predictor of the project's sustainability outcomes, such that the more sustainability was considered during design and implementation, the stronger the effects will be a few years later (after 1-3 years post completion). The effect shows only a direct impact pathway, such as other factors (such as Beneficiary Engagement) will explain a portion of the mechanism in which the result is affected.

These results are in line with Silvius and Schipper (2014), where it states that integrating sustainability in project management strongly contributes to a higher long-term success of the project. Likewise, PMI (2021) states that sustainability-oriented project management practices transcend the iron triangle (cost, time, scope) and result in a much higher long-term value creation.

These results are confirmed by Gareis et al. (2013) where the author recognizes lifecycle-oriented project management systems crucial to sustainable outcomes in development contexts which is complex. With regards to the context of Ethiopian development, Workneh and Aga (2022) concludes that those projects that possess more institutionalized management systems deliver more sustainable outcomes, as compared to those that fail to address or lack well-integrated sustainability principles in projects.

From the Systems Theory perspective (Meadows, 2008), the finding supports that PMP act as a significant structural element within the project system. High explanatory power of 70% shows that project design and management structures have major impact on sustainability outcome.

From the Triple Bottom Line perspective (Elkington, 1997), it means that an approach that balances economic, social and environmental concerns through systematic project management can produce better long-term results. From the USAID Local Systems Framework (2016), the result suggests that effective system at the project level contributes directly to strengthening of sustainability at the local level even before including mediation effects such as beneficiary engagement.

The key insight from the finding, despite its significant direct impact on PSO, PMP is not a sufficient explanation of the entire process mechanism for sustainability. The high variance explained would seem to indicates a high level of influence, and structural dependence, however, it does not yet fully convey the relationships and behavioral processes through which sustainability is implemented. This opens up a theoretical space for BE to function as the mediating mechanism-and this is exactly what is investigated in Model 2 and Model 3.

In summary, PMP exhibits a positive and significant impact on PSO. This means that by establishing structured and sustainability-oriented project management systems, the sustainability outcome of the project could be enhanced significantly. The model covers 70% variation in PSO, reflecting the role of PMP in the sustainability pathway of a project. Although PMP directly and positively impacts PSO, sustainability outcome is not only influenced by project management, but by other mediation mechanisms as Beneficiary Engagement.

4.7.2.2. Effect of Sustainability Dimensions on Beneficiary Engagement (Mediator Model)- Model 2

This model focuses on the effect of Project Management Practices (PMP) on Beneficiary Engagement (BE), as it is the mediating variable in the study's hybrid sustainability model. According to Stakeholder Theory (Freeman, 1984), beneficiaries are not simply passive recipients of project activities but key actors whose participation in the project system is influenced by the quality of project management systems and governance.

With regard to the framework of a Systems Theory approach (Bertalanffy, 1968; Meadows, 2008), PMP represent the structure subsystem and influence the level of interaction, participation and sensitivity within the project system. Therefore, an enhancement of PMP is expected to contribute to the development of higher levels of stakeholder engagement with beneficiaries through enhanced coordination, communication and participatory approaches.

Table 21: Model Summary PMP→BE

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.845[a]	.714	.713	.32139

a. Predictors: (Constant), PMP

b. Dependent Variable: BE

The outcome of the regression revealed a highly significant correlation between PMP and BE (R=0.845). About 71.4% of the variation in BE is accounted for by the model (R=0.714) thus, it is confirmed that project management that is sustainable is a significant factor that contributes to the quantity and quality of BE. The adjusted R (0.713) confirms the stability of the model.

Table 22: ANOVA Results for the Regression Model PMP→BE

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	110.702	1	110.702	1071.739	.000[b]
	Residual	44.415	430	.103		

Total	155.117	431			

a. Dependent Variable: BE

b. Predictors: (Constant), PMP

The overall model is significant (F = 1071.739, p < 0.001). This suggests that PMP is a significant predictor of Beneficiary Engagement. This means that PMP adds significant amount of explanatory variation to the model.

Table 23: Coefficients of Regression Model PMP→BE

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.867	.103		8.449	.000
	PMP	.812	.025	.845	32.737	.000

a. Dependent Variable: BE

From coefficient results, PMP has significant positive impact on Beneficiary Engagement PMP (= 0.845, t = 32.737, p < 0.001). These findings imply that the enhancement of Project Management Practices results in a greater increase of Beneficiary Engagement. Also, the B coefficient (B= 0.812) implies strong relationship between PMP and enhanced level of engagement, cooperation and coordination among beneficiaries to participate in the project activities.

This finding offers an answer to Research Question 4, which tries to explain the function of beneficiary participation within the sustainability concept. The result is indicative of PMP as a clear upstream determinant of beneficiary participation, that is, formalized, sustainability-oriented management systems play an active role in shaping the process of beneficiaries' participation in the different project implementation stages, monitoring and decision-making procedures. It confirms that beneficiary participation does not happen haphazardly but is managed.

This result conforms to Freeman (1984), who holds that stakeholder engagement depends primarily on system within the organization that structures in inclusion and participation process. Correspondingly, USAID Local System Framework (2016) claims that a

strengthened project management system encourages the local participation by providing formal channels to involve and engage and to give feedbacks to project implementation. This is further corroborated with Silvius and Schipper (2014), who present the evidence of better stakeholder involvement, response and accountability for development project implementing using sustainability focused project management approach. By similar effect to what is observed in Ethiopian development process, Workneh and Aga (2022) and Tilahun (2021) conclude also that clear project governance system enhances beneficiaries' involvement but its level varies depending on how it is applied.

Based on Stakeholder Theory, it supports that the interaction with the beneficiaries are facilitated by the project formal system, instead of isolated from it. The PMP enables the institutional and formal framework for stakeholder's involvement.

Based on Systems Theory, the PMP serves as a regulating sub-system which can trigger relationship in the project system and elevate the interaction between implementer and beneficiary. Based on USAID Local Systems Framework, the results imply that the improvement of project-level management system reinforces those participation mechanisms which are required for sustained development impact.

The key insight from this finding is that this model presents the most convincing evidence for the "A-path" of mediation, demonstrating the extent to which PMP is related to Beneficiary Engagement. This point is significant because it allows to argue that BE is not merely an independent variable in its own right, but is consistently produced by project management processes. This helps justify the use of BE as a valid mediating mechanism between PMP and PSO.

Generally, the results indicated that the effect of Project Management Practices on Beneficiary Engagement is high, significant and positive in statistical terms. 71.4% variation in BE is explained by the model and as such the design and systematic application of a project management system based on sustainability has a direct impact on the extent and level of beneficiaries' engagement. This verifies beneficiary engagement as a variable not being natural, but instead being structured by the design and

execution of projects, which is of a high importance in setting it up as an intermediary between the explanations of project sustainability.

4.7.2.3. Combined Effect of PMP and Beneficiary Engagement on Sustainability Project Outcomes (Mediation Model) Model 3

In this section presents the analysis of Model 3 on effect of both the combination of Project Management Practices (PMP) and Beneficiaries Engagement (BE) on Project Sustainability Outcomes (PSO). In this model the influence of Beneficiaries Engagement (BE) mediating relationship between PMP and PSO is being test specifically in this Model. The mediation analysis was performed based on Barons and Kenny (1986) as well as Hayes (2022) procedures in relation to analysis of mediation. The aim of this model is to understand whether by incorporating BE, will make it clear or change the relation of PMP and PSO.

Theoretically, the model is consistent with Systems Theory (Bertalanffy, 1968; Meadows, 2008), indicating that the combination of structural (PMP) and relational (BE) subsystems creates output. It illustrates the relationship between formal project systems and stakeholder mechanisms for the generation of sustainable output, within the framework of USAID's Local Systems framework (2016).

Table 24: Model Summary-PMP→BE→SPO

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.851[a]	.724	.723	.34963

a. Predictors: (Constant), BE, PMP

b. Dependent Variable: SPO

As it can be noticed in the regression result, there is a strong and significant link between the aggregated predictors (PMP and BE) and PSO (R = 0.851). The model has a high R which explained 72.4% (R = 0.724) of the variation of PSO, suggesting that management

practices and beneficiary involvement play a critical role in project sustainability outcomes.

The adjusted R (0.723) confirms the stability and reliability of the model as only a minimal difference exists between R and adjusted R.

Table 25: ANOVA Results for the Regression Model PMP→BE→SPO

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	137.825	2	68.912	563.733	.000[b]
	Residual	52.442	429	.122		
	Total	190.267	431			

a. Dependent Variable: SPO

b. Predictors: (Constant), BE, PMP

The model is statistically significant (F=563.733, p<0.001), and it was therefore established that the management practices PMP and beneficiary participation BE combined will contribute to enhancing the prediction power of Project Sustainability Outcomes. This confirms that both management practices and beneficiary participation are predictors of sustainability outcomes and work better together than in isolation.

Table 26: Coefficients of Regression Model PMP→BE→SPO

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.188	.120		1.558	.120	-.049	.425		
	PMP	.627	.050	.589	12.439	.000	.528	.726	.286	3.492
	BE	.324	.052	.293	6.181	.000	.221	.427	.286	3.492

a. Dependent Variable: SPO

The coefficient results reveal that it is possible to establish both PMP and BE as having a statistically significant and positive impact on Project Sustainability Outcomes. PMP

actually has a high impact on the dependent variable, PSO (= 0.589, t = 12.439, p < 0.001), which leads to interpret that enhance the sustainability of the practices, more sustainability it can achieve in the sustainability of the projects.

In particular, Beneficiary Engagement was found to have a positive impact and to be significant with the dependent variable, PSO (= 0.293, t = 6.181, p < 0.001), and this is confirming that more beneficiary participation leads to achieve more sustainability outcomes in the projects. Yet, we can also observe a decrease of PMP's effect on PSO from = 0.837 to = 0.589 after BE was added to the regression equation (comparison to Model 1). The decrease was interpreted as a partially mediated effect, in particular part of the effect of PMP on PSO is transmitted through Beneficiary Engagement.

This model attempts to directly answer the Research Questions 1, 2 and 4 focusing on how far do PMP and BE determine the final result on the final result of PSOs. Both PMP and BE are significant determinants of PSOs but the mediation effect by BE on PMP's final effect proves that SPOS do not emanate from management approaches but also from the BE process. This therefore indicates that there is a mediation effect of Beneficiary Engagement in developing sustainable management approach into ultimate development results of a project sustainability period.

The results show support for Stakeholder Theory (Freeman, 1984) that, for the project outcomes to be supported by stakeholders, benefits need to be delivered by them. Although they do not carry a lot of weight in relation to management by them, but through the formal systems of management which are employed for their involvement.

The results show that from systems theory (Meadows, 2008) PSO results from the cooperation between the structural subsystem PMP and the relational subsystem BE. And the system performs best when both are combined to contribute to project outcomes.
The results show that from USAID Local Systems Framework (2016) sustainability is higher when formal systems of management are supported with sufficient participation that enhances local ownership and institutional persistence.

The key insight from this model is that it provides evidence for the full mediation structure within the present study. PMP continues to be the best predictor of PSO, but its impact is partially transmitted through Beneficiary Engagement. Thus, this supports that Beneficiary Engagement is not a separate supplemental variable but a functional process by which sustainability-oriented project management practices are converted into long-term performance.

From the results, it can be said that both Project Management Practices and Beneficiary Engagement play an important role in Project Sustainability Outcomes. Yet, sustainability outcomes are maximized when both variables work with one another in an integrated system. This indicates that PSO cannot be attributed to the management practices per se, but rather it is a product of the interaction between structured project systems and active participation from beneficiaries. These results hence validate the study's hybrid sustainability framework, under which PMP serves as the structural foundation, BE is considered the relational mechanism, and PSO provides the final system-level outcome.

4.7.2.4. Regression Summary

Across the three models, PMP was a significant predictor of BE, and both PMP and BE were significant predictors of PSO. The decrease in the direct effect of PMP when BE was entered into the model provides first evidence for partial mediation. The result implies that while PMP affects project sustainability directly, one way in which PMP achieves project sustainability is by enhancing beneficiary involvement. The present findings are consistent with the literature which finds that well-designed and effective project management systems help sustain project results by encouraging stakeholders' involvement, ownership and commitment to project goals. Review of empirical evidence done in Chapter Two also revealed that projects in which there is high beneficiary involvement had better long-term success than other projects which only depend on managerial and technical actions.

Moreover, the significant impact between PMP and BE provides further support to the management practices enabling environment for substantial stakeholder participation. And, the positive and significant impact of BE on PSO suggests that the role of beneficiaries in continuing project benefits beyond its duration is significant. This corresponds with earlier studies that found beneficiary involvement as significant predictor on sustainability of the project and project effectiveness. Based on this, introduction of BE in the model shows decrease in the value of PMP coefficient from = 0.837 to = 0.589, meaning that some effects of PMP on the outcome variable on sustainability, are mediated through beneficiaries' involvement. Therefore, there are enough theoretical as well as empirical grounds to use Hayes PROCESS Macro for mediation analysis testing the indirect impact of PMP on PSO through BE.

4.7.2.5. Total Effect Mediation (direct and indirect) (Hayes PROCESS Model 4)

For the purpose of testing the mediating function of BE in the relationship between PMP and PSO, Hayes PROCESS Macro Model 4 was utilized. This approach is arguably more powerful than typical regression-based tests as it employs bootstrapping method in calculating the indirect effect and requires no assumption about the normality of the sampling distribution of the indirect effect (Hayes, 2022). Therefore, with 5,000 bootstrap samples, direct, indirect and total effects of mediation were tested in the context of the hybrid sustainability approach adopted.

The PROCESS results revealed the following key effects, PMP predicts BE significantly (= 0.8116, $p < .001$); PMP predicts PSO significantly (= 0.6269, $p < .001$) and BE predicts PSO significantly (= 0.3243, $p < .001$). The model overall demonstrates high explained variance for the mediator and dependent variable.

Most crucially for the test of mediation showed Total effect PMP -> PSO: = 0.8901, $p < .001$; Direct effect PMP -> PSO: = 0.6269, $p < .001$; Indirect effect PMP -> BE -> PSO: = 0.2632

Bootstrapped 95% CI: [.1630, .3633]. Since 0 is not in the confidence interval the indirect effect is statistically significant and mediation is established.

The result demonstrates that PMP not only has a direct impact on Project Sustainability Outcomes, but also indirect effect through Beneficiary Engagement. The findings highlight that sustainability focused project management practices could be leveraged not only by influencing directly the Project Sustainability Outcomes, but also by using the increased beneficiary participation processes, which can further contribute to sustainability outcomes. The evidence of partial mediation is that Beneficiary Engagement is not the only channel, through which PMP influences PSO.

Stakeholder Theory (Freeman, 1984): The results support the idea that the beneficiaries are not passive beneficiaries, but active participants within the project system whose participation is shaped by the project management system structurally but is not completely self-sustaining but partial, confirming that participation is still a matter of organizational systems.

Systems Theory (Bertalanffy, 1968; Meadows, 2008): The results clearly show that the subsystem interrelationship creates sustainability. PMP acts as a structural subsystem and the BE is the relational subsystem. The mediation confirms that it is not a single cause (variables) but system interaction that cause sustainability.

USAID Local systems framework (2016): The results show that strengthening the PM system strengthens the participation system which supports sustainability, yet, partial mediation shows that strengthening of local systems is still a work in progress and does not appear self-sustaining yet.

These findings are consistent with Silvius and Schipper (2014) who contend that sustainability-oriented project management can lead to better stakeholders' engagement and enhance the project success in the long term. And in similar direction Hayes (2022) maintains that mediation in social systems are likely to be partial due to the nature of multiplicity of indirect effects.

Empirical results from Ethiopia also conform with the result that while participatory mechanisms can enhance project outcome, but the level of beneficiaries' empowerment and institutionalization vary (Workneh & Aga, 2022; Tilahun, 2021). And it also indicates why BE serves as a partial mediator instead of a full mediator.

The findings carry useful implications for development practice. First, they suggest that PMP itself cannot be a guarantee of sustainability outcomes; Second, they reinforce that Benefit Entitlement is the key channel through which the latter is attained; Third, they indicate that enhancing participation systems would greatly increase project management efficiency. Last, they suggest that the intervention on sustainability should pay more attention on enhancing relations and participation systems, not merely technical project designs.

The results empirically confirm the hybrid sustainability framework that we adopt in this research. PMP stands for the structural perspective of sustainability, while BE stands for the relational, participatory perspective. PSO then comes as a system-level outcome of their co-evolution.

The Hayes PROCESS Macro outcomes confirm that Beneficiary Engagement is a partial mediator of the relationship between Project Management Practices (PMP) and Project Sustainability Outcomes (PSO). Although PMP directly impacts on PSO, a substantial part of the effects on PSO passes through BE. It has thus been confirmed that project sustainability results both from properly designed project management systems as well as the participation of the beneficiaries of the project, a confirmation of the integration of systems theory, stakeholders' theory and the USAID local systems approach in understanding sustainability of development project performance.

4.7.2.6. Summary of Mediation Analysis

In this chapter, the results of the study related to PMP, BE and PSO are presented and discussed. Three stages of analysis: descriptive, diagnostic and inferential statistic was

presented to test PMP, BE and PSO by using three-step model: diagnostic, regression analysis and mediation analysis (Hayes PROCESS Macro).

All diagnostic tests provided assurance of the acceptability of the data for further analysis. While the results of the tests for normality showed that the variables were not normally distributed, this was not problematic due to the high value of N (N = 432), making the parametric tests robust.

Also, the results from diagnostics for multicollinearity reassured that variables were related strongly but not too strongly. Hence the analysis was considered sound in terms of variable regression. The results of the regression analysis produced results similar to that of the correlation analysis with strong significant predictors in each model. PMP significantly predicted PSO both directly and indirectly and had a significant impact on BE. BE on the other hand was also a predictor of PSO.

Finally, the mediation analysis conducted via Hayes PROCESS Macro found that BE mediates partially between PMP and PSO. The indirect effect found to be significant, which means PMP had effect on PSO not only directly but indirectly via on beneficiary.

The overall results validated a consistent and empirically based structural relationship between the variables of study. PMP acts as a potent upstream predictor of BE and PSO, and BE act as an intermediate relational mechanism that mediate partly the relation of PMP on PSO. This validated that sustainability in the projects development cannot be merely attributed to project management practices per se, but it is a system-level outcome that results from an interaction between the formal management systems and stakeholder interaction processes.

The results closely correlate with Systems Theory in that sustainability is conceived as an emergent characteristic of interacting subsystems. PMP acts as a structural subsystem, BE as a relational subsystem, and PSO as the emergent system-level outcome. From Stakeholder Theory, the findings confirm that beneficiaries are active stakeholders whose

engagement is shaped by organizational systems and directly influences sustainability outcomes. Based on the USAID Local Systems Framework, sustainability emerges when project systems strengthen institutional structures and participatory mechanisms, although full system self-reliance is not yet fully achieved in the projects studied.

BARON & KENNY SUMMARY TABLE (CLASSIC MEDIATION LOGIC)

Table 27: Summary of Baron & Kenny Mediation Steps

Step	Relationship Tested	Path	Result	Interpretation
Step 1	PMP → PSO (Total Effect)	c	β = 0.8901***	Significant positive relationship; PMP affects PSO
Step 2	PMP → BE	a	β = 0.8116***	PMP significantly predicts Beneficiary Engagement
Step 3	BE → PSO (controlling PMP)	b	β = 0.3243***	BE significantly influences PSO
Step 4	PMP → PSO (Direct Effect)	c′	β = 0.6269***	Effect remains significant but reduced
Step 5	Mediation Condition	a × b	Supported	Partial mediation confirmed

All conditions for mediation, as shown by Baron and Kenny (1986), are met. PMP significantly predicts PSO, PMP significantly predicts BE, and BE significantly predicts PSO. The introduction of BE into the model reduces the direct effect of PMP on PSO but maintains a significant effect, corroborating the partial mediation.

HAYES PROCESS INTEGRATION TABLE (FINAL AND MOST IMPORTANT)

Table 28: Hayes PROCESS Macro Mediation Results (Model 4)

Effect Type	Path	Coefficient (β)	Boot SE	95% Confidence Interval	Significance	Interpretation

Total Effect	PMP → PSO	0.8901	0.0281	[0.8349, 0.9454]	$p < 0.001$	Strong overall effect
Direct Effect	PMP → PSO (controlling BE)	0.6269	0.0504	[0.5279, 0.7260]	$p < 0.001$	Significant direct impact
Indirect Effect	PMP → BE → PSO	0.2632	0.0510	[0.1630, 0.3633]	Significant	Mediation confirmed
Path a	PMP → BE	0.8116	0.0248	[0.7629, 0.8603]	$p < 0.001$	Strong predictor
Path b	BE → PSO	0.3243	0.0525	[0.2211, 0.4274]	$p < 0.001$	Significant mediator effect

The results of the Hayes PROCESS confirm the mediation effect with robustness using bootstrapped confidence intervals. Since the indirect effect ($\beta = 0.2632$) has a confidence interval that does not include zero, mediation is statistically confirmed. These results also show partial mediation, since the direct effect of PMP on PSO remains significant even after inclusion of BE. The implication is that PMP has both direct and indirect effects on PSO via beneficiary engagement mechanisms. To assess mediation validity, the Hayes model is stronger than the Baron and Kenny alternative without employing stepwise significance assumptions.

This result is supported by several empirical studies that have already stated that participation of stakeholders and community are significant determining factors of project sustainability. Workneh and Aga (2022) confirmed that efficient monitoring and evaluation with the participation of stakeholders determines the sustainability of NGO projects in Ethiopia. Hamda and Kebede (2021) also state that participation of community and involvement of stakeholders determine project sustainability positively. Tilahun (2021) also concluded that participation of community and project management related factors play a significant role to the sustainable project outcomes.

Similarly, Zikargae, Woldearegay, and Skjerdal (2022) found that increased involvement and information sharing of beneficiaries results in ownership and sustainability. The current study further supports this finding by showing empirical evidence that beneficiary

involvement is a crucial mediator through which the practices of project management influence the outcome of project sustainability. The finding thus supports that sustainability is gained through not just efficient project management systems, but also through substantive beneficiary involvement, where management practices get translated to sustained project benefits. Furthermore, the Hayes model is stronger than the Baron and Kenny approach as it tests directly significance of indirect effect through bootstrapped confidence intervals.

CHAPTER 5: SUMMARY, CONCLUSION & RECOMMENDATION

5.1. Introduction

This chapter gives a summary of the main results of the study, draws some conclusions based on evidence, and suggests recommendations based on the findings. It goes beyond statistical output, like the chapters before this one, as it integrates results from the correlation, regression, and mediation analyses in explaining how Project Management Practices (PMP) impact Project Sustainability Outcomes (PSO) directly and mediated through Beneficiary Engagement (BE). The analysis of the results uses a theoretical framing including systems theory, stakeholder theory, and the USAID local systems framework for a holistic approach to sustainability in a development project.

5.2. Summary of Findings

The purpose of this study was to investigate the interrelationship between Project Management Practices (PMP), Beneficiary Engagement (BE) and Project Sustainability Outcomes (PSO) in development projects in Ethiopia. More precisely, the study investigates the direct influence of PMP on PSO, impact of PMP on BE, impact of BE on PSO and mediating role of BE on PMP-PSO relationships.

The first research question found that Project Management Practices have a direct significant positive influence on Project Sustainability Outcomes. It suggests that when planning, execution, monitoring and control, stakeholder management and sustainability-focused management practices of a project are effective, sustainable outcomes are achieved. This means that good project management practices have a direct positive impact in ensuring project benefits continue after the implementation stage of a project.

Regarding the second question, it was discovered that the use of project management practices significantly impacts the quality and intensity of beneficiary participation at all phases of a project. According to the evidence, projects that are properly managed result in higher levels of beneficiaries' consultation, involvement, participation, communications, sense of ownership, and engagement in project activities. Clearly, good project management is an important enabling condition for effective participation of beneficiaries.

With regards to research question three, results confirmed that there is a positive correlation between Beneficiary Involvement and the outcomes for Project Sustainability. Beneficiaries' participation in the decisions, activities during the implementation, monitoring as well as development initiatives help to enhance project ownership, accountability and utilization of project outputs and sustainable nature of benefits. This means that project benefits can be made sustainable if beneficiaries are included from inception to the end of the project cycle.

In response to the fourth research question, it was concluded that Beneficiary Engagement significantly mediates the relationship between Project Management Practices and Project Sustainability Outcomes. The results indicated that effective management practices has a direct relationship on sustainability outcome, but it has an indirect effect through mediation of beneficiary engagement. The evidence is clear that management practices is directly positively affecting sustainability outcomes, and their effect is further enhanced when management practices induce effective beneficiary involvement and participation.

In summary, the results of the study reveal that there are strong interrelationships among project management practices, beneficiary involvement, and project sustainability outcomes. Project management not only has an impact on sustainability in direct ways but also on the beneficiary involvement that subsequently affects project sustainability outcomes. The study, therefore, holds that in order to obtain the sustainability of the outcomes of development projects there must exist both strong project management systems and beneficiary involvement in all stages of the project.

5.3. Conclusion

The study concludes that Project Sustainability Outcomes (PSO) are jointly shaped by Project Management Practices (PMP) and Beneficiary Engagement (BE). This finding is supported by combined evidence of correlation, regression and mediation results, project documents, and theoretical underpinning.

This finding is consistent with the system thinking concept which suggests that the concept of sustainability as an emergent property of various interlinked subsystem variables rather than independent factors (Bertalanffy, 1968; Meadows, 2008). Correspondingly, the project implementation documents of both organizations that were examined revealed that the implementation performance will be enhanced when structured management system is linked to participatory implementation.

According to regression result, it shows that the relationship between Project Management Practices and Project Sustainability Outcomes is significantly positive. That is to say, the higher level of sustainable management practices involved in planning, execution, and control the higher the possibility of continuity. The result is consistent with systems-based sustainability theory, which suggests that good institutional and functional systems drive sustainable development outcomes (Meadows, 2008). The project documents in PACT Ethiopia and CARE Ethiopia further suggest that, where projects have robust implementation system, strong coordination system and good adaptive management system, outcomes sustain after external support expires. Thus, PMP may be considered as a structural base for sustainability outcomes in development projects.

Additionally, Beneficiary Engagement also showed strong correlation to Sustainable Project Management Practice and Sustainable Project outcome. This indicated beneficiaries are not a passive recipient of development intervention but an active participant though influenced by the system of the project. The above conclusion aligns with stakeholder theory; stakeholder theory suggests that development project outcomes is enhanced when beneficiaries are involved in decision-making and implementation process. Through project documentation, we noted a shift

in approach towards beneficiary involvement across project phases from one based on consultation towards that of the institutionalized mechanism.

It is evident that Beneficiary Engagement is not a coincidental factor; but systematically integrated into the system for the implementation of projects. The regression analysis also clearly demonstrates that both PMP and BE significantly contribute to the Project Sustainability Outcomes. PMP is the more dominant factor of the two. This implies that though a strong role of technical and managerial system is dominant, effective contribution is still made by the participatory process. This result support development literature which says that sustainable development is ensured through the interplay of effective institutional system and participation of stakeholders (Silvius & Schipper, 2014). The implementation documents of the projects support that sustainability has a stronger tendency in the projects in which strong managerial systems are complemented by beneficiary participation.

The results of the mediation analysis prove that Beneficiary Engagement mediates on the relationship between PMP and project sustainability outcomes, to some extent. This shows that PMP affects sustainability outcome, both directly and indirectly through mechanisms relating to engagement. In a statistical sense, indirect effect was found to be significant and this demonstrates that some portion of the effects of project management practices to sustainability are routed through beneficiary participation.

This result is in line with the tenets of participatory development, which postulate that involvement of the beneficiaries leads to greater development outcomes (Chambers, 1997; Uphoff, 1992). Also supported by project documentation, where robust engagement frameworks resulted in high levels of local ownership and sustained benefit. Beneficiary Engagement is thereby perceived as a primary relationship mechanism, by which sustainability comes about.

Based on triangulation of statistical data, project document and theory, we arrive at the conclusion that sustainability of the project can be defined as an outcome of system arising out of interplay between structural and relational aspect. PMP depicts the structural aspects of

sustainability while BE captures the relational dimensions by converting structures to effective participation and sense of ownership by the community. The emergent system is called the PSO.

This conclusion aligns with the tenets of Systems Theory, which posits that outputs are a product of the interplay of interdependent subsystems rather than a simple cause-effect linear chain of relationship (Bertalanffy, 1968; Meadows, 2008), and is also in line with the USAID Local Systems Framework where sustainability occurs where the institutional and the participation system reinforce each other (USAID, 2016).

In conclusion, this study asserts that the system outcome is not necessarily project management, but a creation formed through the interplay of system management and user involvement. It implies that a system output occurs which can be attributed to a synergy between institution design and participatory processes, thereby corroborating that an intervention process has to be viewed from technical, institutional and social perspectives.

5.4. Recommendations

Strengthening Sustainable Project Management Practice (PMP) to improve Project Sustainability Outcomes (PSO). According to the findings of the study, Project Management Practices (PMP) are the strongest determinant of Project Sustainability Outcomes (PSO) where they accounted for significant variation in performance. This implies that sustainability performance can be enhanced through a quality project management system. For this reason, development organizations like PACT Ethiopia and CARE Ethiopia must endeavor to strengthen the practices of PMP by improving the planning process and ensuring integration of sustainability across the project life cycle and the coordination processes. This fits with the empirical result that PMP has a both direct and indirect influence over PSO and hence can be called the primary structural element that drives sustainability outcomes.

Institutionalizing BE as a key sustainability mechanism: The findings of the study further ascertain that BE is a significant predictor of PSO and is also a partial mediator between PMP and PSO. It indicates that project sustainability is achieved not only through management systems, but is also influenced by beneficiary participation. Following from this argument,

beneficiary participation should be institutionalized as an integral operational component rather than being an optional or project-specific process. Organizations should emphasize the elements of participatory planning, co-implementation and feed-back mechanisms to have the beneficiary influence on sustainability of outcomes. This recommendation is in line with the research aim on BE's role on PSO**.**

Integration of PMP and BE to improve sustainability performance: the mediation analysis indicates that a portion of the impact of PMP on PSO occurs via BE, demonstrating a system relationship between structural and relational dimensions of development projects. Taking this into consideration, development practitioners are suggested to apply an integrated approach to sustainability by integrating management systems with deliberate mechanisms for beneficiary participation: technical planning, governance and delivery mechanisms should be explicitly and functionally connected to participatory mechanisms. Such integration addresses the research goal of determining the impact of PMP and BE simultaneously on PSO from a system view**.**

Reinforcing Implementation Systems as a Key Sustainability Driver: Our regression analyses show that implementation-related project management dimensions are key determining variables for sustainability performance. This implies that sustainability is not determined at design but at implementation stage and organizations need to build their investment in reinforcing adaptive implementation systems such as monitoring, coordination, accountability and learning. This recommendation corresponds to our goal of identifying key determinants of PSO**.**

Enhancing PMP→BE system cohesion: The results prove that PMP and BE are highly interdependent and form two distinct but interconnected elements of a sustainability system, generating the highest sustainability results when working together. It is therefore up to development actors to assure cohesion between project management structure and the participation process mechanism (i.e. Coherence between institutional system and community engagement), to assure sustainability generated through the interaction between components within a system. The recommendation addresses directly the purpose: to analyze the system-relationship between PMP, BE and PSO**.**

5.5. Research Limitations and Areas of Further Research

5.5.1. Limitations of the Study

This study examined the relationships between Project Management Practices (PMP), Beneficiary Engagement (BE), and Project Sustainability Outcomes (PSO) in some of selected NGO development projects in Ethiopia. Despite that the study yielded solid empirical results, there are limitations on how the findings are interpreted:

Firstly, the study was conducted based on cross sectional design where all relationships captured at a single time. Although, regression and mediation results show statistically significant relationships, a cross sectional design has limitations on determining temporal causality among PMP, BE, and PSO. Sustainability is a time process; a longitudinal design is better suited to capture dynamics of relationship among these variables over time.

Secondly, the study relied on structured survey quantitative data. Although statistical generalizations were made in a relatively large sample (N=432), it does not fully reflect the in-depth institution, behavior and process related aspects in implementing and utilizing practices of sustainability in practical working contexts. Thus, the explanatory power of BE and interaction with system might not be fully examined.

Thirdly, the study covered selected NGO projects (PACT Ethiopia and CARE Ethiopia) in selected areas of Ethiopia. This sample design may be generalizable only within that sector/NGO and region/country with precautions, to other NGOs, sectors or situations.

Finally, although the study included crucial explanatory variables of PMP and BE, other variables such as quality of leadership, organization culture, condition of donor, political and institutional contexts, and the like were not included in the model. However, omitted contextual variables may contribute significantly to the success or failure of sustainability practices.

5.5.2. Areas for Further Research

Drawing on the results and limitations of this study, future research has been suggested.

Firstly, it is suggested that future research utilize longitudinal design to examine the dynamics relationship between Project Management Practices and Beneficiary Engagement in relation to Project Sustainability Outcomes over time. The use of longitudinal design would make it possible to investigate how PMP and BE affect PSO at different stages of the development project life cycle.

Secondly, it is suggested that it is beneficial to complement the quantitative analyses with qualitative ones. Qualitative methods like interview, case study, and participative observation could explore the ways PMP lead to beneficiary engagement and impact on sustainability outcomes.

Thirdly, the model presented in this research could be extended with new moderating or mediating variables such as leadership effectiveness, good governance, institutional capacity and donor contribution in order to more thoroughly explain the dynamics of sustainability systems in development environment.

Fourthly, comparative studies among countries, sectors, and types of development organization could be useful to evaluate the generalizability of the present results and to determine variations within the relationship between PMP-BE-PSO in different contexts.

Finally, it is recommended that multi-level analyses (individual level, organizational level and system level) be conducted so as to examine how sustainability is generated at multiple levels rather than purely at the project level.

REFERENCE

Abu Tabanjeh, M., Pott, A., & Reining, C. (2025). Sustainability drivers in project management: A conceptual framework for long-term impact. *[Journal Name]*, *[Volume(Issue)]*, xxx–xxx. https://doi.org/xxxxx

Africa Sustainability Matters. (2020). *Stakeholder engagement: Why it matters for sustainability*. https://www.africasustainabilitymatters.com/

Ahmed, R., & Anantatmula, V. (2017). Empirical analysis of project manager's leadership competence and project performance. *Engineering Management Journal, 29*(3), 189–205. https://doi.org/10.1080/10429247.2017.1343005

American Psychological Association. (2007). *APA dictionary of psychology*. APA.

American Psychological Association. (n.d.). Dependent variable. In *APA dictionary of psychology*. https://dictionary.apa.org/dependent-variable

Andrews, M. (2009). *Isomorphism and the limits to African public financial management reform*. Harvard Kennedy School. https://doi.org/10.2139/ssrn.1435185

Association for Project Management. (2019). *Guide to sustainability in project management*. https://www.apm.org.uk

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research. *Journal of Personality and Social Psychology, 51*(6), 1173–1182. https://doi.org/10.1037/0022-3514.51.6.1173

Bertalanffy, L. von. (1968). *General system theory: Foundations, development, applications*. George Braziller.

Biesenthal, C., & Wilden, R. (2014). Multi-level project governance. *International Journal of Project Management, 32*(8), 1291–1308. https://doi.org/10.1016/j.ijproman.2014.02.005

Bourne, L. (2016). *Stakeholder relationship management*. Routledge.

CARE. (2006). *Evaluation of Village Savings and Loan Associations in Zanzibar*. CARE International.

CARE International. (2021). *CARE Vision 2030: Program strategy resource manual*.

Cerin, P. (2006). Bringing economic opportunity into line with environmental influence. *Ecological Economics, 56*(2), 209–225. https://doi.org/10.1016/j.ecolecon.2005.01.018

Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE.

Damtew, B. (2019). *Factors affecting successful implementation of projects in INGOs in Ethiopia* (Master's thesis). Addis Ababa University.

Elkington, J. (1997). Partnerships from *Cannibals with forks*. *Environmental Quality Management, 8*(1), 37–51. https://doi.org/10.1002/tqem.3310080106

Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). SAGE.

Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman.

Gareis, R., Huemann, M., & Martinuzzi, A. (2013). *Project management and sustainable development*. Gower.

Gujarati, D. N., & Porter, D. C. (2009). *Basic econometrics* (5th ed.). McGraw-Hill.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage.

Hamda, A. H., & Kebede, M. (2021). Determinants of project sustainability. *European Business & Management, 7*(4), 95–104. https://doi.org/10.11648/j.ebm.20210704.11

Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis* (3rd ed.). Guilford Press.

Kerzner, H. (2017). *Project management: A systems approach* (12th ed.). Wiley.

Kumar, R. (2019). *Research methodology* (5th ed.). SAGE.

Larson, E. W., & Gray, C. F. (2021). *Project management: The managerial process* (8th ed.). McGraw-Hill.

Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*, 140, 1–55.

Marcelino-Sadaba, S., González-Jaen, L. F., & Pérez-Ezcurdia, A. (2019). Project management as a way to sustainability. *Journal of Cleaner Production, 233*, 946–958. https://doi.org/10.1016/j.jclepro.2019.06.089

Martens, M. L., & Carvalho, M. M. (2014). Project management and sustainability. *Journal of Cleaner Production, 74*, 1–11.

Meadows, D. H. (2008). *Thinking in systems: A primer*. Chelsea Green.

Milen, A. (2001). *What do we know about capacity building?* WHO.

Mohajan, H. K. (2017). Validity and reliability. *Annals of Spiru Haret University, 17*(4), 59–82.

OECD. (2020). *Development co-operation report 2020*. OECD Publishing.

Appendix A: Regression Diagnostics

Figure 1: Histogram of Standardized Residuals for the Regression Model 1 (PMP→SPO

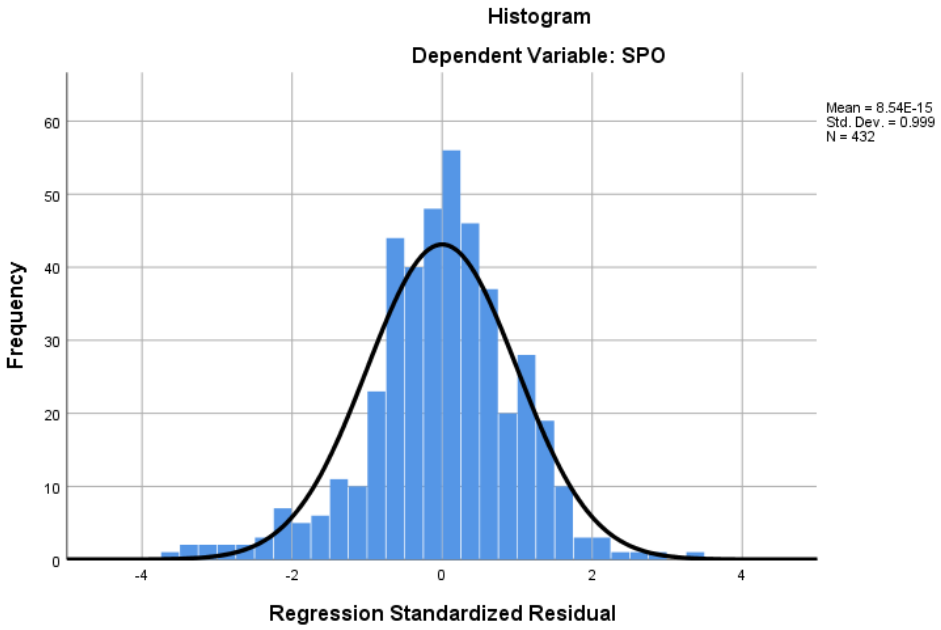


Figure 2: Normal Probability Plot (P–P) of Standardized Residuals Model 1 (PMP→SPO)

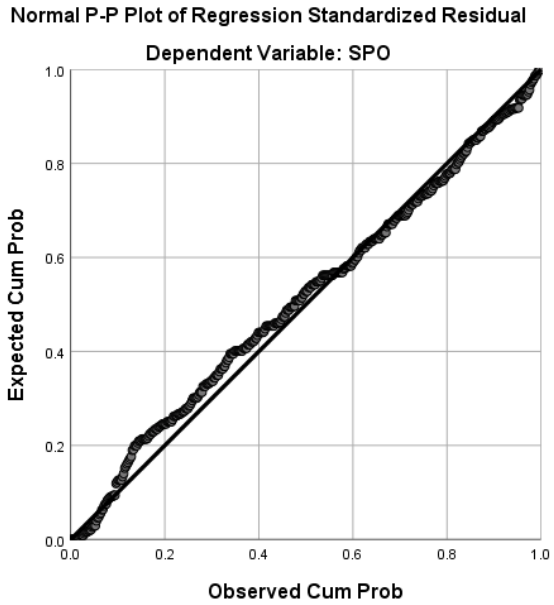


Figure 3: Scatterplot of Standardized Residuals against Standardized Predicted Values Model 1 (PMP→SPO)

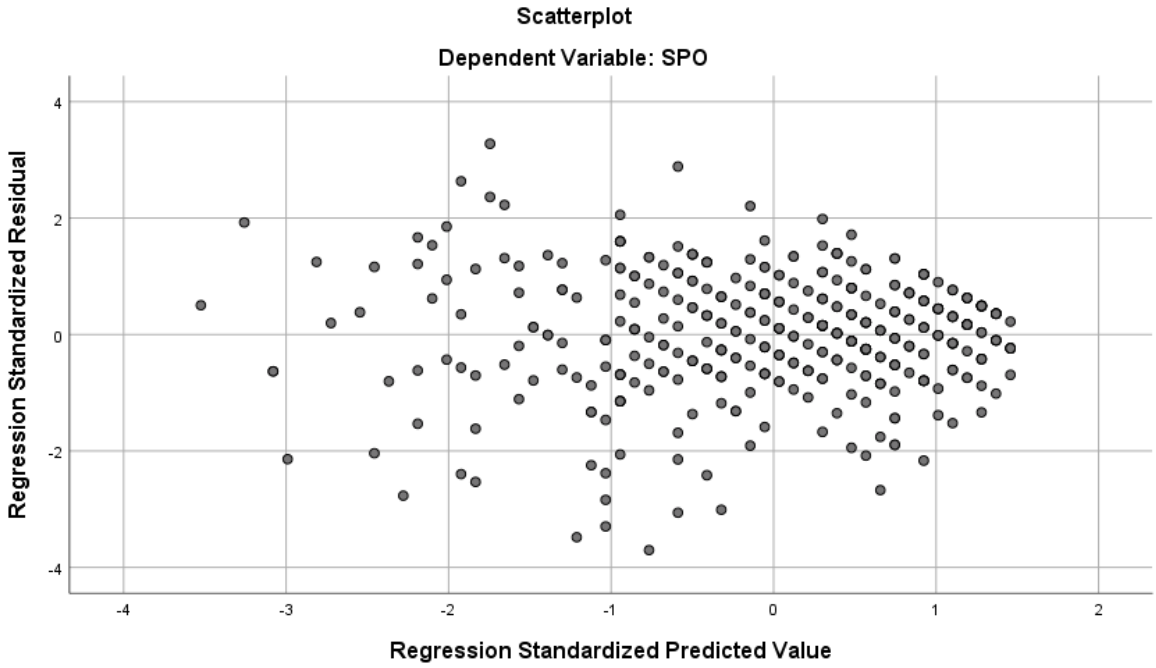


Figure 4: Histogram of Standardized Residuals for the Regression Model 2 (PMP→BE)

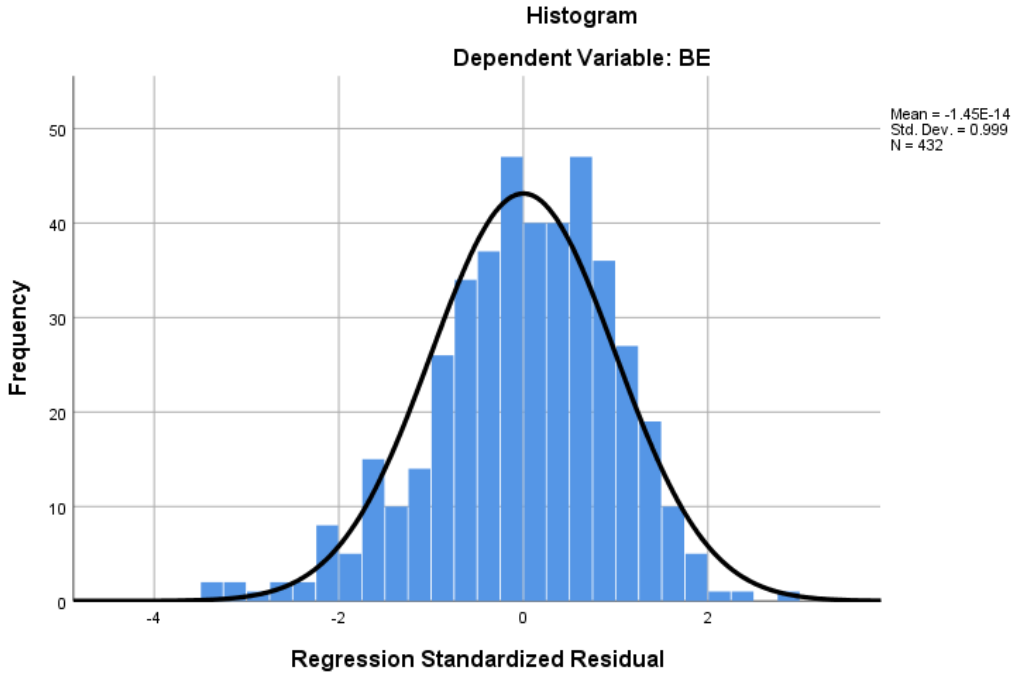


Figure A 1: Normal Probability Plot (P–P) of Standardized Residuals Model 2 (PMP→BE)

Figure 5: Normal Probability Plot (P–P) of Standardized Residuals Model 2 (PMP→BE)

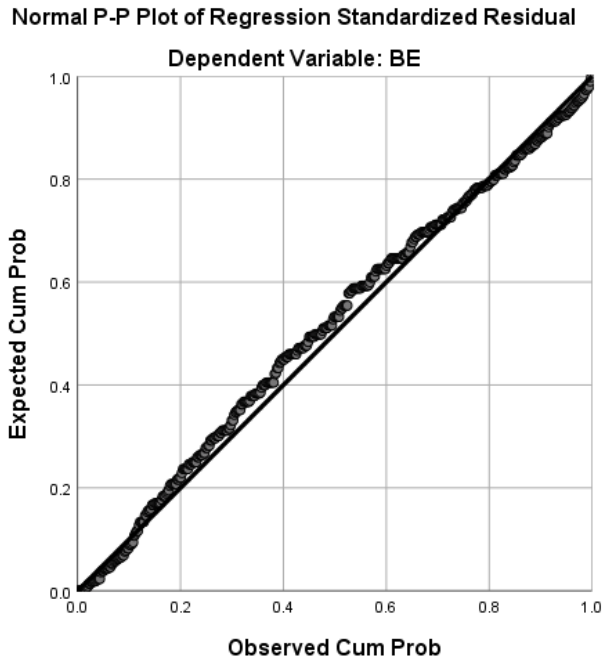


Figure 6: Scatterplot of Standardized Residuals against Standardized Predicted Values Model 2 (PMP→BE)

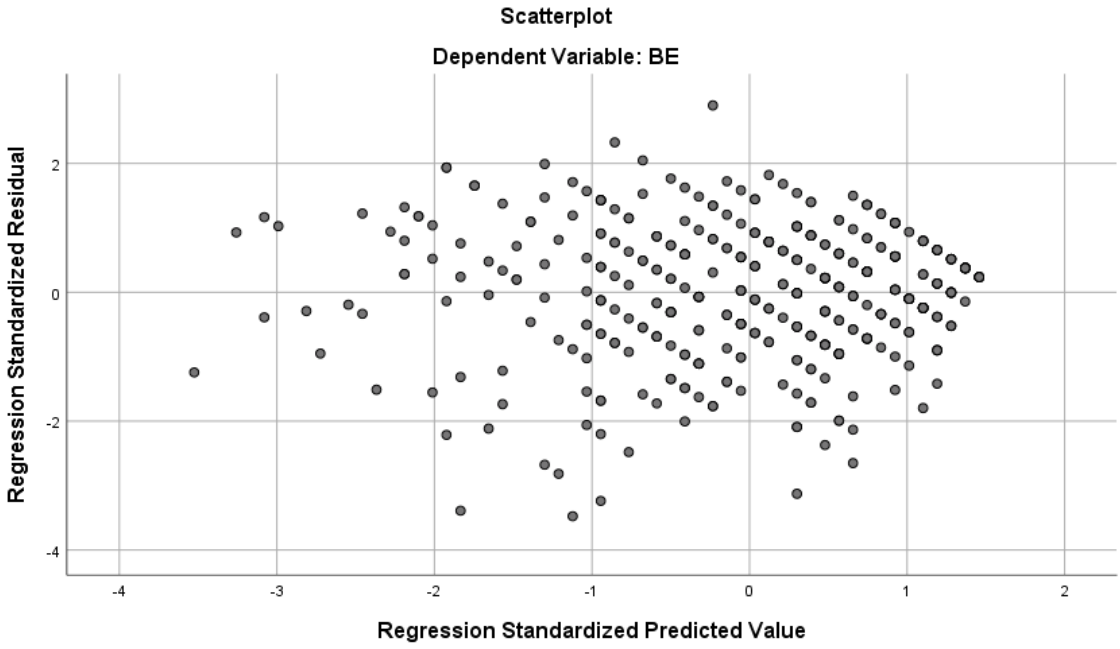


Figure 7: Histogram of Standardized Residuals for the Regression Model 3 (PMP→BE→SPO)

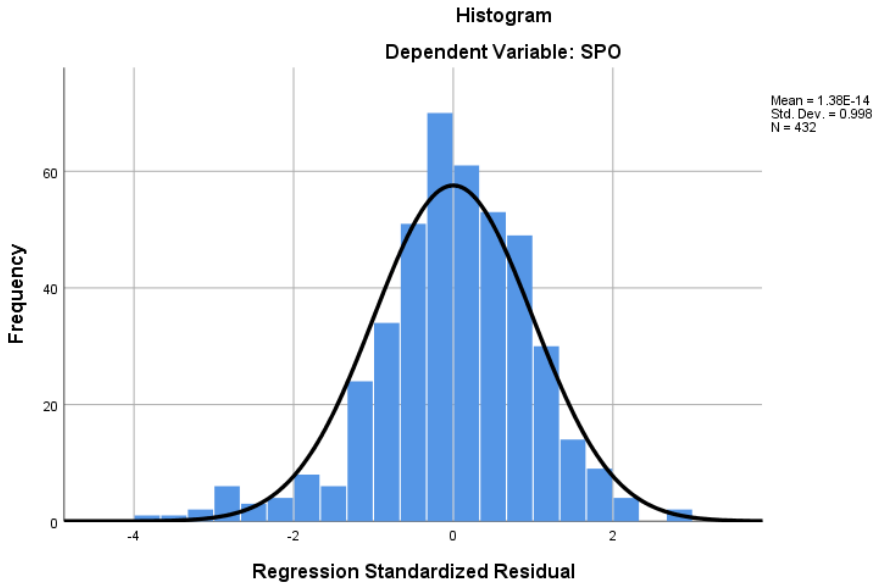


Figure 8: Normal Probability Plot (P–P) of Standardized Residuals Model 3 (PMP→BE→SPO)

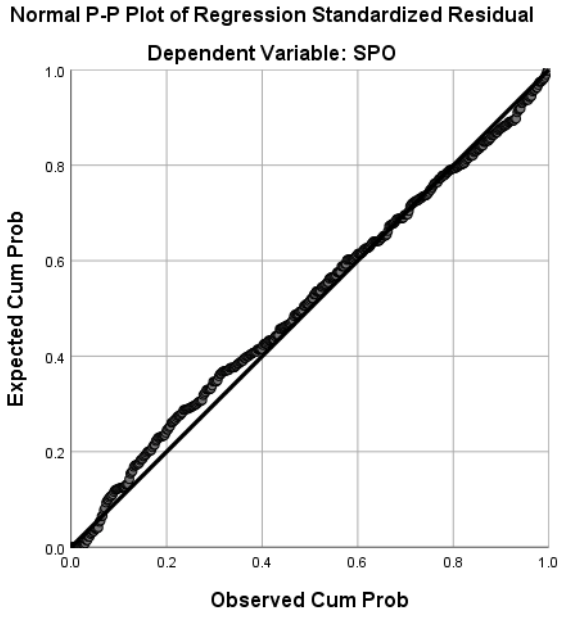
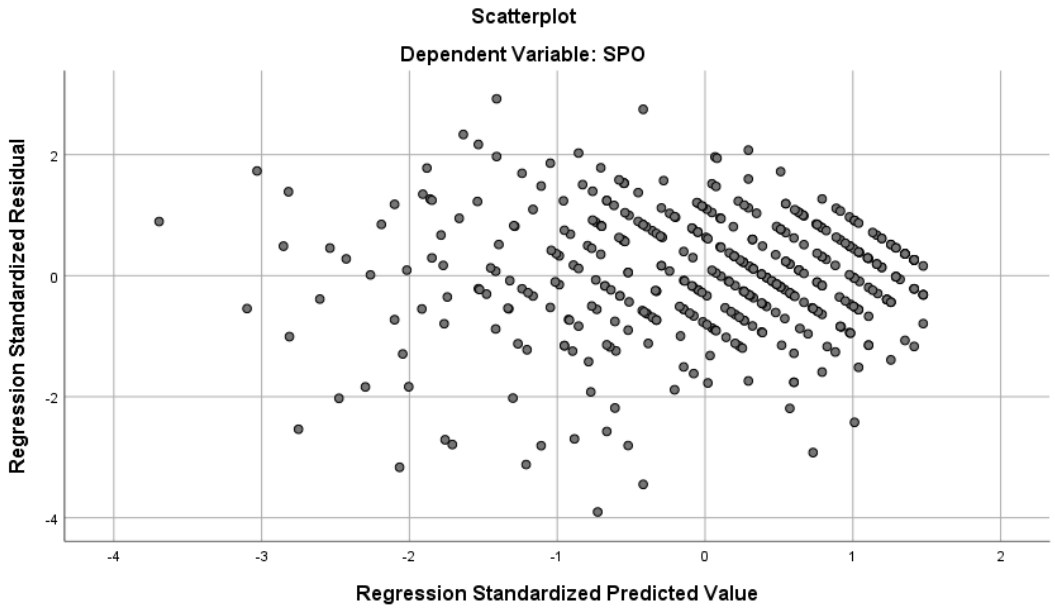


Figure 9: Scatterplot of Standardized Residuals against Standardized Predicted Values Model 3 (PMP→BE→SPO)



Appendix B: Normality Test

PMP

Figure 10: Histogram of PMP for Normality Test

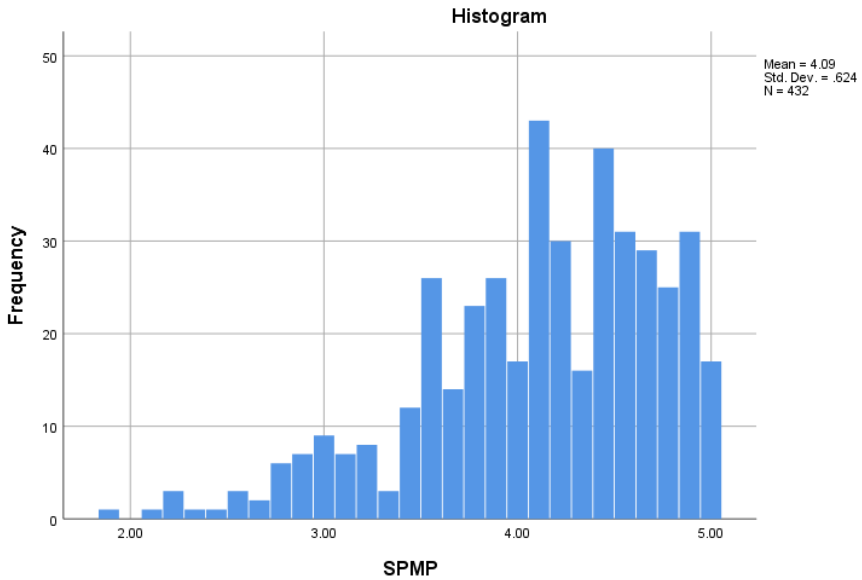


Figure 11: Normal Q-Q Plot of PMP

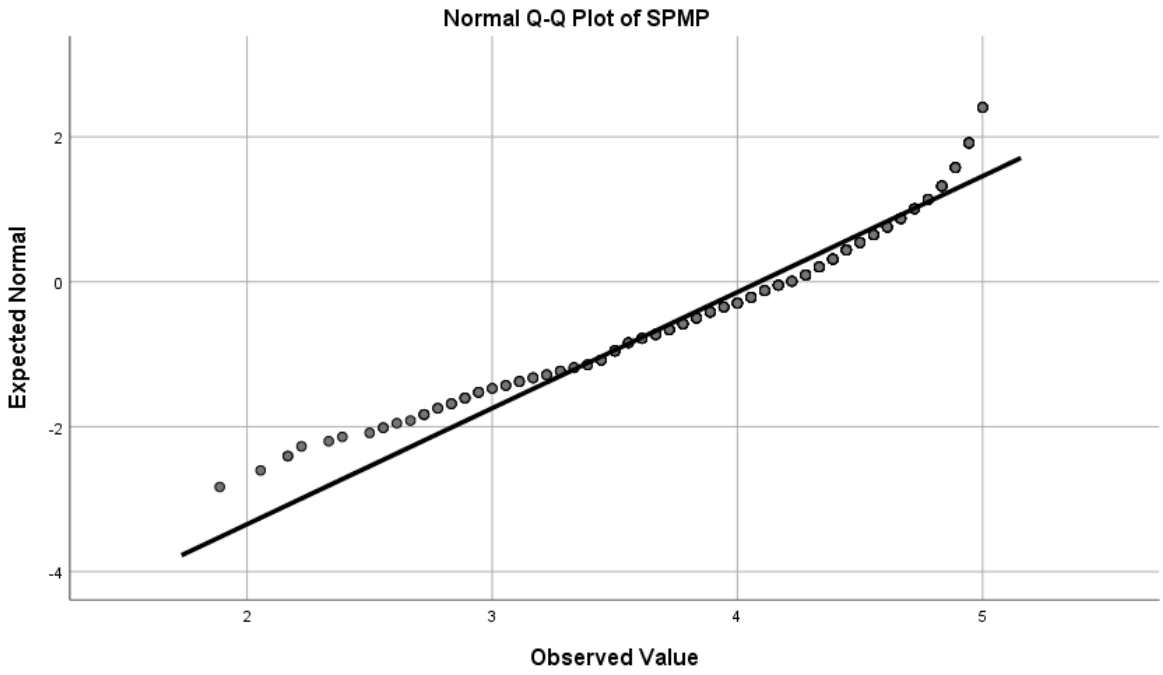
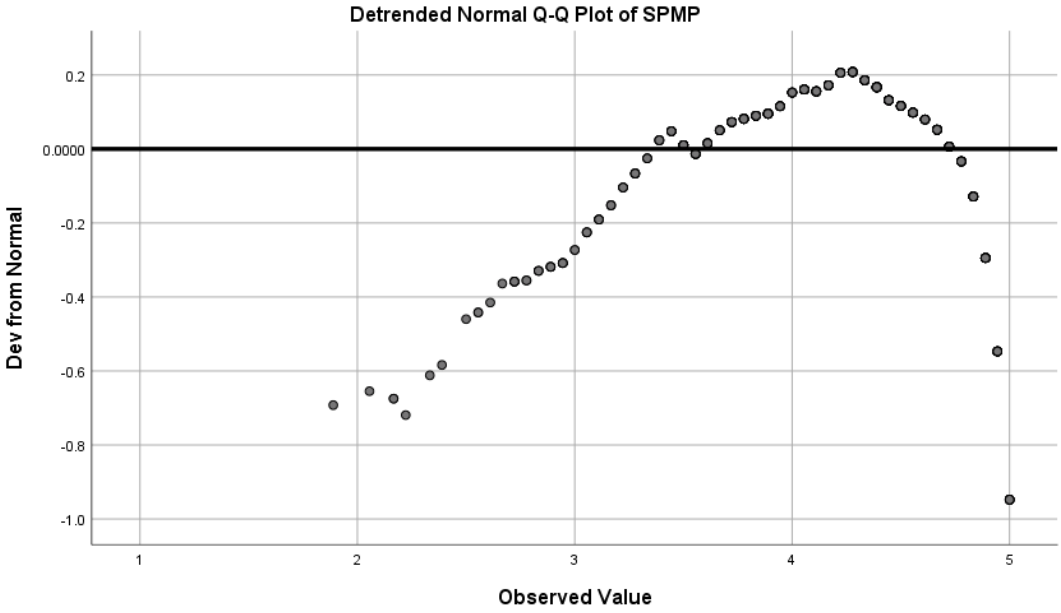


Figure 12: Detrended Normal Q-Q plot of PMP



BE

Figure 13: Histogram of BE for Normality Test

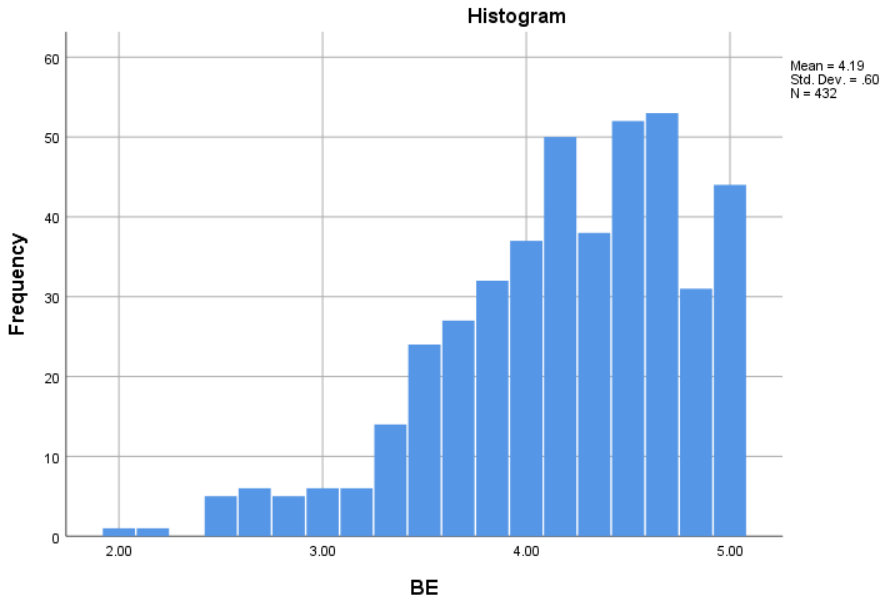


Figure 14: Normal Q-Q Plot of BE

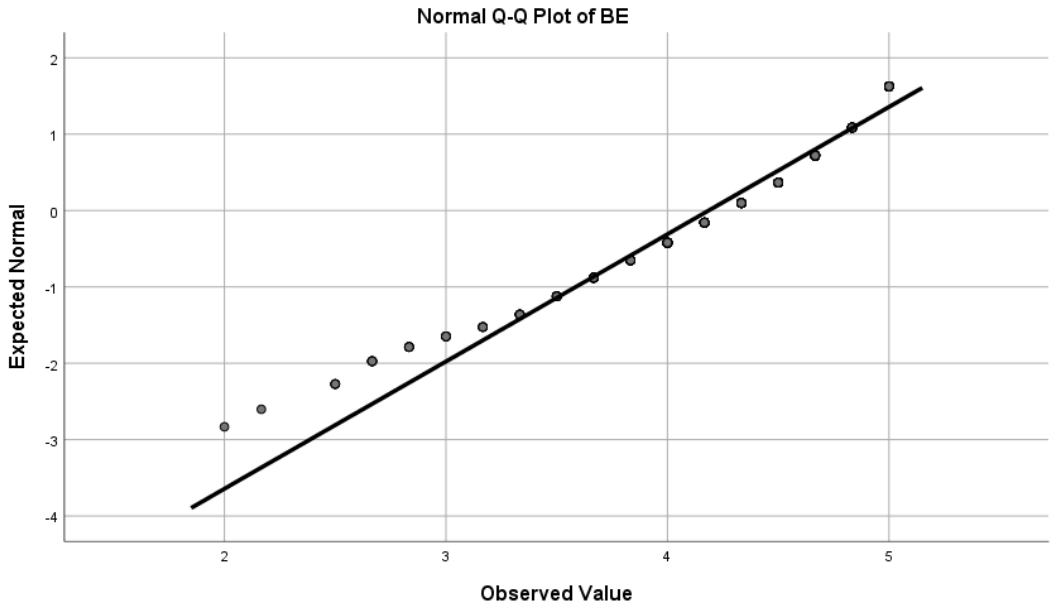
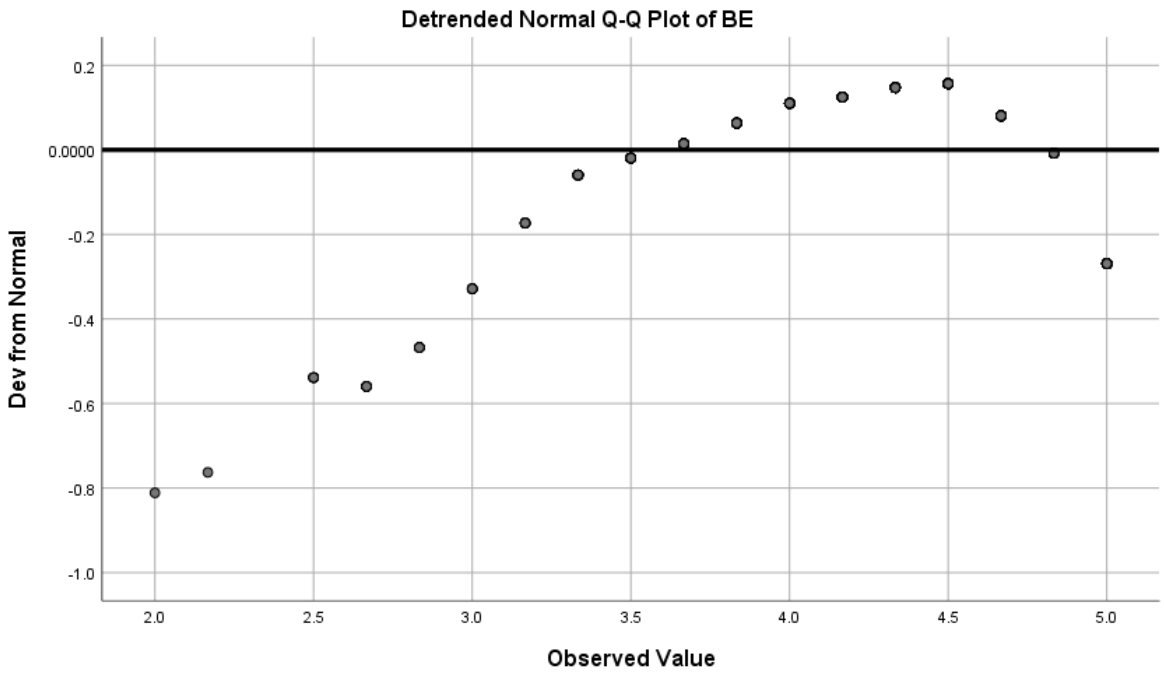


Figure 15: Detrended Normal Q-Q of BE



SPO

Figure 16: Histogram of SPO for Normality Test

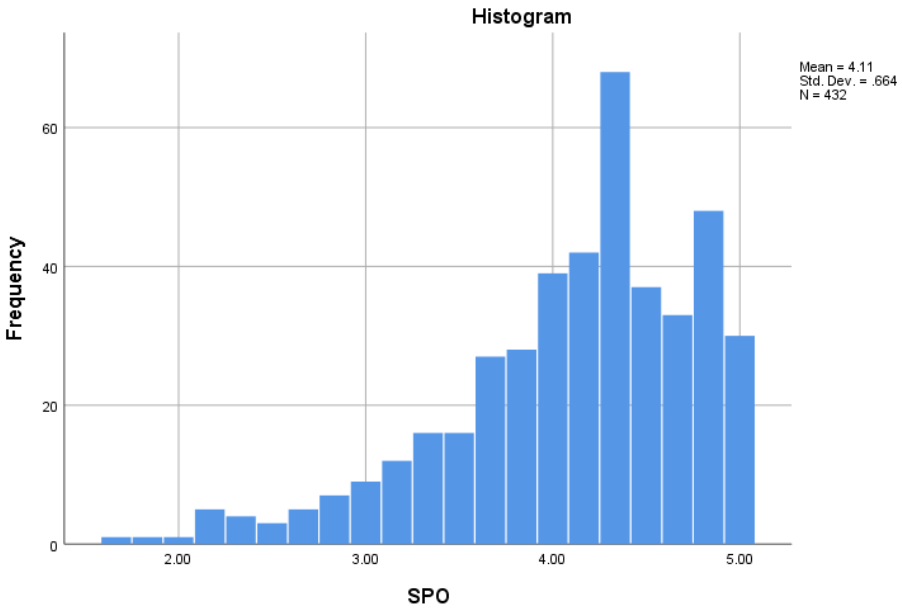


Figure 17: Normal Q-Q Plot of SPO

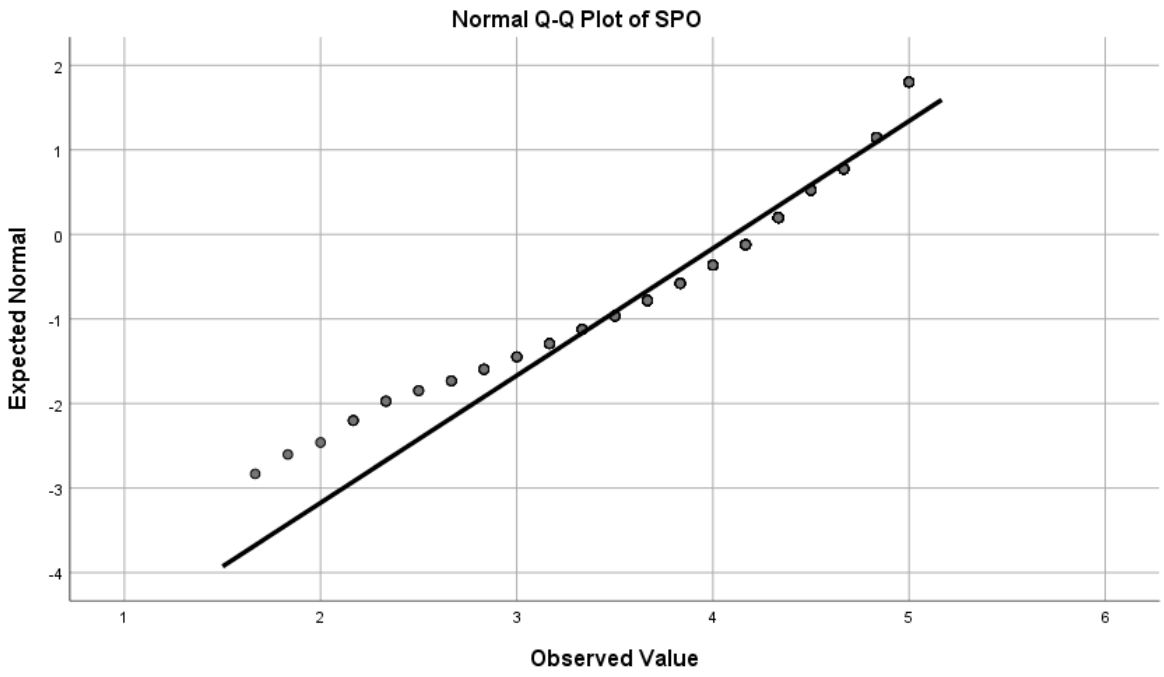
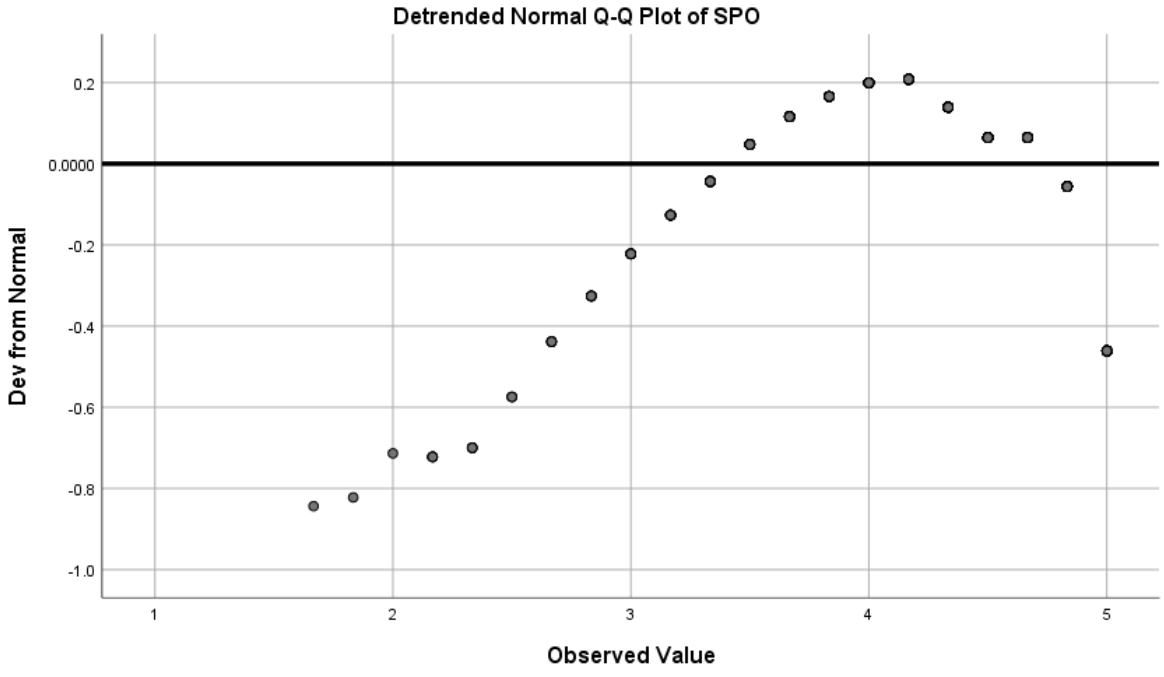


Figure 18: Detrended Normal Q-Q Plot of SPO



Appendix C: Reliability Test Results (Cronbach's Alpha)

Table 29: Reliability Statistics of Study Variables

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PMP	8.2951	1.432	.888	.880
BE	8.1991	1.526	.852	.910
SPO	8.2758	1.383	.848	.915

Appendix D: Correlation Matrix

Correlations

		PMP	BE	SPO
PMP	Pearson Correlation	1	.845**	.837**
	Sig. (2-tailed)		.000	.000
	N	432	432	432
BE	Pearson Correlation	.845**	1	.791**
	Sig. (2-tailed)	.000		.000
	N	432	432	432
SPO	Pearson Correlation	.837**	.791**	1
	Sig. (2-tailed)	.000	.000	
	N	432	432	432

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix E: Mediation Analysis Using PROCESS Macro (Model 4)

The appendix presents the bootstrapped mediation results obtained using the PROCESS macro (Model 4), highlighting the total, direct, and indirect effects.

Table 30: Total, Direct, and Indirect Effects of PMP on PSO

Effect Type	Coefficient (β)	SE	t-value	p-value	LLCI	ULCI
Total Effect	0.8901	0.0281	31.6627	0.0000	0.8349	0.9454
Direct Effect	0.6269	0.0504	12.4390	0.0000	0.5279	0.7260

Table 31: Indirect Effect (Mediation via Beneficiary Engagement)

Mediator	Effect (β)	BootSE	BootLLCI	BootULCI
BE	0.2632	0.0510	0.1620	0.3650

Appendix F 1: Survey Questionnaire-Beneficiary

Survey Questionnaire for Project Beneficiaries

Title: Beneficiary Participation and Sustainability Practices in Development Projects of PACT & CARE Ethiopia

Scope of Study: This study examines sustainability practices and beneficiary participation in development projects of PACT & CARE Ethiopia, encompassing proposal formulation through post-completion outcomes. Three projects are included:

- **PACT (Completed):** Enhancing the National Conflict Early Warning and Rapid Response Upgrade (2019–2021)
- **PACT (to be completed):** SEEK II Program (2021–2025)
- **CARE (Upcoming):** Renewed Women's Voice and Leadership (RWVL)
-

Instructions for Enumerators:

- Replace "PACT/CARE" with the relevant organization depending on the project.
- Confirm whether the project is completed, active, or upcoming to contextualize responses.
- Ensure inclusivity: women, youth, and marginalized groups must be represented.
- Use the Likert scales consistently (agreement or frequency).

Ethical Statement

Dear respondent,

First of all, I would like to thank you in advance for your willingness to spend your valuable time responding to this research questionnaire. I am a student pursuing Master of Arts Degree in Project Management at Addis Ababa University School of commerce. I am conducting academic research to assess sustainability practices and beneficiary's engagement in development projects implemented by NGOs in Ethiopia, a case of PACT Ethiopia/CARE Ethiopia. The final result of this research will be used for academic purposes and the information you provided is used purely

for academic purposes and will be treated with confidentiality. Your answer for all the questions genuinely and appropriately will be highly appreciated.

Thank you again for your cooperation and valuable time.

Section 1: Socio-Demographic Information

1	**Gender:**	☐ Male	☐ Female			
2	**Age**	☐ 18–29	☐ –30-40	☐ 41–50	☐ 51–60	☐ 60+
3	**Education Level**	☐ No education at all (illiterate)	☐ Read & write	☐ 1-4 grade ☐ 5-8 grade	☐ 9-12 grade ☐ 12 completed	☐ Certificate ☐ Degree ☐ post-graduate
4	**Marital Status of the Respondent**	☐ Single	☐ Married	☐ Divorced	☐ Widowed	☐ Don't want to tell
5	**Occupation**					
6	**Project participation status**	☐ Beneficiary	☐ Staff	☐ Volunteer	☐ Other: _____	
7	**Length of Participation in the project**	☐ < 1 year	☐ 1-2 year	☐ 3+ years		
8	**Type of Project**	☐ Peace Building	☐ Health	☐ Livelihood	☐ Education Vocational/Technical Training	☐ Other: (please specify) _____
	Location	Region:		Woreda:		

Response scale for all below:

Survey Questionnaire for Beneficiaries

Table 32: Survey Questionnaire for Beneficiaries

S, No	Survey Items	Response Options				
		SD	DA	Neutral	Agree	SA
	PMP-Pre-Project Planning					
1	The project design was based on a formal assessment of community needs and environmental risks.					
2	The initial project proposal included a clear strategy for activities to become self-funding after the donor grant ends.					
3	Local government and community leaders were actively involved as co-designers during the proposal stage.					
4	The project design included specific structural safeguards for gender equity and social inclusion.					
5	The project plan was specifically adapted to align with the cultural and social systems of the target area.					
6	The proposal phase identified potential "systemic" barriers to sustainability within the local context.					
	PMP-Sustainable Execution & Governance					
7	The management team regularly adjusted project activities based on changing local conditions or feedback.					

8	A systematic "learning system" was used to document project lessons and apply them to ongoing execution.					
9	Project activities were formally integrated into local government plans or existing institutional frameworks.					
10	Implementation prioritized the use of local labor and resources to strengthen the community's internal economy.					
11	The organization allocated personnel with high technical and ethical capacity required for the project lifecycle.					
12	Internal governance and accountability structures were strictly maintained throughout the project execution.					
	PMP-Monitoring & Exit Practices					
13	A formal exit strategy and handover plan were finalized well before the project reached its completion date.					
14	Project staff successfully transferred the technical and managerial skills needed for the community to run activities.					
15	Functional systems (e.g., user fees or community funds) were established to cover future operation costs.					
16	Participatory monitoring was used to track the likelihood of benefits lasting after completion.					
17	Local structures have been formally empowered to take over oversight once PACT/CARE exits.					

18	The project exit was timed based on the verified "readiness" of the local system to sustain results.					
	Beneficiary Engagement (Mediator)					
19	Community members had the final authority to influence or change key decisions during the project lifecycle.					
20	Beneficiaries were trained and actively involved in monitoring the project's performance and quality.					
21	Capacity-building activities focused on empowering local leaders rather than just providing one-way information.					
22	Clear channels existed for community feedback, and project management was seen to act on that feedback.					
23	The community has a strong sense of ownership and responsibility for the long-term success of the results.					
24	Community participation evolved from passive attendance to active leadership by the end of the project.					
	Project Sustainability Outcomes					
25	The core project benefits (e.g., income, water, health) have persisted for 1–3 years after completion.					
26	The community is now better equipped to handle environmental or economic shocks without external aid.					

27	The project successfully addressed the underlying structural causes of the community's problems.					
28	Local institutions are currently managing the project activities without requiring external technical support.					
29	Positive changes from the project continue to benefit the community and future generations.					
30	The project has become a permanent part of the local community or government system.					

Appendix F 2: Survey Questionnaire-Staff/Stakeholder

Survey Questioner for Project Staff, Partners & Key stakeholders

Title: Beneficiary Participation and Sustainability Practices in Development Projects of PACT & CARE Ethiopia

Scope of Study: This study examines sustainability practices and beneficiary participation in development projects of PACT & CARE Ethiopia, encompassing proposal formulation through post-completion outcomes. Three projects are included:

- **PACT (Completed):** Enhancing the National Conflict Early Warning and Rapid Response Upgrade (2019–2021)
- **PACT (Active):** SEEK II Program (2021–2025)
- **CARE (Upcoming):** Renewed Women's Voice and Leadership (RWVL)
-

Instructions for Enumerators:

- Replace "PACT/CARE" with the relevant organization depending on the project.
- Confirm whether the project is completed, active, or upcoming to contextualize responses.
- Ensure inclusivity: women, youth, and marginalized groups must be represented.
- Use the Likert scales consistently (agreement or frequency).

Ethical Statement

Dear respondent,

First of all, I would like to thank you in advance for your willingness to spend your valuable time responding to this research questionnaire. I am a student pursuing Master of Arts Degree in Project Management at Addis Ababa University School of commerce. I am conducting academic research to assess sustainability practices and beneficiary's engagement in development projects implemented by NGOs in Ethiopia, a case of PACT Ethiopia/CARE Ethiopia. The result of this research will be used for academic purposes and the information you provided is used purely for academic purposes and will be treated with confidentiality. Your answer for all the questions genuinely and appropriately will be highly appreciated.

Thank you again for your cooperation and valuable time.

Section 1: Socio-Demographic Information

1	**Gender:**	☐ Male	☐ Female			
2	**Age**	☐ 18–29	☐ –30-40	☐ 41–50	☐ 51–60	☐ 60+
3	**Education Level**	☐ No education at all (illiterate)	☐ Read & write	☐ 1-4 grade ☐ 5-8 grade	☐ 9-12 grade ☐ 12 completed	☐ Certificate ☐ Degree ☐ post-graduate
4	**Marital Status of the Respondent**	☐ Single	☐ Married	☐ Divorced	☐ Widowed	☐ Don't want to tell
5	**Occupation**					
6	**Project participation status**	☐ Beneficiary	☐ Staff	☐ Volunteer	☐ Other: _____	
7	**Length of Participation in the project**	☐ < 1 year	☐ 1-2 year	☐ 3+ years		
8	**Type of Project**	☐ Peace Building	☐ Health	☐ Livelihood	☐ Education Vocational/Technical Training	☐ Other: (please specify) _____
	Location	Region:		Woreda:		

Response scale for all below:

Survey Questionnaire for Staff/Stakeholder

Table 33: Survey Questionnaire for Beneficiaries

S, No	Survey Items	Response Options				
		SD	DA	Neutral	Agree	SA
	A PMP Pre-Project Planning					
1	The project was designed based on formal community needs and environmental risk assessments.					
2	The project proposal included a strategy for financial sustainability after donor funding ends.					
3	Local government and community leaders were actively involved in project design.					
4	Gender equality and social inclusion safeguards were integrated into the project design.					
5	The project was aligned with local cultural and social systems.					
6	Systemic barriers to sustainability were identified during the design phase.					
	B PMP Execution & Governance					
7	Project activities were adjusted based on feedback and changing conditions.					
8	A structured learning system was used to document and apply lessons learned.					
9	The project was integrated into government or institutional frameworks.					
10	Local labor and resources were prioritized during implementation.					
11	Qualified technical and ethical staff were assigned to the project.					
12	Governance and accountability systems were strictly maintained.					

	C PMP Monitoring & Exit					
13	A formal exit and handover plan was developed early in the project.					
14	Technical and managerial skills were transferred to the community.					
15	Financial sustainability mechanisms were established.					
16	Participatory monitoring was used during implementation.					
17	Local structures were empowered for post-exit management.					
18	Exit timing was based on readiness assessments.					
	D Beneficiary Engagement					
19	Community members influenced key project decisions.					
20	Beneficiaries participated in monitoring and evaluation activities.					
21	Capacity building focused on empowering local leadership.					
22	Feedback mechanisms existed and influenced project decisions.					
23	Community ownership of project outcomes was strong.					
24	Participation evolved from passive to active leadership.					
	E Project Sustainability Outcomes					
25	Project benefits have continued after completion.					
26	The community can manage shocks without external aid.					
27	Structural causes of community problems were addressed.					
28	Local institutions manage project activities independently.					
29	Positive impacts continue for future generations.					

30	The project is institutionalized in local systems.					