A Resource-Based Perspective on Project Management in Non-Governmental Organisations (NGOs)

A Study of NGOs in Sri Lanka

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ABSTRACT Nanthagopan Yogarajah

A Resource-Based Perspective on Project Management in Non-Governmental Organisations (NGOs): A Study of NGOs in Sri Lanka

The number of NGOs has increased rapidly in the last four decades, in part due to increasing economic, social and environmental turbulence. These NGOs face pressures to improve performance from a number of areas, such as other NGOs, international non-profit enterprises, government and private sector led initiatives. As a result, NGOs have grown in both scale and sophistication as they seek to meet complex societal challenges along with increased demands for accountability and improved performance from stakeholders. Existing organisational development approaches have adopted a long-term operational perspective, however, most NGO activities are project-based, temporary, unique activities for which this approach has limited value. There is, therefore, a need for enhanced understanding of Project Management (PM) resources in NGOs, such as PM tools, techniques, systems and processes.

The aim of this study is to develop a critical understanding of the nature of PM resources in NGOs and their relationships with project success using a theoretical perspective drawn from the Resource-Based View (RBV). A sequential mixed method design (exploratory, 4 case studies, and 447 survey responses) is used which combines inductive and deductive perspectives. The setting for this study is Sri Lanka, a country that is currently recovering from civil war and natural disasters and is host to a large number of national and international NGOs.

The case study findings identified three levels of PM resources: team, organisational and collaborative social resources, this last a resource that has not yet been identified in the literature as important to the delivery of successful projects and which supports adaptation to the complex, uncertain environments in which some NGOs operate. Subsequently, survey study findings confirmed these resources and identified significant associations between these three levels of PM resources and project success: PM success, project success and NGO success. These findings were used to develop an integrated conceptual model for PM resources and project success in NGOs. Overall, the model provides an academic contribution as a limited amount of research has been done on PM resources and project success from the NGO perspective. Further, it provides practical implications for NGO management to understand and build PM resources in order to improve successful project delivery by NGOs.

Keywords: NGOs, Resource-Based View, PM Resources, Project Success

Table of Contents

2.2.1 Types of NGOs	
2.2.2. Evolution and Growth of NGOs	40
2.3. Strategic Perspectives on Organisations	
2.3.1. Outside-in View	
2.3.2. Inside-Out View	
2.4. Organisational Capacity of NGOs	53
2.4.1. Levels of Organisational Capacity	54
2.4.2. Operational and Adaptive Capacity	54
2.4.3. Limits of Organisational Capacity Approach	55
2.5. Project Management Practices in NGOs	
2.5.1. Projects and Project Management	
2.5.2. Unique Characteristics of Projects delivered by NGOs	
2.5.3. Importance of Project Management in NGOs	
2.5.4. Project Management in NGO research	59
2.6. PM Resources	60
2.6.1. Structural Elements of Project Resources	60
2.6.2. Project Capacity as a collection of Practices	61
2.6.3. PM Resource Types	61
2.7. Levels of PM Resources	63
2.7.1. PM Team Resources	63
2.7.2. PM Organisational Resources	64
2.7.3. Challenges and Limitations of RBV in PM	64
2.8. Project Success	65
2.8.1. Evolution of Perspectives on Project Success	65
2.8.2. Project Success in Non-profit Organisations	66
2.9. Research Gap and Initial Conceptual Framework	68
2.10. Summary	
CHAPTER THREE	72
RESEARCH METHODOLOGY	72
3.1. Introduction	72
3.2. Research Philosophy and Paradigms	73
3.3. Research Design	75

	3.4. St	trategy of Inquiry	76
	3.5. Pl	hase 1: Case Study	81
	3.5.	1. Case Selection	82
	3.5.	2. Case Study Sample Characteristics	83
	3.5.	3. Ethical Issues and Risk Assessment	86
	3.5.	4. Validity of Case Study Research	86
	3.6. Pl	hase 2: Survey Study	87
	3.6.	1. Method—Questionnaire	87
	3.6.	2. Procedure	88
	3.6.	3. Sample Selection	88
	3.6.	4. Quantitative Study: Sample Characteristics	89
	3.6.	5. Survey Analysis	92
	3	.6.5.1. Univariate Analyses	92
	3	.6.5.2. Multivariate Analyses	93
	3.6.	6. Multivariate Analysis Process	96
	3	.6.6.1. Factor Analysis	96
	3	.6.6.2. SEM	96
	3.7. R	esearch Implementation Plan and Connecting Research Methods	99
	3.8. Sı	ummary	101
C	HAPTI	ER FOUR	102
E	XPLOI	RATORY QUALITATIVE STUDY and CONCEPTUAL MODEL DEVELOPMENT.	102
	4.1.	Introduction	102
	4.2.	Initial Thematic Framework: PM Resource and Project Success	104
	4.3.	Implementation of Exploratory Case Study	105
	4.4.	Detecting Elements and Dimensions: PM resources and Project Success	109
	4.5.	Categorising and Classifying of PM Elements and Resources	114
	4.6.	Visual Mapping of Case Study Results	115
	4.6.	1. Visual Mapping of PM Elements and Resources in NGOs	116
	4.6.	2. Visual Mapping of Project Success in NGOs	117
	4.6.	3. Three Levels of PM resources	118
	4	.6.3.1. Team PM resources	120
		4.6.3.1.1. Casual Conversations and Informal Meetings	121

	4.6.3.1.2. Brainstorming Sessions	122
	4.6.3.1.3. Field Visits	123
	4.6.3.1.4. On-the-job Training	124
	4.6.3.1.5. Job Shadowing and Mentoring	125
	4.6.3.1.6. Success and Failure Stories	126
	4.6.3.1.7. Team Cohesion and Trust	127
	4.6.3.1.8. Team PM Values	129
	4.6.3.1.9. Team PM Expertise	129
	4.6.3.1.10. Team Best PM Practices	130
	4.6.3.1.11. Summary of Finding of Team PM resources	131
4	.6.3.2. Organisational PM resources	132
	4.6.3.2.1. Effective PM Office	133
	4.6.3.2.2. PM Methodology, Standards and Processes	134
	4.6.3.2.3. PM Tools and Techniques	135
	4.6.3.2.4. PM Information System	136
	4.6.3.2.5. Project Monitoring and Evaluation Mechanism	137
	4.6.3.2.6. Staff Capacity-building Programs	139
	4.6.3.2.7. Formal Meetings for Sharing Knowledge	140
	4.6.3.2.8. Effective Project Communications System and Technology	141
	4.6.3.2.9. Defined Organisational PM Culture	142
	4.6.3.2.10. Supportive Organisational Leadership to PM	143
	4.6.3.2.11. Summary of Finding of Organisational PM resources	144
4	.6.3.3. Collaborative Social PM Resources	145
	4.6.3.3.1. Project Advisory from Government Bodies	147
	4.6.3.3.2. Project Advisory from Donors	149
	4.6.3.3.3. NGOs' Intra and Consortium Meetings	149
	4.6.3.3.4. Official Information Releases	150
	4.6.3.3.5. Joint Projects Formal Interactions	151
	4.6.3.3.6. Joint Projects Informal Interactions	152
	4.6.3.3.7. Networking Relations with Stakeholders	153
	4.6.3.3.8. Beneficiary Integration in Projects	154
	4.6.3.3.9. Project Marketing	155

4.6.3.3.10. Community of Practice through Online Social Networks	. 156
4.6.3.3.11. Summary of Findings of Collaborative Social PM resources	. 157
4.6.4. Three Levels of Project Success	. 158
4.6.4.1. Project Management Success	. 158
4.6.4.2. Project Success	. 159
4.6.4.3. NGO Success	. 161
4.6. Association between PM Resources and Project Success	. 162
4.7.1. Team PM resources and Project Success	. 163
4.7.2. Organisational PM resources and Project Success	. 165
4.7.3. Collaborative Social PM Resources and Project Success	. 166
4.7. Hypothesis Generation from Exploratory Case Study	. 168
4.8.1. Proposed Hypotheses	. 170
4.8. Updated Conceptual Model from Exploratory Case Study	. 171
4.9. Summary	. 172
CHAPTER FIVE	. 173
SURVEY INSTRUMENT DEVELOPMENT AND DATA PRESENTATION	. 173
5.1. Introduction	. 173
5.2. Operationalisation of Variables	. 173
5.3. Questionnaire Development Process	. 176
5.3.1. Final Survey Instrument	. 178
5.4. Descriptive Statistics of Construct Items	. 179
5.4.1. Valid Percentage of Respondents on PM Resource and Project Success	. 179
5.4.1.1. Team PM Resource	. 179
5.4.1.2. Organisational PM Resource	. 181
5.4.1.3. Collaborative Social PM Resources	. 182
5.4.1.4. Three Levels of Project Success	. 183
5.4.2. Central Tendency and Univariate Normality of PM Resources and Project Success	. 185
5.4.2.1. Team PM Resources	. 185
5.4.2.2. Organisational PM Resources	. 186
5.4.2.3. Collaborative Social PM Resources	. 187
5.4.2.4. Project Success	. 188
5.5. Independent Sample t test of Local and International NGOs	. 189

5.6. Conclusion	191
CHAPTER SIX	192
QUANTITATIVE DATA ANALYSIS	192
6.1. Introduction	192
6.2. Analytical Framework	193
6.3. Exploratory Factor Analysis (EFA)	194
6.3.1. Item (Indictor) Selection of Team PM Resource	195
6.3.2. Best Item (Indictor) Selection of Organisational PM Resource	196
6.3.3. Best Item (Indictor) Selection of Collaborative Social PM Resource	197
6.4. Confirmatory Factor Analysis (CFA)	198
6.4.1. Assessment of Construct Validity	201
6.4.2. Step 1: Measurement Model Specifications for PM Resources	202
6.4.2.1. CFA Model 1: Three Levels of PM Resources	202
6.4.2.2. Elimination of items	204
6.4.2.3. CFA Model 2: Three Levels of PM Resources	205
6.4.2.4. Elimination of items for CFA Model 2	207
6.4.2.5. CFA Model 3: Three Levels of PM Resources	207
4.2.6. Elimination of items for CFA Model 3	209
6.4.2.7. CFA Model 4: Three Levels of PM Resources	209
6.4.2.8. Summary of Comparison (Goodness of fit Indices of CFA Models - PM Resou	
6.4.3. Step 2: Measurement Model Specifications for Project Success	
6.4.3.1. CFA Model 5: Three Levels of Project Success	212
6.4.3.2. Elimination of Items for CFA Model 5	213
6.4.3.3. CFA Model 6: Three Levels of Project Success	214
6.4.4. Step 3: Measurement Model Specifications for PM Resources and Project Success .	215
6.5. Structural Equation Modelling (SEM)	219
6.5.1. SEM Model 1	219
6.5.2. SEM Model 2	221
6.5.3. Comparison of SEM Models 1 and 2	223
6.5.4. SEM Model 3	223
6.5.5. Comparison of Models 2 and 3	225

6.5.6. Comparison of Standardised Regression Estimates across different Estimation Met	
6.5.7. Direct, Indirect and Total Effects on SEM Model 3	
6.6. Hypothesis Testing	228
6.7. Summary	
CHAPTER SEVEN	232
FINDINGS AND DISCUSSION	232
7.1. Introduction	232
7.2. Overview of Aim and Objectives of Research	233
7.3. Discussion on PM Resource Development	235
7.3.1. Team PM Resource	236
7.3.1.1. Summary of Findings: Key Elements of Team PM Resource	238
7.3.2. Organisational PM Resource	241
7.3.2.1. Summary of Findings: Organisational PM Resource	244
7.3.3. Collaborative Social PM Resource	247
7.3.3.1. Summary of Findings: Collaborative Social PM Resource	249
7.4. Discussion on Developing Evaluating Measures of Project Success	251
7.4.1. Item Development for Measuring PM Success	252
7.4.1.1. Summary of Findings: PM Success	253
7.4.2. Item Development for Measuring Project Success	255
7.4.2.1. Summary of Findings: Project Success	256
7.4.3. Item Development for Measuring NGO Success	258
7.4.3.1. Summary of Findings: NGO Success	259
7.5. Associations between PM Resource and Project Success	261
7.5.1. Associations between Team PM Resource and Project Success	262
7.5.2. Associations between Organisational PM Resource and Project Success	263
7.5.3. Associations between Collaborative Social PM Resource and Project Success	264
7.5.4. Comparison of Total Effects of three levels of PM Resources on Project Success	265
7.6. Hypothesis Testing	267
7.7. Comparison of Proposed and Validated Conceptual Models	272
7.8 The Role of RBV	275
7.9 Summary	277

CHAPTER EIGHT	278
CONCLUSION	278
8.1. Introduction	278
8.2. Research Contributions	278
8.2.1. Theoretical Contributions	279
8.2.2. Empirical Contributions	282
8.2.3. Practical Contributions	283
8.3. Research Implications	283
8.4. Limitations of the Study	285
8.5. Suggestions for Future Research	286
8.6. Conclusion	287
References	289
Bibiliography	353
Appendices	363
Appendix 1: Time Frame for Research (Phase 1 and Phase 2)	363
Appendix 2: Case Study Coding Table	364
Appendix 3: In-depth Interview Questionnaire	366
Appendix 4: Semi-structured Interview Questionnaire	370
Appendix 5: Excel Table: Case Study Interviews and Coding	373
Appendix 6: Pretesting Questionnaire: Summary Sheet	413
Appendix 7: Examination of Previous Survey Tools related to PM Resources and Proje	ect Success
Appendix 8: Survey Pilot Study Results (Reliability)	422
Appendix 9: Survey Pilot Study Results (Communality Values)	423
Appendix 10a: Survey Questionnaire in English	424
Appendix 10b: Survey Questionnaire in Tamil	431
Appendix 10c: Survey Questionnaire in Sinhala	438
Appendix 11a: Exploratory Factor Analysis: Team PM Resources	445
Appendix 11b: Exploratory Factor Analysis: Organisational PM Resource	449
Appendix 11c: Exploratory Factor Analysis: Collaborative Social PM Resource	453
Appendix 12a: CFA Model 1	457
Appendix 12b: CFA Model 2	461

Appendix 12c: CFA Model 3	466
Appendix 12d: CFA Model 4	470
Appendix 12e: CFA Model 5	474
Appendix 12f: CFA Model 6	477
Appendix 12g: CFA Model 7	481
Appendix 12h: SEM Model 1	486
Appendix 12i: SEM Model 2	489
Appendix 12j: SEM Model 3	492

List of Tables

Table 1-1: NGOs and Sector-wise Involvement in Sri Lanka (2005)	
Table 2-1: Definitions of NGO	
Table 2-2: Examples of Types of Organisation	40
Table 2-3: Strategies of Development-oriented NGOs: Four Generations	
Table 2-4: Operational and Adaptive Dimensions of Organisational Capacity in NGOs	
Table 2-5: Levels of Project Success	68
Table 3-1: Research Paradigms, Philosophical Dimensions and Research Methods	74
Table 3-2: Mixed Methods Design Types	77
Table 3-3: Research Objectives, Question, Methods, and Expected Outcomes	78
Table 3-4: Case Study Protocol	83
Table 3-5: Qualitative Case Study: Sample Characteristics	
Table 3-6: Sample Characteristics of the study (N=447, NGO Managers)	91
Table 4-1: Initial Thematic Framework	104
Table 4-2: Development of Interview Instrument (Stage 1: Interviews)	107
Table 4-3: Development of Interview Instrument (Stage 2: Interviews)	
Table 4-4: Detecting Elements and Dimensions: PM resources and Project Success	114
Table 4-5: Categorising and Classifying PM Resources and Capacities	
Table 4-6: Hypothesis Generation from Exploratory Case Study	
Table 4-7: Proposed Hypotheses for the Study	
Table 5-1: Operationalisation of Variables	
Table 5-2: Valid Percentage of Respondents (N=447)	
Table 5-3: Valid Percentage of Respondents (N=447)	
Table 5-4: Valid Percentage of Respondents (N=447)	
Table 5-5: Valid Percentage of Respondents (N=447)	
Table 5-6: Team PM Resources (N 447)	
Table 5-7: Organisational PM resources (N-447)	
Table 5-8: Collaborative Social PM Resources (N 447)	
Table 5-9: Project Success (N 447)	
Table 5-10: Independent Sample t test of Local and International NGOs	
Table 6-1: Factor Matrix: Team PM Resource of NGOs	
Table 6-2: Factor Matrix: Organisational PM Resource of NGOs	
Table 6-3: Factor Matrix: Collaborative Social PM Resource of NGOs	
Table 6-4: Summary of Acceptable Thresholds	
Table 6-5: Estimates for CFA Model 1	
Table 6-6: Elimination of Items for CFA Model 1	
Table 6-7: Estimates for CFA Model 2	
Table 6-8: Modification Index: Regression Weights - CFA Model 2	
Table 6-9: Estimates for CFA Model 3	
Table 6-10: Modification Index: Regression Weights - CFA Model 3	
Table 6-11: Estimates for the CFA Model 4 Table 6.12: Graduate for the CFA Model 4	
Table 6-12: Summary of Comparison of Goodness-of-fit Indices	
Table 6-13: Estimates for CFA Model 5	
Table 6-14: Elimination of Items for CFA Model 5	

Table 6-15: Estimates for CFA Model 6	215
Table 6-16: Estimates for CFA Model 7	218
Table 6-17: Estimates for SEM Model 1	221
Table 6-18: Estimates for SEM Model 2	222
Table 6-19: Chi-square Difference Test	223
Table 6-20: Estimates for SEM Model 3	224
Table 6-21: Chi-square Difference Test	225
Table 6-22: Comparisons of Standardised Regression Estimates across Different Estimation	
Methods	227
Table 6-23: Standardised Direct, Indirect and Total Effects (Modified SEM Model 3)	228
Table 6-24: Hypotheses, Associated Paths and Results	230
Table 7-1: Standardised Factor Loadings – Items of Team PM Resource	240
Table 7-2: Standardised Factor Loadings – Items of Organisational PM Resource	246
Table 7-3 Standardised Factor Loadings – Items of Collaborative Social PM Resource	251
Table 7-4: Standardised Factor Loadings – Items of PM Success	255
Table 7-5: Standardised Factor Loadings – Items of Project Success	258
Table 7-6: Standardised Factor Loadings – Items of NGO Success	261
Table 7-7: Associations between Team PM Resource and Project Success	263
Table 7-8: Associations between Organisational PM Resource and Project Success	264
Table 7-9: Standardised Effects of Collaborative Social PM Resource on Project Success	265
Table 7-10: Total Effects of the Three Levels of PM Resources on Project Success	267

List of Figures

Figure 1-2: Research Aim and Objectives	28
Figure 2-1: Evolution of Strategic Perspectives	45
Figure 2-2: Existing Perspectives on PM and Strategy	46
Figure 2-3: Resource-Based View and Competitive Advantage	51
Figure 2-4: Project Management Resources	63
Figure 2-5: Initial Conceptual Model of PM Resources and Project Success for NGOs	70
Figure 3-1: Exploratory Design: Propositions development Model (Adapted from Creswell and	
Plano-Clarke, 2007)	80
Figure 3-2: Survey Analysis	95
Figure 3-3: The Analysis Process	98
Figure 3-4: Research implementation Plan and Connecting Research Methods	.100
Figure 4-1: Structure of Exploratory Case Study	.103
Figure 4-2: Visual Mapping of PM Elements and PM Resources	.117
Figure 4-3: Visual Mapping of Project Success	
Figure 4-4: Association between Team PM resources and Project Success	.165
Figure 4-5: Association between Organisational PM Resources and Project Success	.166
Figure 4-6: Association between Collaborative Social PM Resources and Project Success	.168
Figure 4-7: Proposed Conceptual Model of PM Resources and Project Success for NGOs	.171
Figure 5-1: Questionnaire Development Process	.178
Figure 6-1: Analytical Framework	.194
Figure 6-2: CFA Model 1	.203
Figure 6-3: CFA Model 2	.206
Figure 6-4: CFA Model 3	.208
Figure 6-5: CFA Model 4	.210
Figure 6-6: CFA Model 5	.213
Figure 6-7: CFA Model 6	.215
Figure 6-8: CFA Model 7	.217
Figure 6-9: SEM Model 1	.220
Figure 6-10: SEM Model 2	.222
Figure 6-11: SEM Model 3	.224
Figure 7.1: Overview of Research Aim and Objectives	.233
Figure 7-2: Team PM Resource Development	.237
Figure 7-3: Organisational PM Resource Development	.243
Figure 7-4: Collaborative Social PM Resource Development	.248
Figure 7-5: Item Development for Measuring PM Success	.253
Figure 7-6: Item Development for Measuring Project Success	.256
Figure 7-7: Item Development for Measuring NGO Success	.259
Figure 7-8: Results of Hypothesis Testing	.271
Figure 7-9: Comparison of Proposed and Validated Conceptual Models	.274

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List of Abbreviations

CBO	Community-Based Organisation		
CSO	Civil Society Organisation		
GHA	Global Humanitarian Assistance		
IDRC	International Development Research Centre		
IPMA	International Project Management Association		
NGO	Non-governmental Organisation		
OCA	Organisational Capacity Assessment		
OECD	Organisation for Economic Co-operation and Development		
PM	Project Management		
PMBOK	Project Management Body of Knowledge		
PMI	Project Management Institute		
РМО	Project Management Office		
RBV	Resource-Based View		
UNDP	United Nations Development Programme		
UNICEF	United Nations International Children's Emergency Fund		
VRIN	Valuable, Rare, Inimitable, and Non-substitutable		
VRIO	Valuable, Rare, Inimitable and Organisational support		

CHAPTER ONE INTRODUCTION

1.1. Introduction

Non-governmental organisations (NGOs) are generally considered to be non-state, nonprofit-oriented groups that function in the public interest (World Bank, 2001; Schmidt and Take, 1997). Since the 1980s, NGOs have become prominent players in community, national and international development (Banks et al., 2015; Bagci, 2003; Malena, 1995). NGOs are particularly active in developing countries where they play prominent roles in development activities and vulnerability reduction (United Nations Development Programme (UNDP), 2014). NGOs are mission-driven organisations and their missions vary widely (Werker and Ahmed, 2008). However, their objectives are not only to provide one-time aid to the needy, but also to make the needy capable of managing themselves (Ovasdi, 2006). Therefore, retaining long-lasting sustainability is crucial for NGOs to provide continuous support to communities.

Currently, NGOs are deployed to mitigate challenges resulting from turbulence in the natural, economic and social environment (UNDP, 2014). To match these challenges, NGOs are required to develop and deliver increasingly complex projects. However, existing approaches to NGO capacity development are based on an operational perspective which is based around long-term, stable processes which do not meet the demands of a dynamic external environment (Dedu et al., 2011). As a result, a significant number of NGO projects fail to deliver satisfactory outcomes to stakeholders (Ika, 2012). Therefore, there is a need to consider new methods to improve successful project delivery in NGOs (Ika, 2012).

One possible approach is the improvement of project management (PM) resources, an emerging discipline that has been applied with great success in the private sector. While the potential of this resource has been recognised, there is currently little research on how PM resources can be improved in the NGO sector. Therefore, the research aims to develop a critical understanding of the nature of PM resources in NGOs and its relationship with project success.

The rest of the chapter proceeds as follows: first, it provides the background summary (section 1.2). Next, the research rationale is described (section 1.3), and then the key terms used in the research are defined (section 1.4). Following that, the research problem is justified, the research gap is identified, and the research question is developed (section 1.5). Next, there is an explanation of the research aim and objectives (section 1.6), an explanation of the research setting (section 1.7), research approach (section 1.8), a brief description of the research contributions (section 1.9) and finally, it provides the structure of the study (section 1.10).

1.2. Research Background

NGOs have existed in various forms for centuries with a limited mission of relief and welfare, that is, the delivery of services to people in need (Lewis, 2010; Bagci, 2003), however, with the formation of United Nations in 1945, 'non-governmental organisation' was given an official definition (Lewis, 2010). These organisations have grown both in number and scale of operations in the 1980s and 1990s as a result of increased international development aid to NGOs (Lewis, 2010; Reimann, 2006). Relatively recent events, such as the 2004 tsunami reconstruction, have positioned NGOs as key third sector actors in socio-economic development (UNDP, 2014; Lewis, 2010) and their impact is especially felt in third world countries (UNDP, 2014). NGOs directly received US\$2.3 billion for international humanitarian aid in 2012 (Global Humanitarian Assistance (GHA), 2014), most of which was spent in third world countries such as Afghanistan, Chad, Ethiopia, Indonesia, and Sri Lanka, where those countries face high levels of poverty and low levels of government humanitarian support (GHA, 2014). This increasing amount of financial support to NGOs performing activities was, as NGOs are believed to be a more cost effective avenue, recognised as more reliable, independent and effective systems than the government sector in these countries (Lewis, 2010).

The need for NGOs has grown as a result of the turbulent natural, economic and social environment which has increased poverty and vulnerability in third world countries (UNDP, 2014). In recent decades, natural and man-made disasters have increased, causing substantial economic damage and human suffering to countries worldwide. EM-DAT (Emergency Events Database) (Centre for Research on the Epidemiology of Disasters (CRED), 2014)

estimated natural disasters have caused economic damage of more than US\$2,000 billion during the past two decades and UNDP (2014) highlights that more than 200 million people were affected by natural disasters every year between 2000 and 2012. The World Health Organization (2014) estimated that on average 4,400 people died every day in man-made disasters such as conflict and violence and more than 1.3 billion people are affected every year. Moreover, globalisation caused increasing poverty in third world countries as they did not have adequate resources, such as money, infrastructure or technology, to compete with developed countries (Eade, 2000; Edwards et al., 1999). UNDP (2011) recorded globally 1.2 billion people (about 22% of the total population) live on less than \$1.25 a day and 2.7 billion people (about 50% of the total population) live on less than \$2.5 a day.

Natural and man-made disasters, combined with globalisation, can lead to appeals for raising international humanitarian assistance to transform the lives of social and economic victims of such disasters, and this is the basis for the increasing number of NGOs and the growing scale and complexity of operations worldwide in recent decades (UNDP, 2014; Edwards et al., 1999; Gellert, 1996). NGO numbers have increased massively in recent times. There is no reliable source to show precisely the number of NGOs functioning worldwide; some statistics exist for individual countries. It is estimated that about 3.3 million NGOs operate in India (One World South Asia, 2010) and about 1.5 million NGOs operate in the United States (U.S. Department of State, 2012), therefore, the total number worldwide will be more than 5 million. NGOs' scopes have expanded in function (Bagci, 2003; Korten, 1990), i.e., not limited to relief and welfare but to extend to all sectors of social life, such as development programs, environmental issues, human rights, democracy building, conflict resolution, cultural preservation and many other areas of socio-economic development (Lewis and Kanji, 2009; Bagci, 2003; Korten, 1990).

Increasing numbers of NGOs and their complex job of rebuilding vulnerable communities brought new attention to NGOs to strengthen their organisational capacities to ensure they meet growing community needs and long-term sustainability of NGO activities (UNDP, 2014; Ika et al., 2012; Bebbington et al., 2008; Edwards et al., 1999). As a result, NGOs' organisational development and capacity building are increasingly discussed as prime objectives for donors, non-governmental leaders, consultants and management support organisations (UNDP, 2014; Ika et al., 2012; Lewis, 2010; Reimann, 2006). Past research has highlighted that even though organisations are deeply concerned about developing traditional organisational capacities, such as building organisational systems and structures, human resource development, financial resource development and leadership capacity development (Wachira, 2008; Bryson, 2004), NGOs' projects have a high failure rate in terms of meeting quality, timeliness and being on budget to eradicate the poverty and vulnerability (Ika, 2012; Dedu et al., 2011).

To facilitate the capability of NGOs' projects to succeed, PM has emerged as a key strand of NGOs' organisational capacity development because NGOs' activities are project-based as they are meant to be temporary interventions to meet immediate community needs with additional temporary activities to build internal capacity in the community to meet future demands (Ika, 2012). PM effectively supports the activities of research, intervention design, planning, resource management, delivery and evaluation (Ika et al., 2010). Improvements in how projects are delivered by NGOs will enable them to meet their stakeholders' needs and their stated objectives effectively such as quality specifications, budget and time schedules and improving specific conditions in community.

With these issues in mind, the present study is developed to understand the nature of PM resource and how it contributes to NGOs' project success. The study will enable NGOs to better understand PM applications and lead to improvements in project delivery to meet the intended objectives and enhance organisational performance and their contribution to development.

1.3. Research Rationale

The initial research idea for the current study was derived from four key driving factors; first, NGOs compete for resources such as donor funding, i.e., NGOs operate in Asian countries face instabilities in donors funding because of frequent changing priorities of international donors (Parks, 2008). Second, limitation of traditional development approaches to develop projects that meet the increasingly complex demands that arise from turbulent external environment, i.e., the Indian Ocean tsunami in 2004 have challenged the Sri Lankan NGOs to meet relief and reconstruction projects with existing limited capacities (Yamada et al.,

2006). Third, understanding the nature of PM resources can aid in improving NGO performance in meeting donor and recipient needs through the successful delivery of projects such as community development and finally the personal motivation of the researcher to conduct this research. These four driving factors are briefly discussed in the following subsections.

1.3.1. Competition among NGOs

NGOs face competitive forces (Zhang et al., 2016; Ly and Mason, 2012; Aldashev and Verdier, 2009) as millions of these enterprises function all over the world and compete in four ways: for donor funding, for state funding, internationally and with the private sector. The competition for donors is a long-standing and well-known problem for NGOs (Aldashev and Verdier, 2009). Donors choose the organisations that provide services most effectively and efficiently. Since donors have limited capacity, allocation of funding to one NGO can reduce the funds available to other NGOs, affecting their ability to continue to provide services (Keegan, 2009).

Governments also channel development projects through NGOs and control them through various policies. The past performance of NGOs is the main criterion for governments providing tax incentives to donors and qualifying for matched funding grants (Aldashev, 2007). These instruments result in intense competition among NGOs who seek to position themselves as the best recipient of government funding. NGOs also compete on the national and international stage, and have become more global themselves to cope with the demands of a globalising world (Lindenberg and Bryant, 2001). Multinational NGOs have economies of scale in fundraising that local NGOs may lack, in which case national NGOs focused on similar missions in smaller countries may disappear entirely, while some may remain in larger countries only if country sizes are sufficiently large (Aldashev and Verdier, 2009). If NGOs are not financially stable, they cannot support their community development projects, and this will lead to their disappearance from the community.

Finally, NGOs compete with the private sector. NGOs find that traditional funding from donors is not often sufficient to meet emerging community needs (Viravaidya and Hayssen, 2001) and rising project costs. In addition, restrictions imposed on many grants and

donations, along with uncertainty of these funds over time, make it difficult for NGOs to do long-term planning, improve their services or reach their full potential. NGOs have tried to cope by finding an alternative source of funding through social entrepreneurship, defined as forming a socially accountable business that aims to generate profit, while solving social problems (Viravaidya and Hayssen, 2001). While the term 'social entrepreneurship' has come into extensive use over the past decade, the roots of this activity date back to the end of the nineteenth century with the rise of a more strategic form of charity, from giving temporary relief to creating sustained improvement (UNICEF, 2007). These kinds of incomegenerating activities result in NGOs competing not only with local and international counterparts, but also with private organisations.

1.3.2. Limitations of Traditional NGO Development Approaches

The current external economic, social and climate setting can be described as turbulent. Further, NGOs are faced with a number of competitive pressures from a number of sources: other NGOs, government-induced, international and the private sector. Under these conditions, NGOs' traditional approaches to developing capacity and improving operations may not be sufficient (Khang and Moe, 2008). The growing scale and sophistication of NGO projects demand stronger PM resource capacities, such as PM tools, techniques, systems and processes in addition to the traditional capacities in order to improve project operations, and hence alleviate poverty and improve the quality of life of vulnerable populations (Ika et al., 2012; Hekala, 2012; Haily and James, 2004).

Traditional capacity development approaches, such as human resource, financial and leadership, are necessary to manage ongoing operations but are not sufficient to support temporary project activities because they operate under fixed time, budget, clear scopes and defined project activities, and therefore demand specific PM applications (Mingus, 2002; Clarke, 1999).

1.3.3. Understanding the Nature of PM Resources will aid in improving NGO Performance

A substantial number of NGO activities are project-based (Strichman et al., 2008) since these are temporary interventions to fulfil community emergencies or needs. Further, there is a

need to improve project delivery as NGO projects have a high failure rate (Ika et al., 2012; Dedu et al., 2011; Shleifer, 2009; Easterly, 2009). For NGOs, applying PM methodologies aids in the delivery of complex community development projects. Empirical research on NGOs suggests that a relationship exists between the use of formal PM methodologies, for example, Activities/responsibilities (Chart), Log frame, Work breakdown structure, PM software and Budgeting of tasks and project success (Ika et al., 2010). Ika (2012) further emphasises the importance of effective project supervision on monitoring, coordination, design, training, and institutional environment for successful implementation of international development projects. Other researchers support this view, agreeing that PM tools, techniques, and methods (Mingus, 2002; Clarke, 1999; Munns and Bjeirmi, 1996), and project planning are crucial to project success in NGOs (Ika et al., 2012; Dvir and Lechler, 2004; Belassi and Tukel, 1996). Since the ability to successfully deliver projects is important to NGOs, it is therefore necessary to look at approaches in evaluating their ability or capacity to deliver projects.

1.3.4. Personal Motivation

Organisational capacity development has become an important objective for donors and nongovernmental leaders. In addition, UNDP (1997) identified capacity development as a key strategy for its work. Significant research was done on organisational capacities and development to increase the performance of NGOs (Packard, 2010; Okorley and Nkrumah, 2012). However, many NGOs are not successful despite investing heavily in capacity development (Ika et al., 2012).

The researcher has over eight years of experience in organisational development and capacity-building projects in NGOs and has undertaken research to improve the organisational performance of NGOs. In his MBA program, he identified the six dimensions of organisational capacity for successful performance of NGOs. As a consequence of these research findings, it was recognised that PM resource capacity should be considered as an organisational capacity of NGOs, however, little research has been done in this area. The original motivation for this topic emerged from understanding the nature of PM resource and how it will contribute to the performance of NGOs.

1.4. Definition of Key Terms

1.4.1. Definition of Project and Project Management

A project is a temporary endeavour undertaken to create a unique product or service (Project Management Institute (PMI), 1996) to meet established goals within defined parameters (Buchanan and Boddy, 1992). PM is defined as a set of processes that enables the successful completion of projects, within parameters of scope, quality, cost and schedule (Thomsett, 2002; Hutson, 1997) while meeting the expectations of project stakeholders such as sponsors, customers and end users (Bay and Skitmore, 2006; Sutton, 2005).

1.4.2. Definition of Project Success

The above definitions imply that while project outputs are defined, the processes that enable project delivery may not be clearly defined. Since both of these domains (output and process) are interdependent, project success has been defined as a project that meets its objectives within budgets and schedules and its impact on the beneficiary's benefits while meeting the expectations of stakeholders and supporting organisational success (Camilleri, 2012; Cooke-Davies, 2002; Sutton, 2005).

1.4.3. Definition of Resources and Capabilities

In management research, resources have previously been defined as strengths and weaknesses (Wernerfelt, 1984) and even more vaguely as anything that can support the firm's ability to create and execute strategy (Barney, 1991). A focus on the characteristics of critical resources has been able to provide more useful definitions for research. The first known categorisation of resources was made by Penrose (1959) who modelled organisations as a group of human and non-human resources. More recent work has extended this categorisation to include: 1) financial, 2) physical, 3) human, 4) technology, 5) reputation and 6) organisational resources (Amit and Schoemaker, 1993). These resources can be coordinated within a firm and in this mode are referred to as capabilities, defined as a firm's ability to deploy its resources to achieve an end result (Carnes et al., 2016; Paradkar et al., 2015; Helfat and Lieberman, 2002).

1.4.4. Definition of PM Resources

PM resources can be defined as elements that support effective project operations, including PM knowledge, skills, systems, processes, culture, tools or techniques (Mathur et al., 2013, 2007). I apply this term 'PM resources' in this research to mean 'PM resources' and 'PM capabilities'. Capabilities are a subset of resources and in non-profit literature are mostly interpreted as a 'know-how' resource (Bryson, 2004; Sowa et al., 2004). Therefore, the term 'resources' widely applies to mean resources and capabilities in this study.

1.5. Research Problem and Question

The current environment is challenging to NGOs and traditional approaches to improving performance are ill-suited to the complex mix of activities now aggregated under stated missions (Font et al., 2012). Consequently, NGO projects have a high failure rate despite investing large sums on traditional capacity development approaches (Khang and Moe, 2008; DeVita and Fleming, 2001). Sri Lankan studies highlight that most development projects have not achieved the expected results (Sridarran et al., 2016; Perera et al., 2012; Kelegama, 2007). Many researchers have conducted studies to improve organisational performance in non-profit organisations in the past. They focused on human resources, financial resources (Packard, 2010; Chakravarthy, 1982), organisational culture (IDRC, 2005), strategic leadership (Okorley and Nkrumah, 2012; Hansberry, 2002; Fowler, 2000), networking and linkages (Andrews, 2012), and an external environment (IDRC/Universalia, 2005).

In NGOs, a substantial amount of work is project-based so there is, therefore, a need to understand the nature of PM resources in NGOs and their relationship with project success. However, there is no empirical research on the resource capacity of NGOs to undertake projects. In the Sri Lankan context, NGO PM research is in its infancy and recent initial studies have identified the success factors for community- driven projects (Yalegama et al., 2016). While a growing body of research in PM examines the capacity of private- and public sector organisations to execute projects, work in the NGO sector either focusses on evaluating project outcomes or the use of particular PM tools, such as the logical framework (Khang and Moe, 2008). Therefore, there currently exists a research gap in evaluating the resource capacity of NGOs to undertake projects (Ika, 2012). Hence, this study will fulfil this gap; identify the PM resource of NGOs and how this resource contributes to the

success of projects. This research aims to develop a critical understanding of the nature of PM resource in NGOs and its relationship with project success.

The study addresses the question: **'How does Project Management Resource support the successful delivery of projects in NGOs?'** To address this question, this research seeks to apply a theoretical framework from strategic management, the Resource-Based View (RBV) to understand the nature of PM resource and how it is related to the successful delivery of projects in NGOs.

1.6. Research Aim and Objectives

The aim of this study is to develop a critical understanding of the nature of PM resources in NGOs and their relationships with project success using a theoretical perspective drawn from the RBV. It should be noted that the context of Sri Lanka in which the study is undertaken has a number of distinctive features (e.g. a history of civil conflict) that may have significant application to other settings in the developing world where similar cases of civil unrest have occurred, for example, countries such as South Sudan, Rwanda, East Timor and Liberia (UNDP, 2011; Sørensen, 1998). With this broad research aim in mind, the specific the research objectives and secondary research questions are determined. Figure 1-2 presents the research aim and objectives of the study.

Research Aim

The aim of this study is to develop a critical understanding of the nature of PM resources in NGOs and their relationships with project success using a theoretical perspective drawn from the RBV.

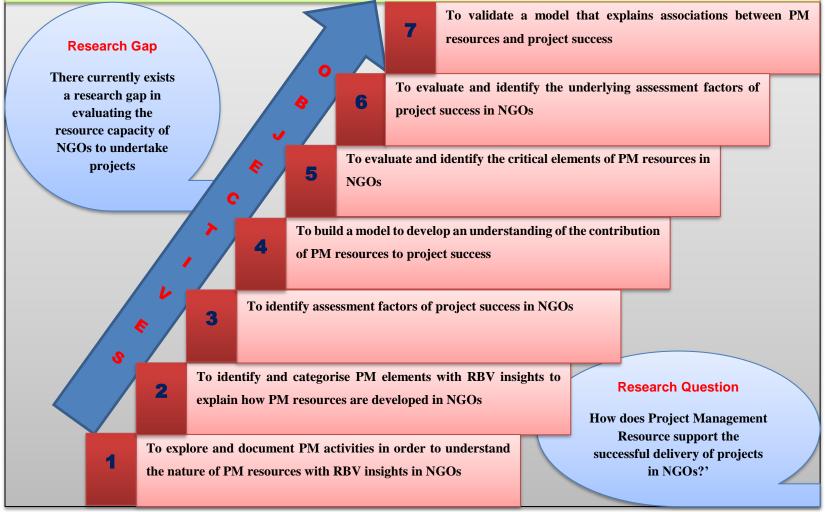


Figure 1-2: Research Aim and Objectives

1. To explore and document PM activities in order to understand the nature of PM resources with RBV insights in NGOs.

Existing research on PM in NGOs focuses on the application of formal methodologies and tools (Khang and Moe, 2008). However, PM in organisations requires both explicit and tacit resources such as systems, methods, capabilities and skills (Jugdev, 2011). This research seeks to understand the nature of PM resources in NGOs. This study will initially explore PM applications and activities that focus on both explicit and tacit resources in NGOs. The following secondary research question addresses this objective:

- What are PM applications in NGOs?
- 2. To identify and categorise PM elements with RBV insights to explain how PM resources are developed in NGOs.

The RBV indicates that resources are coordinated to create capabilities/capacities which are deployed to deliver activities. There is, therefore, a need to understand how PM resources are developed in NGOs. The following secondary research questions address this objective:

- Which PM elements exist in NGOs?
- How PM elements can be pooled to classify PM resources?
- What PM resources are identified in NGOs?

3. To identify assessment factors of project success in NGOs.

Previous research highlighted the levels and factors of project success in private and public sector organisations. This study uses the previous literature and qualitative case study findings to identify assessment factors of project success in NGOs. The following secondary research question addresses this objective:

• What are the factors used by NGOs to evaluate project success?

4. To build a model to develop an understanding of the contribution of PM resources to project success.

Previous literature and exploratory works help to identify a model to explain the contributions of PM resources and project success in NGOs.

The following secondary research questions address this objective:

- What is the association between PM resources and project success dimensions?
- How can a model be developed to explain the relationship between PM resources and project success?

5. To evaluate and identify the critical elements of PM resources in NGOs

Exploratory work in the earlier research questions on the nature of PM elements in NGOs helps to develop a holistic insight into PM resources. Empirical quantitative research evaluates and identifies the critical elements of PM resources which exist in NGOs. The following secondary research question addresses this objective:

• What are the critical elements of PM resources?

6. To evaluate and identify the underlying assessment factors of project success in NGOs

Exploratory work helped to identify the assessment factors of project success. Empirical survey study evaluates and identifies the underlying assessment factors of project success in NGOs. The following secondary research question addresses this objective.

• What are the underlying assessment factors of project success?

7. To validate a model that explains associations between PM resources and project success

Exploratory works help to identify a model to explain the contributions of PM resources and project success in NGOs. Statistical techniques are employed to modify and validate the model. The following secondary research questions address this objective:

- What is a best model that explains the association between PM resources and project success dimensions?
- How can PM resources improve project delivery in NGOs?
- What are the limits and validity of the model?

1.7. Research Setting

Sri Lanka is a free, independent and sovereign nation with a population of 20.3 million (2011 estimate); it is a multicultural country consisting of Sinhalese, Tamil, Muslims, and Burghers; the Sinhala and Tamil languages are widely spoken throughout the country (Government of Sri Lanka, 2013). Sri Lanka's country context has changed dramatically since the end of the armed conflict in 2009. The Sri Lankan economy grew strongly during 2011 (about 8%) largely due to the post-conflict rebound (Central Bank of Sri Lanka, 2011). The research setting, Sri Lanka, is an appropriate environment to examine NGO activities because of a long history of voluntary service and the recent increase in the number of NGOs due to war and disaster.

While Sri Lanka's voluntary sector has existed since ancient times (Orjuela, 2005; Wanigaratne, 1997), recent events have resulted in the country's need for NGO support. Sri Lanka was the setting for a violent civil war, and numerous local NGOs were created specifically as a response to the needs caused by the conflict (DeVotta, 2005). Further, the country suffered heavy damage as a result of the 2004 tsunami which killed around 35,000, affected one million Sri Lankans and economic damage estimated at US\$1,316 million (EM-DAT, 2014). International NGOs' funding and operations are growing since 2004 in the country (DeVotta, 2005; Orjuela, 2005). Combined, these two events led to an immediate increase in NGOs operating in Sri Lanka as most international donors select to direct aid through NGOs to avoid government mismanagement of funds (DeVotta, 2005).

Sri Lanka is ranked as the twenty-sixth largest international humanitarian recipient country and received humanitarian assistance US\$83 million in 2012, of which US\$26.7 million from EU institutions and US\$19.7 million from the USA as the largest donor of humanitarian assistance in 2012 (GHA, 2013). Sri Lanka is now recovering from natural disasters such as the 2004 Indian Ocean earthquake and 30 years of civil war, mostly with the help of international humanitarian aid channelled through various funding agencies (National Secretariat for Non-Governmental Organizations, 2012). There are over 4,000 NGOs working in Sri Lanka (Ministry of Social Service and Welfare, 2012), of which 1,426 NGOs are registered with National Secretariat for NGOs (National Secretariat for NGOs, 2014). Therefore, the Sri Lankan country context is an appropriate location for studying NGOs and this is the most suitable time for studying NGOs in Sri Lanka, since at present, a large number of resettlement, rehabilitation and development projects are underway (National Secretariat for NGOs, 2012).

At present, NGOs are involved in a range of activities in Sri Lanka including: Community health care, Relief operations for displaced people, Permanent/semi-permanent housing construction, Disaster response and preparedness, Promotion of human values, Livelihoods and income generation, Capacity development, Tourism and agricultural development, Alleviation of human suffering, Providing basic education for the vulnerable community and Safeguarding of people in need (DeVotta, 2005; Perera, 1999). NGOs' sector-wise involvement in Sri Lanka is tabulated in table 1-1.

National NGOs	International NGOs	Total
24	20	44
68	72	140
5	13	18
55	73	128
15	40	55
28	40	68
23	47	70
20	27	47
65	58	123
46	63	109
48	24	72
49	21	70
23	16	39
36	34	70
8	6	14
16	5	21
1	1	2
1	3	4
	24 68 5 15 28 23 20 65 46 48 49 23 36 8 16 1 1	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$

Source: Centre for Non-Governmental Sector (2005)

Table 1-1: NGOs and Sector-wise Involvement in Sri Lanka (2005)

1.8. Research Approach

The study adopts a Sequential Exploratory Method standpoint and follows a mixed methodology using an exploratory case study followed by a survey (Creswell and Plano-Clark, 2007). The exploratory case study is used to explore the elements of the PM resource and project success of the NGOs and informs the subsequent survey study. This case study helps the in-depth analysis into PM resources as no comprehensive studies have been conducted in the NGOs. The objective of the survey study is to test the findings reported by the case study and to create a model to explain the relationship between PM resources and project success. The methods used during the case study implementation are in-depth interview, semi-structured interview and archival analysis where literature provided initial thematic framework, while the survey study relies on structured survey questionnaire.

1.9. Research Contribution

The study provides theoretical, empirical and practical contributions to the literature on PM in NGOs.

- 1. The theoretical contribution is a validated framework for evaluating the PM capacity in NGOs and shows the associations with project success.
- 2. The empirical contribution is an examination of PM in an unexplored -country context, Sri Lanka.
- 3. The practical contribution is improving project delivery by NGOs through exploring and understanding PM capacity. The findings from this research are used to make recommendations to the management of NGOs for making policy- level decisions for developing PM resources in order to improve project delivery by NGOs.

1.10. Structure of the Thesis

The study comprises of eight chapters. A brief outline of each chapter is provided here.

Chapter 1 provides a broad view of challenges facing NGOs in the current complex environment and explains briefly how PM will address these challenges and support to improve the organisational performance in NGOs. Further, it outlines the research setting, research methods and research contributions of the present study. Chapter 2 presents the literature review. Firstly, it explains the definitions, types and evolution of NGOs. Next, it discusses the strategic perspectives and justifies the Resource-Based View (RBV) as the appropriate approach to evaluate PM resources in NGOs. Subsequently, discussion begins by reviewing the literature on organisational capacities in NGOs and then moves the discussion to PM resources in private and public organisations. The chapter concludes with a presentation of an initial theoretical framework of PM resources, the research gap and the research questions driving this study.

Chapter 3 describes the methods applied in this study. This includes a discussion on the underlying philosophical standpoint adopted by this study and builds a case for the methodology to be employed. Subsequently, there is a discussion on the mixed method approach and detailed description of the research design for both qualitative and quantitative study. Finally, the chapter explains how the findings of both qualitative and quantitative phases have been connected.

Chapter 4 presents the exploratory case study results and describes the whole process of development of the conceptual framework. The exploratory case study starts from the initial thematic framework derived from the literature. Three levels of PM resources emerged from the exploratory case study findings and indicator variables were explored for each latent construct and elaborate the rationale for the inclusion of the indicator variables by comparing the literature review and case study findings. Further, it justifies the development of each latent construct by grouping the indicator variables. Finally, it describes the formulation of research hypotheses and generation of the conceptual framework based on the findings of case study.

Chapter 5 explains the operationalisation of the variables of the survey study, the survey instrument development process and presents the descriptive statistics. It establishes that the dataset meets the conditions for univariate normality and applicable parametric statistical tests.

Chapter 6 presents the data analysis and results of the survey study. It begins with the general description of the analytical methods employed for the data analysis. It describes the results

of exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) and, finally, validates the modified model by using structural equation modelling (SEM). The modified model explains the direct and indirect associations between PM resource and project success. In conclusion, hypothetical relations were tested in the modified model.

Chapter 7 discusses the findings of the qualitative and quantitative studies. It compares the results of the mixed studies and concludes what qualitative findings were and were not supported by the survey findings. In addition, the survey findings were compared with the literature and informed new contributions to the existing literature.

Chapter 8 concludes the thesis by briefing presenting the major research findings in terms of the theoretical, empirical and practical contributions and discussing the implications of the research findings. Finally, it acknowledges the limitations of this study and suggests how future research could be developed.

CHAPTER TWO LITERARURE REVIEW

2.1. Introduction

The previous chapter explained that NGOs currently operate in a complex environment, that traditional organisational capacity-building approaches are not adequate and that PM resource capacities are required to face present conditions and to ensure long-standing sustainability of NGOs. In this view, the study aims to understand the nature of PM resources with the RBV approach, which is driven from strategic management and identifies the relationships with project success to show the importance of PM resources for NGOs. The purpose of this chapter is to substantiate the research aim and focuses on the literature to critically explain how business and strategic perspectives support NGOs and subsequently, illuminates why RBV is the most appropriate method to study PM resources in NGOs in the present NGO landscape.

The business and strategic perspectives successfully practised in private sector organisations are designed to improve organisational performance and to ensure their long-term sustainability in the market (Kotler et al., 2015; Jenkins and Williamson, 2015; Lills and Lane, 2007; Barney, 2002). These perspectives may support NGOs to sustain themselves for a long period in the community since they operate in similar competitive and complex circumstances in the current scenario. Further, the chapter reviews the literature of project success and justifies how project success can be evaluated in NGOs and finally builds an initial conceptual framework for the present study relating to PM resource and project success of NGOs.

This chapter is organised into ten sections to support the research aim and to derive the initial conceptual model for the study is explained below. Section 2.2 explains definitions of NGO, types and evolution and growth of NGOs and highlights the importance of adopting business and strategic perspectives to evaluate the organisational capacity of NGOs. Section 2.3 explains the evolution of strategic perspectives, outside-in and inside-out strategic approaches and identifies RBV is the appropriate approach to examine organisational

capacities in NGOs. Next, section 2.4 analyses past research on organisational capacities in NGOs and identifies the research gap in evaluating PM resource in NGOs. Section 2.5 explains the theoretical understanding of projects, unique characteristics of NGO projects, importance of PM and adopts an appropriate method for examination of PM resource is crucial for NGOs. Section 2.6 examines previous studies on PM resources in private sector organisations and types of PM resources. Section 2.7 explains existing work on PM resources at two levels: Team Resources and Organisational Resources. Section 2.8 reviews the research on project success in private and non-profit organisations and organises project success into three levels: PM success, project success and NGO success. Subsequently, section 2.9 presents an initial conceptual framework generated from the literature to evaluate PM resource and shows the associations with project success in NGOs and finally, section 2.10 summarises key points discussed in the literature.

2.2. Non-Governmental Organisations

Organisations can be categorised in a number of ways (Aldrich, 1999), for example, as private firms, government agencies, trade unions or non-governmental organisations (Lusthaus et al., 2002). Commonly, all organisations exist to serve a purpose (Berman, 2015; Etzioni, 1964). However, NGOs function particularly for humanitarian-oriented activities, which are not addressed by the private or public sectors and focus on direct interaction with the community in advocacy, health, non-formal education, relief and capacity building (Hermann and Pagé, 2016; Bagci, 2003; Lusthaus et al., 2002; Lyons, 2001; CEEDR, 2001).

There is still a debate within the non-profit and non-government sectors to define these organisations more precisely. The term civil society organisation (CSO) has been used widely instead of using 'non'-words (Lewis and Kanji, 2009). A civil society is composed of three sectors: government, the private sector and civil society excluding businesses. NGOs are components of social movements within a civil society (Mostashari, 2005). However, defining NGOs is very difficult as they play various roles and take varying forms within and across the different country contexts in which they operate (Lewis and Kanji, 2009; Bagci, 2003). They include many organisations that are entirely or largely independent of government and that have primarily humanitarian origins rather than commercial intensions

(World Bank, 1990). Table 2-1 shows the definitions for NGOs that have been specified by several authors.

NGO Definition	Author
"The groups and institutions that are entirely or largely independent of governmental	World Bank (1970)
and characterized primarily by humanitarian or cooperative, rather than commercial	
objectives"	
"NGOs are typically value-based organizations which depend, in whole or in part, on	World Bank,
charitable donations and voluntary service, and in which principles of altruism and	(1995, p.13)
voluntarism remain key defining characteristics"	
"Private organizations that pursue activities to relieve suffering, promote the interests	World Bank,
of the poor, protect the environment, provide basic social services, or undertake	(1995, p.13)
community development"	
"NGO is any non-profit, voluntary citizens' group that is organized on a local, national	UN (2014)
and international level. Task oriented and driven by people with a common interest"	
"NGO - A nonprofit group or association organized outside of institutionalized	PEMSEA (2003)
political structures to realize particular social objectives (such as environmental	
protection) or serve particular constituencies (such as indigenous peoples)"	
"A NGO is a legally constituted organization created by private persons or	Mullerat,
organizations with no participation or representation of any government"	(2010, p.301)

Table 2-1: Definitions of NGO

Common to all the above definitions, NGOs have the following characteristics: not-forprofit, voluntary, self-governing, humanitarian or public services oriented, and function for either the benefit of members (for example grassroots organisations) or other members of the population (for example, an agency).

2.2.1 Types of NGOs

As defined in section 2.2, NGOs have a humanitarian focus and mobilise voluntary contributions for their humanitarian activities which are obtained through private sources, donor agencies and mobilising themselves from general public (Bagci, 2003; Moore, 1993). They involve a variety of concerns such as poverty alleviation, emergency support, reconciliation and humanitarian affairs. The NGO types can be classified by their orientation and focus (UNEP, 2003; World Bank, 1998; Cousins, 1991).

By orientation, NGOs can be charitable, service, participatory and empowering (UNEP, 2003). In charitable orientations, NGO activity is directed towards meeting the needs of the poor with little participation by the beneficiaries, while service orientations expect community participation in order to provide services such as health and education (UNEP, 2003). Next, in the participatory orientation the local communities are involved under the direction of the NGOs, particularly in project implementation. Finally, in the empowering orientation, the community takes a leadership role in activities with the support of the NGO (UNEP, 2003; Cousins, 1991).

By focus, NGOs can be of two types: Operational NGOs and Advocacy NGOs (World Bank, 1998). Operational NGOs' primary focus is to design and implement development-related projects, while advocacy NGOs functions to defend or promote a specific cause, and influence the policies and practices of international organisations (Bakolias, 2000; World Bank, 1998). This may be interpreted as the choices between small-scale change achieved directly through projects which is basically through operational NGOs and large-scale change promoted indirectly through the political system which is basically by advocacy NGOs (Mostashari, 2005; Senbeta, 2003). Advocacy NGOs are frequently the common vehicle for mobilising and empowering local residents and for representing their collective interests through the advocacy NGOs; they assist the victims of discrimination and injustice (Mostashari, 2005; Senbeta, 2003). Most NGOs incorporate a mix of development and advocacy components in their activities, however, the degree of each individual focus will vary between NGOs and commonly, international NGOs are widely more focused on advocacy processes than national NGOs (World Bank, 1998).

Moreover, on the basis of the geographical range of activities where they involved in, NGOs can be further classified into: a) community-based organisations (CBOs), which serve a specific population in a narrow geographical area; b) city-wide organisations which are relatively bigger than CBOs and serve at district or regional level within the country; c) national organisations, which operate in individual developing countries; d) international organisations, which are typically headquartered in developed countries and carry out

activities in developing countries (World Bank, 1998; Bayat, 1996). Table 2-2 briefly explains the definitions and provides examples of NGOs.

Types of NGOs	Definitions	Examples	Authors
Community-	It is an organisation which	Sports clubs, Religious	Chechetto-Salles
Based	operates in a specific and narrow	societies, Women and	and Geyer, 2006;
Organisations	geographically defined local area.	Educational organisations	UNEP, 2003;
	CBOs heavily depend on		ODA, 1990
	voluntary contributions for labour,		
	material and financial support.		
City-wide	It is an organisation which	Chamber of commerce and	UNEP, 2003;
Organisations	provides social services at the	industry, Rotary clubs, Lion's	Willetts, 2002
	district or region level. It operates	Clubs, and Association of	
	comparably in a wider area than	community organisations	
	CBOs.		
National NGOs	It can be a formalised group	Red Cross, Professional	UNEP, 2003;
	functioning within a country.	organisations and YMCAs	Willetts, 2002
	These work in multiple sub-		
	national regions.		
International	It is similar in scope to local NGOs	Save the children	Timmer, 2005;
NGOs	but operates in more than one	Organisations, OXFAM,	Khagran et al.,
	country. It impacts on economic	CARE, and the Danish	2002; Sikkink,
	and social changes at the global	Refugee Council	1998; Smith et al.,
	level.		1997.

Table 2-2: Examples of Types of Organisation

2.2.2. Evolution and Growth of NGOs

Historically, NGOs originated in the early 1800s (Nalinakumari and MacLean, 2005) and the British and Foreign Anti-Slavery Society was known as the first structured NGO, being established for banning slavery in the British Empire (Nalinakumari and MacLean, 2005; Nadelman, 1990). In the early stages, NGOs only endeavoured to achieve their aims through care and welfare activities (Bagci, 2003). However, after the 1960s, NGOs showed steady growth and subsequently, after the 2004 tsunami, NGOs were recognised as important players in socio-economic development and especially in reconstruction projects in third world countries such as Sri Lanka, Indonesia, India and Thailand (Lewis and Kanji, 2009;

Lyons, 2001). NGOs have been involved in fields spanning the whole range of human needs and have engaged in all sectors of social life, such as relief, rehabilitation, reconstruction, development programs, education, employment creation, skills training, health, peace, human rights, environmental concerns, gender awareness, and economic development in the past two decades (Lewis and Kanji, 2009).

According to Korten (1990), as described here, the evolution of NGOs has occurred over four generations. The first generation was relief and welfare-oriented and aimed for direct delivery of services to meet immediate needs during an emergency due to natural disasters or war. The main activities of NGOs in this first generation included food delivery, health care, or the provision of shelter. Their management direction was logistics and operations management-oriented for implementing their relief operations. The second generation was oriented for community development and involved developing the capacities of community people to better meet their own needs through self-reliant local action. Therefore, in this second generation, NGOs started to move for development from the welfare orientation of the first generation. NGO activities included in this generation were village-level self-help actions, development of health committees to carry out preventive health measures, introduction of improved livelihoods practices, and formation of community councils. In this generation, PM applications were gradually developed for executing community development projects.

The third generation moved forward to sustainable systems development. This generation looked for changes in specific policies and institutions at local, national and global levels. The final, fourth generation focused on social movements and global change. These focused on people-centred development on a global scale. NGOs are now global facilitators of people's development movements and demonstrate the power of people's movements in driving social change. Within the past three decades people's movements have reshaped thought and action on the environment, human rights, women, peace and population. These third and fourth generations of NGOs are increasingly focusing on strategic management and collaborative networking management orientations in order to fulfil their national and global development objectives. Table 2-3 shows Korten's analysis of the development of NGOs' objectives and strategic development approaches through these four generations.

	Four Generations of NGOs			
	First	Second	Third	Fourth
	Relief and	Community	Sustainable	People's
	Welfare	Development	Systems	Movements
			Development	
Problem	Lacks in	Lacks in	Lacks in	Lacks in
Definition	individual or	Community	institutional	Mobilising global
	group of people		policies and	vision
			capacities	
Time Frame	Immediate and	projects in standard	Long period (10 to	indefinite duration
	Short	period	20 years)	
Scope	Individuals /	Local area or	Region or Nation	National or
	Family units	Village		International
Chief Actors	NGO	NGO plus	All Relevant	Loosely Defined
		Community	Public and Private	Networks of
			Institutions	People and
				Organisations
NGO Role	Perform Action	Community	Catalyst	Activists /
		Mobiliser		Educator
Management	Logistics and	Project	Strategic	Collaborative
Orientation	Operations	Management	Management	Networks
	Management			
Development	Stop children from	Community-self	Strengthening	Development on a
Education	starving	resilience	institutions	global scale

Source: Adapted from Korten (1990, p.117)

Table 2-3: Strategies of Development–oriented NGOs: Four Generations

NGOs in the early stage (first generation) were established with the primary objective of relief and welfare but eventually, have grown and, at present, their objectives have expanded with new developed concerns focusing globally on peoples' movements (Korten, 1990). Consequently, their activities are not limited to relief and welfare but to a variety of service and humanitarian functions include bringing citizen concerns to governments, advocating and monitoring policies, encouraging political participation through provision of information and providing specific support, such as on human rights, environment or health, and helping monitor and implement international agreements (Werker and Ahmed, 2008; Tvedt, 2002).

The present fourth generation of NGOs operates increasingly in a turbulent and competitive context (as discussed in sections 1.1 and 1.2.1) and undertake a variety of humanitarian efforts for global social change and development (Lewis and Kanji, 2009; Lyons, 2001; Korten, 1990). They strive for stronger institutional capacities and stimulate collaborating networks in order to sustain or survive for a long period and deliver their complex of services to a vulnerable population (Weerawardena et al., 2010; Lusthaus et al., 2002). Therefore, there is a need to look at dynamic approaches to establish highly sustainable NGOs (Bryson, 2004; Lusthaus et al., 2002; Bryson et al., 2001), and there is criticism of the previous capacity development approaches as not adequate to meet the NGOs' present focus of global peoples' movements and complex external settings (Ika, 2012; Dedu et al., 2011).

Previous scholars researched on improving organisational performance and sustainability through developing various capacities; some researchers were concerned with improving management capabilities such as organisational management systems, policies, structure and procedures that would lead to improve the organisational performance (Okorley and Nkrumah, 2012; Lusthaus et al., 2002; Salamon and Anheier, 1999). Brown (1993) believed that developing systems for information and knowledge management makes organisations effectively exchange information and helps them to take decisions appropriately for better organisational operations. Researchers have examined the importance of physical infrastructure, for example, a building with adequate space, lighting, viable transportation and other working equipment, technology, tools and materials to effectively carry out employees' tasks and improve organisational performance (Boyd, 1996; Hinings and McLaughlin, 1993). Others have focused on staff capacity development activities for example improving staff communications, leadership skills, participatory development capabilities and specific technical skills to improve their operations (Jamal et al., 2014; Packard, 2010; Stavros, 2010). Additionally, some researchers are concerned with developing strategic leadership, for example, building good governance (King, 2014; Frewer, 2013), improving governance and management leadership capabilities and relationships (Lusthaus et al., 2002) and improving external networking activities and improving relationships with stakeholders in order to improve the organisational performance of NGOs (Suárez and Marshall, 2014; Ronggui et al., 2014).

43

The above development activities mainly focus on development of internal capacity of NGOs to improve organisational performance and sustainability; however, they were short-sighted as ways to organise the NGOs to face the current competitive circumstances. NGOs in the present context increasingly compete like private organisations and operate in a highly turbulent external environment under high risks. Therefore, it is highly crucial to adopt business and strategic perspectives because these perspectives look at the internal and external environments (Kotler et al., 2015; Lills and Lane, 2007) and prepare NGOs to face current challenging competitive circumstances. Therefore, the present study proposes a new view of adopting business and strategic perspectives to bridge the gap in organisational capacity assessment in NGOs.

2.3. Strategic Perspectives on Organisations

Strategic management is the collective management approach of formulating, implement and evaluating cross-functional decisions that empower an organisation to accomplish its objectives (Fang and Chen, 2016; David, 2007; Nag et al., 2007). It focuses systematic analysis of factors associated with external and internal environment and attain appropriate match between an organisation's environment and its strategy, structure and processes (David and David, 2015; Wheelen and Hunger, 2011). Consequently, it helps to achieve better arrangement of corporate policies and strategic priorities (David and David, 2015).

Understanding the business and strategic perspectives help the organisations to face the turbulent and competitive environment and to generate sustainable competitive advantage (Jenkins and Williamson, 2015; Killen et al., 2012; Johnson et al., 2008). Prudently examination of the internal firm factors and external environmental attributes assists organisations to take better decisions, formulate appropriate strategies and competitive choices that help the organisation gain and sustain competitive advantage (David and David, 2016; Johnson et al., 2008).

Over the past three decades, it has shown tremendous development in the thoughts of strategic management (Gibbons et al., 2015). The evolution of strategic perspectives are mainly from Penrose (1959), Ansof (1965), Porter (1979), Wernafelt (1984), Shapiro (1989),

Barney (1991), Nonaka (1994), Teece et al. (1997) and Powell et al. (2011). Figure 2-1 shows the evolution of strategic perspectives.

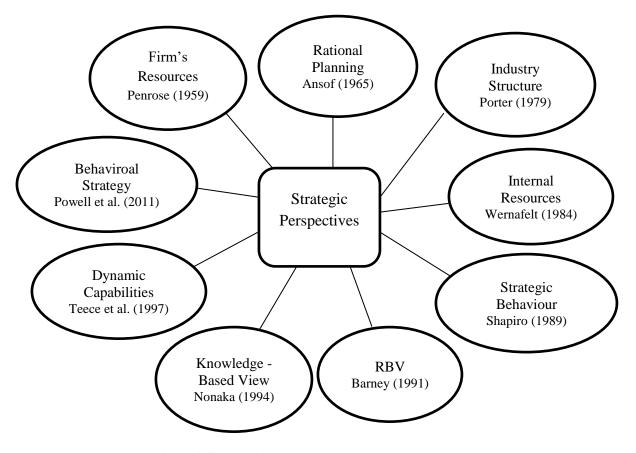
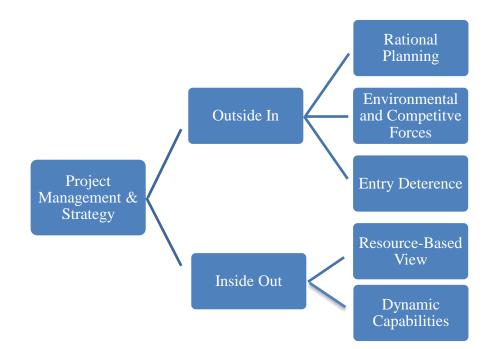


Figure 2-1: Evolution of Strategic Perspectives

Currently, strategic management has accumulated a reasonably great extent of knowledge through both qualitative and quantitative research (Guerras-Martín et al., 2014). Research in strategic management examines how firms operate and engage with their external environments and includes two perspectives (Lills and Lane, 2007).

The first is an outside-in approach in which external market and competitive forces shape organisational strategy (Day and Moorman, 2010; Teece et al., 1997). The second is an inside-out view in which internal organisational practices, resources and capabilities determine company strategy (Breznik and Hisrich, 2014; Lills and Lane, 2007). Figure 2-2 summarises these perspectives.



Source: Adapted from Lills and Lane (2007, p.193)

Figure 2-2: Existing Perspectives on PM and Strategy

2.3.1. Outside-In View

The outside-in view states that external forces are the central determinant in organisational strategy. This perspective suggests that strategy is a long-term plan based on external analysis that guides firm activity. The first of these is the rational planning approach by Ansoff (1965), which views strategy as a defined learning process. First, the environment in which the firm operates is analysed to identify external opportunities and threats. Next, the organisation's strengths and weaknesses relative to competitors are identified. Finally, an appropriate strategy is identified to overcome competition and then organisational activities are planned to implement the strategy.

Porter (1996) extended the rational view of the outside-in strategy. In his view, after the external analysis as recommended by Ansoff (1965), a firm could adopt one of three possible strategic approaches: Differentiation, Cost leadership and Niche, and then perform activities to align organisational resources with the agreed stance. This perspective explains how

similar organisations within the same industry may choose different ways of operating in order to have a competitive advantage.

Finally, Shapiro incorporated concepts from game theory to examine strategy from an outside-in perspective. Game theory attempts to model behaviour of groups and individuals using a more complex set of assumptions than Ansoff (1965), including asymmetric access to information (Shapiro, 1989). Unlike the earlier two perspectives, in the game theory view of strategy, organisations use information strategically in an attempt to control the actions of competitors, not simply to respond to them.

The industry analysis perspective is difficult to apply to NGOs, mainly for three reasons. Firstly, NGOs, even though they compete for funding, operate in a wide variety of contexts, including areas without functional markets (Gibson and Brikinshaw, 2004). It is therefore difficult to apply these approaches in country environments where firms cannot obtain detailed information on competitors in order to plan strategy or to use information in order to shape competitors' activities.

Secondly, the outside-in view only identifies possible directions of activities, it does not present insights on how these strategies are realised (Foss, 1996). Barney (1991) criticises this: that this focuses primarily on environmental determinants of organisational performance and misses evaluating the firm's unique characteristics to contribute to the organisational performance. In this current turbulent environment, knowledge and skills are critical to NGOs, therefore, the outside-in view is deemed to be inapplicable for NGOs (Kong, 2008).

Finally, for NGOs this is a critical issue as they can work in dynamic environments to serve communities in emergency situations. Under these conditions, the firm's actions, not long-term intent, are critical. Overall, this suggests that a perspective is needed that examines how firms deliver value.

2.3.2. Inside-Out View

The inside-out view takes the opposite approach to the outside-in view stating that company characteristics and activities determine organisational strategy. This approach takes the view

that strategy is an activity and long-term plans are based on the firms' ability to deliver them. The dominant paradigm in this view is the Resource-Based View (RBV) in which individual firms are modelled as a collection of resources (Mahoney and Pandian, 1992) that are coordinated to generate rents or income (Penrose, 1959). RBV is a strategic perspective that relates to the competitive advantage of a given firm to the tangible or intangible resources owned or controlled by the organisation (Breznik and Hisrich, 2014; Amit and Schoemaker, 1993; Wernerfelt, 1984; Rumelt, 1984).

Competitive advantage exists while organisations constantly outperform competitors and is gained through having superior organisational resources to provide products or services which yield greater values and benefits to the customers (Dirisu et al., 2013; Barney, 2002; Besanko et al., 2000; Porter, 1991). Organisation-particular resource characteristics make certain resources more important to organisations. Peteraf (1993) indicated that resources should be heterogeneous and not perfectly mobile. Barney (1991) indicated that resources must be valuable, rare, inimitable, and non-substitutable (VRIN). Subsequently, it was reorganised so that resources must be valuable, rare, inimitable, and nor-substitutable, and it requires organisational support for exploiting these resources (VRIO) in order to achieve sustain competitive advantage which refers to long-term competitive advantage that is not easily surpassable by competitors (Barney, 1997). Strategic resources contribute to the firm's competitive advantage and tend to be knowledge-based (Amit and Schoemaker, 1993), and are also known as organisational capabilities (Barney 1991).

Figure 2-2 illustrates the RBV and how VRIO contributes to organisations achieving sustained competitive advantage. In the first instance, the RBV examines strengths and weaknesses of internal tangible and intangible resources of organisations to exploit the external opportunities and neutralise the threats of the external turbulent environment (Fang and Chen, 2016; Spring, 2011; Robinson, 2008). The tangible and intangible resources controlled by organisations determine their performance and make organisations differ one to another (Peteraf and Barney, 2003). Tangible resources are the physical resources which can be easily bought in the market (e.g. buildings, machinery, materials, etc.), while intangible resources are not physically present in the organisation but are built into the organisation and have accumulated over time (Brynjolfsson et al., 2002). Organisations

identify the appropriate strategies to combine and exploit these tangible and intangible resources relative to the external environment (Barney, 2002). Organisational resources are the strengths of the organisations and, the previous research has highlighted intangibles resources as the main source of competitive advantage for organisations (Bhatti and Zaheer, 2014; Saeed and Arshad, 2012; Mathur et al., 2007; Drucker 1995).

Next, there is a requirement to examine the two assumptions for applying RBV: the first is that resources are heterogeneous; the second is that resources are not perfectly mobile (Barney, 2001). Heterogeneous resources refer to the organisational internal tangible and intangible resources that vary between organisations. If organisations have similar resources then they cannot formulate different strategies to gain competitive advantage (Cool et al., 2002). Therefore, organisations should have a mix of different resources for gaining competitive advantage (Dollinger, 2005; Barney, 2002). Immobile resources refer to resources not being movable from one to another at least over a short period, because this will prevent the duplication of resources by the competitors (Foss and Knudsen, 2003; Barney, 2001). Previous research highlighted that intangible resources have highly immobility characteristics (Killen et al., 2012; Bridoux, 2004).

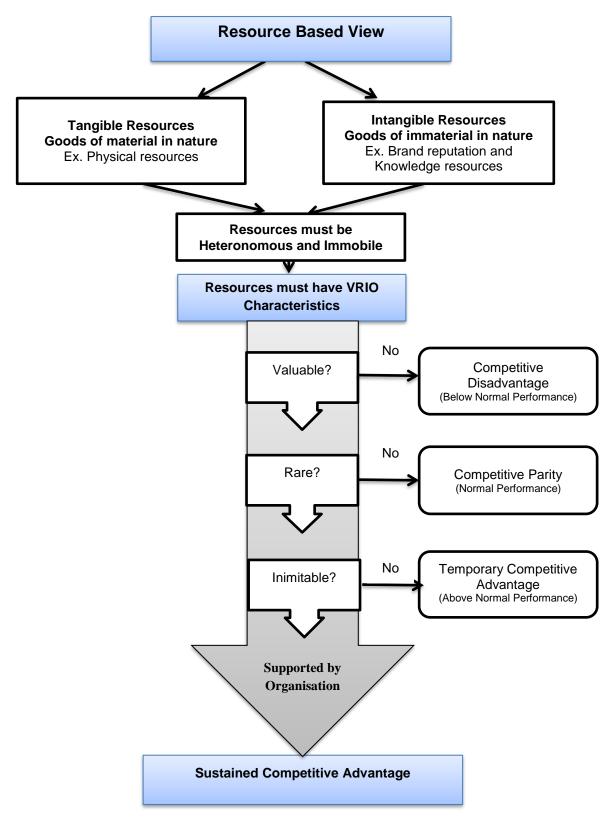
Heterogonous and immobility conditions are not adequate and in addition to that, the resources must have VRIO characterises for achieving sustained competitive advantage and superior performance (Kraaijenbrink et al., 2010; Barney, 1991). Examining the characteristics of tangible and intangible resources in terms of value, rarity, inimitability and organisational support (VRIO) provides insight to organisations to understand their competitive position in the market (Barney, 2001). This helps to focus on a firm's unique resources and their characteristics for creation and development of competitive advantage (Foss, 1997). The VRIO characteristics of the firm are discussed in detail below.

Valuable resources enable the exploitation of opportunities and/or neutralisation of threats, support improving efficiency or effectiveness of organisations and further create value for customers (Barney, 1991). Figure 2.3 illustrates that organisations should have valuable resources to achieve competitive benefits. If organisations cannot build up valuable resources they cannot develop a competitive position and this leads to competitive disadvantage and

they will fail to survive in the industry (Barney, 1991). However, in order to achieve sustained competitive advantage, the resources must meet other characteristics of rarity and inimitability (Pearson et al., 2015; Barney, 1997; Foss, 1997).

Rarity of resources implies that the organisational resources are not widely possessed by other competitors. If organisational resources are widely possessed by a large number of competing firms then all organisations will be regulating their resources in a similar way and no organisation gains competitive advantage (Pesic et al., 2013; Schulze, 1994; Barney, 1991). Therefore, in order to sustain competitive advantage, organisations build up valuable and rare resources; however, if the resources do not meet the attribute of imitability, then the organisations will only enjoy the competitive advantage for a short period (Huang et al., 2015; Barney, 1991).

Inimitable resources are unique resources which are not easily duplicated or substituted by competitors (Barney, 1991). However, in practice, examination of imitability is a very challenging task because if organisations have enough money and time they probably imitate the resources of competitors (Pesic et al., 2013). Therefore, a good way to examine this imitability is on the basis of how long rivals take to duplicate such a resource (Pesic et al., 2013). Barney and Hesterly (2010) highlight that generally tacit, intangible resources like corporate culture and reputation owned by the organisations are difficulty to copy by rivals and therefore these resources contribute more to the sustained competitive advantage.



Source: Adapted from Rothaermel (2012, p.91)

Figure 2-3: Resource-Based View and Competitive Advantage

For a firm to acquire competitive advantage, it must possess valuable, rare, inimitable resources. However, this is not adequate to gain sustained competitive advantage unless these resources are put into effective use. Barney (1997) emphasises that organisations must have capability in order to effectively exploit the resources to achieve the sustained competitive advantage. Therefore, effective use of resources is an indispensable condition to be satisfied if firms are to obtain the benefits of the valuable, rare and inimitable conditions. Therefore, organisations must build up robust systems, plans and procedures to utilise the organisational resources in an appropriate way to improve organisational performance and achieve competitive advantage.

Thus, the RBV supports organisations to examine all the resources and capabilities in an organisation and establish appropriate strategies to face the external complex environment and reap the competitive advantage. RBV is an approach highly recommended by scholars in examinations of resources and capabilities of organisations (Huang et al., 2015; Barney, 1997; Amit and Schoemaker, 1993) and it has evolved over a period of time to overcome its inherent limitations of possession of VRIN resources, which are not adequate to get a sustained competitive advantage (Kraaijenbrink et al., 2010; Eisenhardt and Martin, 2000).

The recent development of a dynamic capabilities framework is the extended version to the RBV (Helfat and Peteraf, 2015; Breznik and Hisrich, 2014; Eisenhardt and Martin, 2000). Dynamic is meant as change (Rothaermel, 2015) and capabilities are meant as ability to adjust to the environment (Tallman, 2015; Woldesenbet et al., 2012). Dynamic capabilities generate, adapt and apply capabilities and competencies in order to align with the necessities of rapidly changing environments (Tallman, 2015; Helfat and Peteraf, 2015; Woldesenbet et al., 2012). Further, in the dynamic capabilities view, it may be possible to create competitive advantage through nurturing capabilities that integrate internal and external knowledge to create distinctive capabilities (Rothaermel, 2015; Lillis and Laner, 2007; Zollo and Winter, 2002).

Despite its relatively recent introduction, the dynamic capabilities framework has attracted significant attention and is highly influential in management research (Michailova and Zhan, 2015; Gibson and Brikinshaw, 2004). This approach been used to explain how firms can act

in uncertain, turbulent environments by aligning orientation with required behaviours and processes to match external opportunities and it allows to identify best practice that may be assimilated or transferred by resource-based capabilities (Rice et al., 2015; Killen et al., 2012; Gibson and Brikinshaw, 2004).

The dynamic capabilities are progressively developed or built in the organisations rather than purchased from the market (Ward and Peppard, 2016; Makadok, 2001). It comes from routine operations of companies (Wang and Ahmed, 2007) and it can be the competitive core competencies which may be resources or capabilities of the firms (Teece, 2014). The firms to gain competitive advantage needs capabilities which are not easily imitated by competitors (Barney and Hesterly, 2010), while fast changing environment requires strategic advantages to be adopted rapidly and repeatedly (Ward and Peppard, 2016; Killen et al., 2012). Therefore, identifying dynamic capabilities of an organisation is crucial for superior performance and achieving competitive advantage of firms. The literature highlighted the PM is the competitive resource and strategic asset in private sector organisations (Petit, 2012; Killen et al.; 2012; Jugdev and Mathur, 2006).

However, this researcher adopts the RBV approach for this present study for two reasons. Firstly, in NGOs no valid research has yet examined the organisational resources and capabilities from the business and strategic perspective. Secondly, in NGOs a valid framework has not yet been created for their organisational resources and therefore, it is not feasible to identify the new dynamic capabilities without exploring deeply the existing resources and capabilities. Therefore, it is highly crucial first to explore and understand the nature of organisational resources from the business and strategic perspective in NGOs. Therefore, this RBV definition is aligned with the perspective of current NGO research and is discussed in the next section.

2.4. Organisational Capacity of NGOs

While the earlier perspectives were adopted from business research, in NGO research, the term 'organisational capacity' is more frequently used than 'organisational resources' or 'organisational capabilities' (Ker, 2003). This perspective is linked to the inside-out view of organisations as it is focused on the internal development of resources by NGOs. This section

reviews concepts of NGO capacity from two perspectives: levels of organisational capacity and types of capacity (Operational and Adaptive). These areas are reviewed to identify a research gap in the capacity of NGOs to undertake projects.

2.4.1. Levels of Organisational Capacity

Previous research has identified three levels of capacity: individual, organisational and environmental. The individual level focuses on the knowledge, skills, attitudes, accountability, beliefs, values, and motivations of employees and volunteers in NGOs (UNDP, 1998). Capacity at this level refers to the individual's capacity to function efficiently and effectively within an NGO. Capacity development in this area seeks to enhance human resources including technical, leadership and management using training and mentorship (Boffin, 2002).

The organisational level consists of all resources and capabilities within the control of the NGO, including the human resources at the individual level, financial resources, physical resources, information resources, technology resources and structure. Research in this domain examines challenges faced by NGOs in managing these resources and the interactions between them (Enemark and Molen, 2008). Finally, the system level examines the interactions between NGOs and the environment in which it is embedded. At this broader level, research in this area examines the impact of the political setting, donors, funding agencies and the legal infrastructure that influence an NGO's ability to operate in a particular environment (Enemark et al., 2008).

2.4.2. Operational and Adaptive Capacity

Another paradigm of research in this area views an organisation's capacity as separated between two dimensions, operational capacity that an organisation needs to carry out its dayto-day activities and adaptive capacity that an organisation needs to learn and change in response to changing circumstances (Wachira, 2008). Both are required for NGOs to carry out their missions, and table 2-4 presents an overview of previous research findings on operational and adaptive dimensions of organisational capacity in NGOs.

Operational Capacity	Adaptive Capacity	Author
Funding	Leadership	Okorley and Nkrumah (2012)
-	Social capital	Andrews (2012)
Financial, human and	Management capability, strategic	Lusthaus et al. (2002)
material resources	leadership, networking and linkages	
Funding, facilitative	Leaders' attitude, staff motivation and	Packard (2010)
organisational structure, and	commitment	
effective budgeting process		
-	Policy governance, board behaviours and	Nobbie and Brudney (2003)
	board performance	
Rewards, incentives, and	Organisation culture	IDRC/Universalia model (2005)
management style		
Access to resources and	Capable and motivated leadership,	Hansberry (2002)
management support systems	results-oriented programs	

Table 2-4: Operational and Adaptive Dimensions of Organisational Capacity in NGOs

Organisations can develop operational capacity, including human resource policies and procedures, accounting systems, and physical facilities, which support the efficient delivery of day-to-day activities (Packard, 2010). At the same time, organisations also deploy adaptive capacity, defined as the ability to adapt to rapid changes in the external environment (Connolly and York, 2003; Ebrahim, 2003; Letts et al, 1999). Adaptive capacities can include strategic planning, organisational learning, and management of change (Horton, 2003). This capacity to respond to changes in the external environment is recognised as a critical factor for NGO survival and sustainability (Smille and Hailey, 2001 Letts et al., 1999).

2.4.3. Limits of Organisational Capacity Approach

Both perspectives on NGO capacity development are complementary rather than competitive. The individual and organisational levels focus on the management of internal factors to achieve organisational goals, in a similar manner to the operational capacity perspective. Also, the system view of organisational capacity addresses alignment with the external environment, in a similar manner to the adaptive view of organisational capacity.

However, all of these approaches take a static view of the organisation in which there are defined processes that operate in a continuous manner. Adaptations are required in response

to external forces and are required to move the firm from one operational state to another (Okorley and Nkrumah, 2012). However, many NGOs carry out their missions in areas of high uncertainty, operating in dynamic country environments or addressing complex societal needs (Ives, 2005). As a result, most activities of NGOs are project-based (Ika, 2012), managing the delivery of actions to meet these challenges (Cabanis, 1998). Under these conditions, the existing perspectives of operational levels and types of capacity are necessary, but not sufficient to meet the demands of project-based activities characterised by rapid change and high complexity (Strichman et al., 2008). This indicates that this previous focus on operational capacities by previous researchers is an oversight in the literature and it is therefore necessary to examine capacity in NGOs from a project perspective.

2.5. Project Management Practices in NGOs

This section builds a theoretical understanding of projects and PM and explains the importance of PM in NGO sectors.

2.5.1. Projects and Project Management

A project is a set of people and other resources temporarily assembled to reach a specified objective, normally with a fixed time period. Projects are generally associated with products or procedures that are being done for the first time or with known procedures that are being altered (Gragam, 1995). Key features of a project that differentiate them from operations are: a project is a unique undertaking with defined objectives that can cross organisational boundaries, incorporating multiple departments and external organisations. PM is the planning, directing and controlling of project activities, resources and interfaces (Bay and Skitmore, 2006).

2.5.2. Unique Characteristics of Projects delivered by NGOs

NGOs contribute to the community and regional development through value creation. There is consensus among the researchers that NGOs and private sector organisations operate under increasingly competitive pressure at present (Ly and Mason, 2012; McDonald, 2007), there is distinctive that NGOs operate in turbulent natural, economic and social environment where they take prominent role in rebuilding vulnerable communities (UNDP, 2014; Weerawardena, 2010). Therefore, NGOs engage in distict projects with unique operational

model and depend on various stakeholders for the resources required to deliver effective service to the communities (Yalegama et al., 2016; Weerawardena, 2010).

Over the last few decades, the upsurge in external natural, economic and social environmental challenges has promoted implementation of very complex projects by NGOs (Yalegama, et al., 2016). A substantial number of NGO activities are project-based (Strichman et al., 2008), since these are temporary interventions to fulfil community emergencies or needs. NGOs can work in country environments in which institutional capacity is limited due to emerging economy status (Dedu et al., 2011) or as a result of natural disasters (Crawford and Bryce, 2003). As a result, infrastructure may be lacking and the NGO may be required to duplicate functions provided by the state in a developed country such as access and security before project activity can take place (Hekala, 2012). NGOs deliver complex social, economic and physical interventions in which outcomes are difficult to measure. This creates challenges in monitoring and evaluating these projects using approaches developed within industries which deliver tangible outputs, such as construction (Dedu et al., 2011). A related challenge that NGO projects are required to engage with the wide variety of stakeholders such as donors, host communities and beneficiaries (Easterly, 2009) who need to be formally consulted during the process. To meet the demands of these stakeholders while operating in difficult country environments may require adaptation to project systems, tools, processes and activities (Ika et al., 2012; Shleifer, 2009).

In NGO projects, the target customer or beneficiary is a community where boundaries are not clearly defined (Golini et al., 2015). Further, the beneficiaries benefit from the project, however, usually they are not funding the project, in most cases (Ahsan and Gunawan, 2010). NGO projects are considered as unique since they provide tremendous support to reduce the vulnerability in the countries under the current turbulent pressure, and therefore, there has been an increase in donors' funds, human capital and the international players that are employed in humanitarian development activities (UNDP, 2014; Diallo and Thuillier, 2005). The importance has been recognised of applying distinctive and solid project management practices for humanitarian projects not only for their non-profit nature, high stakeholder involvement and increasing complexity, but also distinctive success factors has been identified exclusive to NGOs' projects (Golini et al., 2015; Hermano et al., 2013; Ika et al., 2012).

2.5.3. Importance of Project Management in NGOs

Previous research in private sector organisations has indicated that PM resource is a useful approach for improving performance (Jugdev, 2011). This approach may also be of value to NGOs (Mingus, 2002) as PM resource can aid NGOs in adapting to complex environments, like Sri Lanka, while delivering projects supporting such activities as research, initiative formulation, resource and risk management (Clarke, 1999). Therefore, this study critically examines the importance of PM resource for internal operations as well as for responding to an external, dynamic and competitive environment.

There have been several PM resource capacity assessment models, for example, the Capability Maturity Model, Project Management Maturity Model, and Organisational Project Management Maturity Model, used to evaluate the PM resource capacities in private sector organisations (Mullaly, 2006). PM resource capacity assessment models examine to what level PM is widely practised in organisations and its repetitive nature in bringing high probability of project success (Ibbs et al., 2004; Kerzner, 2001). Maturity models have been acknowledged as important instruments that can evaluate PM capabilities and competencies of organisations and enabling improvement in a well-structured way to face changing environments (Ibbs et al., 2004).

However, there are growing criticisms of these assessment models despite these advantages; firstly, these models were not built up from a valid theoretical stance and secondly, Maturity Models only address explicit PM resources such as a PM office, tools, techniques, systems, standards and processes and fail to address tacit PM resources such as project team trust, values and informal knowledge-sharing processes (Judgev and Mathur, 2006; Jugdev and Thomas, 2002; Ibbs and Kwak, 2000). As project management involves explicit and tacit PM practices, it is highly crucial to critically study the nature of PM practices in view of explicit and tacit orientations. In addition, intangible PM resources were highlighted as crucial for the competitive advantage of organisations (Judgev and Mathur, 2006). Therefore, the present study adopts the RBV approach to evaluate the PM resource in NGOs.

2.5.4. Project Management in NGO Research

The first strand of research examines the factors that influence NGO project delivery and outcomes (Ika et al., 2012). NGOs are required to manage political, social, legal, technical and cultural issues in host environments (Struyk, 2007). Managing these factors may require stakeholder engagement in order to develop approaches that are sensitive to the host country (Yu and Leung, 2015). This can require the development of a management structure and project team (Khan et al., 2000) that can adapt project processes to the country context (Youker, 2003). Since NGO projects are aimed at providing long -term benefits, a success factor is also the transfer of knowledge to host communities (Yalegama et al., 2016).

The second strand of research examines NGO project management tools and methodologies. Researchers have examined the extent to which traditional PM tools are used by NGOs (Golini et al., 2015) along with the need to adopt additional tools from program management (Korten, 1987). The literature highlights specific PM tools – for example, logical framework matrix, work breakdown structure, GANTT diagram, PM software and budgeting of tasks – that are crucial for the success of NGOs' projects (Yalegama et al., 2016; Golini et al., 2015; Ika et al., 2010; Papke-Shields et al., 2010; Biggs and Smith, 2003). However, a significant amount of research has examined the adoption and limitations of the logical framework, a commonly used NGO PM tool (Khang and Moe, 2008). Newer, NGO specific methodologies have also been proposed such as the PMD Pro 1 Guide (Hermano et al., 2013). Research has also compared traditional and NGO specific PM tools (Golini and Landoni, 2014).

Finally, the evaluation of NGO project outcomes has attracted attention from researchers. Previous work has examined traditional "iron triangle" metrics such as cost and schedule (Ahsan and Gunawan, 2010). Other researchers have included additional project delivery measures such as quality, site disputes, safety and environmental impact (Ngacho and Das, 2014). Related work has also examined the reasons for failure of development projects (Ika, 2012).

While previous work has generated valuable insights into the type and effectiveness of NGO project activities, there has been little attempt to examine the PM resource capacity of NGOs. Existing capacity development activities mainly focus on development of internal capacity

of NGOs to improve organisational performance and sustainability (Bryson et al., 2001; Lusthaus et al., 2002; Bryson, 2004). Research suggests that NGO resources are important for successful delivery of projects, however, existing work focuses on examining a narrow range of explicit or tacit resources. They have focused on human resources, financial resources (Chakravarthy, 1982; Packard, 2010), organisational culture (IDRC/Universalia Model, 2005), strategic leadership (Fowler, 2000; Hansberry, 2002; Okorley and Nkrumah, 2012) networking and linkages (Andrews, 2012), and external environment (IDRC/Universalia Model, 2005). Further, recent research findings on cultural competences in NGO projects underlines these improve the project managers' capability and performance to establish stronger relationships, converse challenges and opportunities (Dale and Dulaimi, 2016).

2.6. PM Resources

Previous research in private sector organisations has indicated that PM resource capacity is a useful approach for improving performance (Jugdev, 2011). Existing research in project resources in private and public sector organisations can be classified into an examination of the structural elements of project resources and the practice elements of project resources.

2.6.1. Structural Elements of Project Resources

The organisational environment can influence the delivery of projects. At the macro level, organisations may launch projects to deliver a planned or emergent strategy (Aubry and Hobbs, 2011). These projects therefore need to be aligned with strategy (Turner, 2016; Asrilhant et al., 2007), and this area looks at how the degree of fit between PM and strategy is defined and measured (Martinsuo and Killen, 2014). Research has identified factors such as the top management support (Kwak et al., 2015). Research has also examined the effect of organisational culture on intra (Duffield and Whitty, 2015) and inter- project knowledge flows and across organisations (Ghobadi, 2015). In addition to project actors, internal organisational configurations influence the execution of project activities (Thiry and Deguire, 2007). Projects may be required to interface with operations (Killen and Kjaer, 2012) resulting in challenges of communication and coordination (Budayan et al., 2015).

Research also examines the establishment of project specific delivery structures such as Project Management Offices (PMOs) including rationale (Spelta and Albertin, 2012), characteristics (Thorn, 2003) and the adaptation of these structures over time (Aubry et al., 2008).

2.6.2. Project Capacity as a Collection of Practices

Project resources have also been viewed as a collection of company practices that are identified and assessed using tools such as maturity models (Gomes et al., 2015; Andersen and Jessen, 2003). These models generally examine for comparing project processes (Amendola et al., 2014; Szulanski, 1996) to an idealized "best practice" (Leybourne and Kennedyn, 2015) and makes recommendations for improvement. Research has examined the identification, formulation and standardisation of best practices (von Wangenheim et al., 2010) along with their contribution to project outcomes (Williams, 2016; Besner and Hobbs, 2008). Best practices can inform the development of metrics for project management (Papke-Shields et al., 2010). Since best practices imply the coordination of internal knowledge assets, this research also examines team interactions (Anantatmula, 2010) and the relationship between leadership and project outcomes (Aga et al., 2016). An emerging stream of this research examines the adoption and impact of maturity models on project practices (Bititci et al., 2015). PM resource assessment models examine to what level PM is widely practised in organisations and its repetitive nature in bringing high probability of project success (Backlund et al., 2015; Ibbs et al., 2004).

2.6.3. PM Resource Types

PM is a set of processes applied to a project to deliver a unique output (PMI, 2004). As processes, they do not have physical characteristics as do other organisational resources such as machineries and buildings. Rather, these processes are based on intangible knowledge assets; explicit (codified) and tacit knowledge assets (Delaket al., 2015; Fernie et al., 2003; DeFillippi and Arthur, 1998) also called 'know-what' (codified) and 'know-how' (tacit) (Nonaka, 1994). In practice, all knowledge is a mixture of tacit and explicit elements and these designations should be perceived as a range spectrum rather than as definitive positions (Crossan et al., 1999; Nonaka and Takeuchi, 1995). However, to understand knowledge and

knowledge-based resources, it is important to understand the nature of each type (Botha et al., 2008).

Figure 2-4 illustrates PM resource types. Explicit knowledge is codified (Cohen and Olsen, 2015; Hirai et al., 2007), and is fairly easy to identify (Delahaye, 2015; Brown and Duguid, 1998), store, and retrieve (Wellman, 2009). This is the type of knowledge managed by formal organisational systems as it exists in the form of documents and texts stored in physical and virtual databases (Botha et al., 2008). In project management, explicit knowledge resources take the form of standards, methodologies and procedures (Jugdev et al., 2011).

Tacit knowledge is context specific and hard to formalise or record as documents and is generally in the heads of individuals and teams (Gutpa, 2011). Tacit knowledge is transferred only by direct human contact, typically through face-to-face discussions (Hirai et al., 2007) and is based on interaction and involvement (Nonaka, 1994). Tacit knowledge is viewed as valuable (Wellman, 2009) as it supports innovation in organisations (Gamble and Blackwell, 2001) and can be divided into technical and cognitive dimensions. The technical dimension covers informal personal skills and crafts and could be called 'know-how'. The cognitive dimension involves beliefs, ideals, values, and mental models (Botha et al., 2008). In project management, tacit knowledge resources take the form of team PM skills, knowledge-sharing activities and lesson-learning sessions (Jugdev et al., 2011). Drucker (1993) highlights that effective acquisition and applications of knowledge resources contribute highly to the high performance and competitive advantage of organisations.

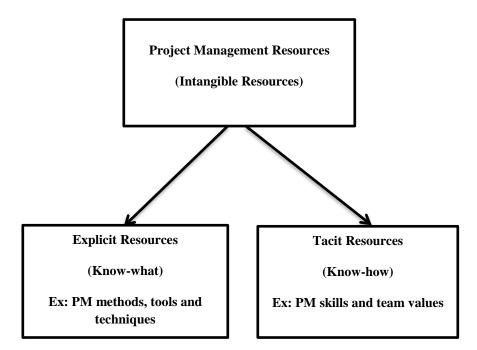


Figure 2-4: Project Management Resources

To date, most PM literature has focused on codified knowledge assets (Pollack and Adler, 2015; Kloppenborg and Opfer, 2002; Ulri and Ulri, 2000). Research has also focused on how these assets are developed and shared through communities of practice ((Lee et al., 2015; Lesser and Storck, 2001). However, an emerging stream of research examines tacit PM resources (Kim et al., 2015). The next section reviews existing work on PM resources in organisations.

2.7. Levels of PM Resources

The previous section examined the types of PM resources. This section examines existing work on PM resources at two levels: Team Resources and Organisational Resources.

2.7.1. PM Team Resources

PM team resources are defined as explicit (codified) or tacit elements within teams (Jugdev and Mathur, 2006a). Explicit PM team resources consist of codified knowledge assets for example professional certifications and written documents of PM practices (Mathur et al., 2007).

Tacit PM team resources consist of items based on informal sharing of knowledge including casual conversations, mentoring, stories, brainstorming, and shadowing that address ways in which participants exchange tacit knowledge (Jugdev and Mathur, 2006a). In PM, team resources have been associated with the on-time completion of projects (PMI, 2004; Muriithi and Crawford, 2003).

2.7.2. PM Organisational Resources

Organisational PM resources have been defined as the extent to which the PM knowledge is distributed, as well as the composition of this knowledge (Mahroeian and Forozia, 2012). PM organisational resources include both explicit resources such as policies, rules and standards and tacit resources (CIC, 2003) such as norms, values, and routines (Ekinge et al., 2000).

In PM, tacit organisational resources can influence the success and failure of complex projects (Verma, 1995; Jaeger and Kanungo, 1990). Belassi et al. (2007) found a significant relationship between the presence of supportive policies for project management and new product development project success. Further, firms with project-oriented routines (Doolen et al., 2003) are associated with higher levels of technology transfer (Gopalakrishnan and Santoro, 2004).

The previous research on PM resources has identified types (explicit and tacit) and levels (team and organisational) of resources. These paradigms are similar to the types and levels of capacity identified in previous research on NGOs. However, to date, no study has attempted to perform an empirical examination of PM resources in NGOs.

2.7.3. Challenges and Limitations of RBV in PM

The RBV has been used as a theoretical underpinning research in PM within organisations (Jugdev, 2011). Unlike the inside-out view, it explicitly addresses the means (knowledge and process assets) by which activities are delivered (Lundvall and Johnson, 1994). However, despite its popularity, RBV runs the risk of being tautological in PM if applied improperly (Lockett et al., 2009; Priem and Buttler, 2001). A tautology may exist in the RBV while considering value and rarity in defining competitive advantage as well as in defining

organisational resources (Barney, 2001). That means that both dependent and independent variables are evaluated based on similar terms, and then it is a possibility for a tautology to exist. However, Jugdev (2004) suggested two ways for PM researchers to avoid the possible tautology trap that can occur in management research using RBV. First, tautology can be eliminated if resources and performance characteristics are defined independently and second, by using sequential exploratory research methods that enable the independent evaluation of PM resources and project outcomes.

Once the issue of tautology has been resolved, RBV can be a useful method to analyse PM resources in NGOs as it is an efficiency-based explanation of performance differences (Peteraf and Bergen, 2003). This property enables researchers to understand the underlying components of capabilities (Peteraf and Bergen, 2003) and provides a basis for comparing different organisations (Foss and Knudsen, 2003; Bridoux, 2004).

2.8. Project Success

This section explains the traditional and modern views on project success in private organisations, approaches used in non-profit sectors and finally the approach followed here to evaluate project success in NGOs.

2.8.1. Evolution of Perspectives on Project Success

Traditionally, project management success has focused on the achievements of defined objectives such as 'within time', 'within budget' and 'according to requirements' (quality and functional specifications) (Turner, 2009; Westhuizen and Fitzgerald, 2005). More success measures were introduced in the 1980s and 1990s and project success today incorporates a broader range of criteria including stakeholder satisfaction (Schwalbe, 2004; Baccarini, 1999), product success, business and organisational benefit (Globerson and Zwikael, 2002; Thomsett, 2002; Redmill, 1997) team development (Atkinson, 1999; Baccarini, 1999) and the quality of PM process (Ika et al., 2012).

De Wit (1988) classified project success into two distinct components: project management success and project product success. Project management success focuses on the successful accomplishment of the project with regards to cost, time and quality. Project product success

focuses on the effects of the project's end-product on stakeholders. While project management success can be distinguished from the project product success, their outcomes are connected (Pinkerton, 2003). Similarly, Cooke-Davies (2002) distinguishes between project management success, being measured against the traditional measures of performance (i.e., time, cost, and quality), and project success, being measured against the overall objectives of the project.

Finally, researchers have taken an even broader view of project success. Shenhar et al. (1997) assess project success along at least four distinct dimensions: project efficiency, impact on the customer, direct and business success, and preparing for the future. They also introduce the influence of stakeholders as the content of each dimension and its relative importance may change for various stakeholders. Sutton's (2005) multi-dimensional project success model takes a complete view of the project lifecycle by considering the project impact on the project outputs and outcomes, and the organisation's business strategy. Cooke-Davies (2002) evaluated project success in similar dimensions: project management success, repeatable project management success, project success, and corporate success. Hence, project success is defined holistically and project delivery is linked to overall organisational success.

2.8.2. Project Success in Non-profit Organisations

While the previous section examined project success in the corporate sector, little research has been done on project success in non-profit organisations. In the NGO domain, the empirical research of Diallo and Thuillier (2004) identified specific success criteria and factors of international development projects. They assess project success as perceived by seven groups of stakeholders: coordinators, task managers, supervisors, project team, steering committee, beneficiaries, and the population at large. They also outline a comprehensive set of evaluation criteria that includes satisfaction of beneficiaries with goods and services generated, conformation of the goods and services produced to project documents, achievement of project objectives, completion of the project in time and within budget, receiving a high national profile, and receiving a good reputation among the principal donors.

Sutton (2005), examining complex, uncertain projects, introduced the concept that projects are not dichotomous and success or failure are not binary outcomes, but that there can be degrees of success and failure. Further, he identifies four distinct levels of success, each having its own discipline, tools and techniques. Thus, excellence at each level is critical for absolute success. These four levels are similar to Cooke-Davies (2002) and consist of the following: project management success; repeatable project management success; project success; and corporate success.

Conceptions of project success have evolved from measurement simply of time, cost, and functionality improvement measurement in the 1970s to a more quality-based focus in the 1980s (Pinto and Slevin, 1988). More recent research on project success today takes into account stakeholder satisfaction, product success and business overall success (Sutton, 2005; Cooke-Davies, 2002). These assessment approaches can be applied to NGO project success (Diallo and Thuillier, 2004), since these are generic ways to assess project success in any organisation, including NGOs. There was no empirical research in the past done in NGOs on assessing project success using this approach, however, Ika et al. (2012) used factors of time, cost, objectives, relevance, impact and sustainability to evaluate project success to identify the critical success factors of World Bank projects. Therefore, this researcher has selected this approach to PM success, project success and NGO success to evaluate overall project success in NGOs.

Table 2-5 summarises the previous research on levels of project success in private, public and international organisations.

Levels of	Explanations	Parameters	Authors
Success			
PM Success	Projects are produces desired outputs. Projects are completed according with planned time, budget, quality and scope parameters.	Time	Berssaneti and Carvalho, 2015; Ika, 2012; Ika, 2009; Westhuizen
		Budget	and Fitzgerald, 2005; Thomsett 2002; Cooke-Davies, 2002;
		Quality	Globerson and Zwikael 2002; Baccarini, 1999; Atkinson, 1999;
		Scope	Redmill, 1997; Blaney 1989; De Wit, 1988; Duncan, 1987.
Project Success	Projects outputs are produced the desired outcomes.	Customer Satisfaction Project Impacts	Serra and Kunc, 2015; Ika et al., 2012; Ika, 2012; Ika, 2009; Sutton, 2005; Schwalbe, 2004; Schwalbe, 2004; Pinkerton, 2003; Jiang, Klein and Discenza, 2002; Globerson and Zwikael, 2002; Cooke-Davies, 2002; Thomsett, 2002; Baccarini, 1999; Shenhar, Levy and Dvir, 1997; Redmill, 1997; De Wit, 1988; Pinto and Slevin, 1988; Tuman, 1986.
Corporate Success	Projects outputs and outcomes are contributed to overall business success.	Achieving the organisational vision, mission and objectives Sustainability	Serra and Kunc, 2015; Ika et al., 2012; Ika, 2012; Cooke-Davies, 2002; Shenhar, Levy and Dvir, 1997

Table 2-5: Levels of Project Success

2.9. Research Gap and Initial Conceptual Framework

Literature increasingly focuses on private sector research on PM resources; however, there is a unique difference between the purposes of private and non-profit organisations based on profit and service orientations and further, their projects are increasingly different because of their operational context (Golini et al., 2015; Dedu et al., 2011; Weerawardena, 2010; Easterly, 2009). That is, NGOs operate in an increasingly turbulent environment faced by natural and manmade disasters and economic and social challenges (UNDP, 2014). Therefore, it is crucial to undertake research on PM resources to understand the nature of their characteristics and their influences on project success in NGOs' projects.

Organisational capacity literature has focused on the development of non-profit organisations in terms of levels and types of operational capabilities, an approach that aligns this work with

the RBV of organisations, which makes this a useful approach for building future theory in this domain. However, a significant amount of NGO activity is project-oriented. This indicates that there is a research gap in examining the nature and effects of PM resources in NGOs. Therefore, this research aims to fill this gap to build a validated model for evaluating PM resources in NGOs.

In Sri Lanka, there is a very little research in NGOs' projects (Yalegama et al., 2016) and there is a research gap in evaluating project management resources in NGOs. Further, the RBV approach is very appropriate to evaluate the PM resource of NGOs since currently the NGOs operate in competitive and dynamic environments like private sector organisations, and it is important to evaluate their competitive position in terms of their stock of explicit and tacit resources to ensure their effective services to the community development sustainability of operations.

Figure 2-5 presents a conceptual model to examine this research gap. In this framework, PM resource is composed of PM Team resources and PM Organisational resources. As described earlier (section 2.5), project team resources enable knowledge exchange within teams to support the successful delivery of project objectives within time and budget. They can contribute to the achievement of project success in NGOs (Diallo and Thuillier, 2004; De Wit, 1988). Organisational project resources enable company-wide coordination of projects and enable the achievement of more complex project objectives such as stakeholder benefits (Schwalbe, 2004). These factors are summarised in figure 2-4 in which project team resources and organisational project resources enable the successful delivery of projects within NGOs.

Commonly, the RBV examines the internal resources and their effects on organisational performance and/or competitive advantage of organisations. The present study explores the PM resource, which examine the nature of explicit and tacit forms of PM resources and their effects on project success in NGOs. As NGOs' operations are project-based, PM resources of NGOs may first contribute to the PM success, next to project success and finally, to overall NGO success.

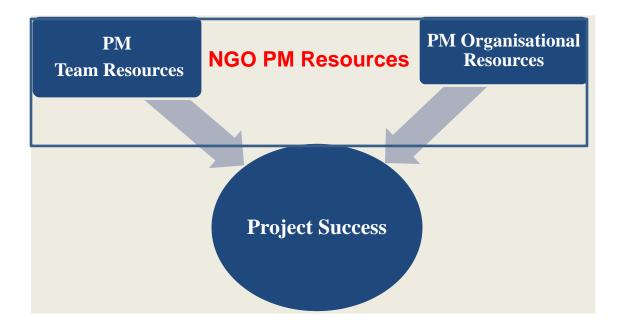


Figure 2-5: Initial Conceptual Model of PM Resources and Project Success for NGOs

The framework above avoids the tautology trap of the RBV since resources and project success are defined independently (Jugdev, 2004). The literature review concludes that PM resource is important in NGO organisational capacity to face the competition and turbulent environment. Therefore, it is important to develop a model to evaluate PM resource in NGOs and RBV is an appropriate method to evaluate it. This underlines the research objectives as the research understands the relationship between PM resources and project success and builds a framework to explain the relationship between PM resources and project success.

2.10. Summary

The chapter has explained NGO growth and how the complex external environment led NGOs to focus on the business and strategies perspectives to evaluate the organisational capacities of NGOs. This provided better understanding of organisational capacity approaches in NGOs and contributed a path to examine the PM resources appropriate to NGOs from business and strategic perspectives. Further, it helped in finding the research gap of evaluating PM resource in NGOs and supported formulation of the initial conceptual framework of the study, helping in compiling a thematic framework to initiate the exploratory qualitative study.

The examination of the relevant literature led to understanding the several key definitions, theories and findings of previous researchers, including NGO definitions and types, business and strategic theories, organisational capacities, PM concepts and practices, and project success factors. This helped to see the NGOs from a strategic viewpoint and encouraged the present study with a comprehensive scope of evaluating PM resources with RBV theory and identifying relationships with project success. The next chapter presents the appropriate research methodology to achieve the research aim and objectives of the study.

CHAPTER THREE RESEARCH METHODOLOGY

3.1. Introduction

The literature review chapter explained that the research gap exists in evaluating the PM resources in NGOs and therefore, there is a growing need for an in-depth exploratory study to understand the nature of PM resources in NGOs; subsequently, it emphasised that the RBV approach is an appropriate strategy to evaluate the PM resources in NGOs. Finally, the chapter concluded by deriving the initial conceptual framework for the present study to explain the associations between PM resources and project success in NGOs. The purpose of this chapter is to explain the ontological and epistemological stance for this research and to justify appropriate research methodology to implement the present study, achieve the research objectives and consequently, the aim of the study.

Mixed method study combining qualitative and quantitative methods is appropriate for RBVinclined studies, for critical exploration of tangible and intangible resources and developing theories with the support of qualitative methods, and testing theories with the support of quantitative methods (Molina-Azorín, 2007; Barrney et al., 2001; Hitt et al., 1998). Moreover, as no research has explored the PM resources in NGOs in the past, there is an increasing necessity for exploring PM applications and resources in NGOs. Therefore, the research methodology is organised commencing with the use of an exploratory qualitative method to exploring and understanding the nature of elements of PM resources in new NGOs context and using a quantitative method for testing the findings of qualitative methods and to create a validated model to explain the relationship between PM resources and project success.

Section 3.2 discusses the research philosophies and informs the selection of a pragmatic research paradigm which includes both inductive and deductive approaches. Section 3.3 debates the methods applied in previous, similar research and justifies that mixed method is most appropriate method for present study. Section 3.4 briefly illuminates the adoption of a sequential exploratory design for the present study. Section 3.5 presents the phase-one case

study protocols, sample characteristics and validity of case study research, while section 3.6 describes the phase-two survey study methods, procedures, sample characteristics and survey analysis techniques. Section 3.7 briefly explains how the research methods are implemented and connected in order to achieve the research objectives in this study and finally, section 3.8 summarises the key aspects of this chapter.

3.2. Research Philosophy and Paradigms

Philosophical worldviews are a key aspect in deciding how the researcher is going to conduct the study. There are two key philosophical dimensions: ontology and epistemology, underpinning existing research paradigms (Saunders et al., 2009; Kalof et al., 2008). Ontology is the nature of reality that refers to knowing or known knowledge, thus, ontology is studying the existence or nature of reality (Hudson and Ozanne, 1988). On the other hand, epistemology views what constitutes valid knowledge and focuses how to obtain that knowledge. Epistemology explores reality through research and therefore, this is the relationship between the researcher and reality (Carson et al., 2001; Hudson and Ozanne, 1988). The philosophical extents of the nature of reality (ontology) and the nature of knowledge (epistemology) inform the research paradigms: positivism, interpretivism and pragmatism of the study (Tuli, 2011; Saunders et al., 2009).

Positivism seeks to understand facts or causes of phenomena through objective verification, value-free (free from researcher bias) and is associated with quantitative methods (Tuli, 2011; Stanfield, 2006; Reichardt and Cook, 1979). Positivism relies on hypothetical-deductive protocols in which precise, positivistic scientific methods are equipped to discover and confirm certain causal associations and can be generalised to the studied population (Stanfield, 2006; Neuman, 2003; Gall et al., 2003). On the other hand, interpretivism understands the phenomena through subjective examination, value-laden and is associated with qualitative methods (Stanfield, 2006; Gall et al., 2003; Tashakkori and Teddlie, 1998). Interpretivism relies on inductive theory building protocols in which individual interpretations support rich description and deep understanding of phenomena, as reality is multiple and not generalisable (Onwuegbuzie and Leech, 2005; Gall et al., 2003; Lincoln and Guba, 2000).

Pragmatism is not embedded in any one paradigm but it is typically both deductive and inductive and a combination of quantitative and qualitative methods (Creswell and Plano-Clark, 2011; Cresswell, 2003). Pragmatist researchers are not fixed with any one philosophy or any one paradigm, rather they depend on the research questions in selecting the appropriate research methods (Tashakkori and Teddlie, 1998). Mixed method researchers use assumptions from qualitative and quantitative methods and take advantage of both methods, lessening the limitations of each method that complement each other, as they believe the study will be more highly valid and provide generalisable results than any one method can (Velez, 2012; Hammond, 2005; Johnson and Onwuegbuzie, 2004). The research paradigms, philosophical dimensions and research methods are outlined in table 3-1.

Philosophical	Research Paradigms		
Dimensions and Research Methods	Positivism	Interpretivism	Pragmatism
Ontology: the position on the nature of reality	External, objective and independent of social actors, single reality	Socially constructed, subjective, may change, multiple reality	External, multiple, view chosen to best achieve an answer to the research question
Epistemology: the view of what constitutes acceptable knowledge	Only observable phenomena can provide credible data, facts. Focus on causality and law-like generalisations, reducing phenomena to simplest elements.	Subjective meanings and social phenomena. Focus upon the details of situation, the reality behind these details, subjective meaning and motivating actions.	Either or both observable phenomena and subjective meanings can provide acceptable knowledge dependent upon the research question. Focus on practical applied research, integrating different perspectives to help interpret the data
Research Methodology: the model behind the research process	Quantitative	Qualitative	Quantitative and qualitative (mixed or multi-method design)

(Based on Saunders et al., 2009, p.119, Adapted from Wahyuni, 2012, p.70)

Table 3-1: Research Paradigms, Philosophical Dimensions and Research Methods

This present research follows the pragmatic paradigm, combining inductive and deductive approaches (Cherryholmes, 1992). Pragmatism has gained considerable support as a stance for a researcher using mixed methods (Feilzer, 2010; Morgan, 2007). Instead of focusing on

methods, researchers emphasise the research problem and use all approaches available to understand the problem regardless of differing worldviews or paradigmatic assumptions (Johnson and Christensen 2004; Rossman and Wilson, 1985). Therefore, the present study applies multiple methods, different forms of data collection and analysis techniques to best address the research problem. The researcher aims to create theory from the data using an inductive approach, by looking patterns in the data (Maylor and Blackmon, 2005). PM research based on the RBV has not yet been conducted in NGOs. Therefore, the inductive approach would best be used for identifying the PM resources and capacity in NGOs and finding fundamental relationships among them.

Deductive research is where a theory or conceptual framework is developed and then tested (Collis and Hussey, 2009), or where you move from a general law to a conclusion about a specific instance (Farquhar, 2012). This research logic follows a structured process that often starts with a conceptual framework that explains behaviour or a social phenomenon (Maylor et al., 2005). Once a conceptual model was developed and relationships between the independent and dependent variables have been identified, a deductive approach has been applied to validate the framework developed earlier.

3.3. Research Design

Past PM research using an RBV perspective in private sector organisations was mainly carried out by using quantitative approaches (Mathur et al., 2007, Jugdev et al., 2006a). The advantage of this method is that it enables the statistical evaluation of relationships; however, it does not allow researchers to understand the nature of PM resources. Since research on PM resources in NGOs is an unexplored area, this research needs to develop a detailed understanding of the nature of these resources and their relationships with project success. Therefore, it is essential to consider diverse methodologies at a variety of levels of analysis (Jugdev, 2004).

Combining inductive and deductive approaches in the form of mixed methods may provide a way to improve research in this area. The qualitative study provides the means to explore relationships between concepts while quantitative approaches can test the relationships among different variables (Lei, 2012). Molina-Azorín (2007) indicated that this approach is particularly suited to research in the RBV as it combines the strengths of quantitative and qualitative methods and Jugdev (2004) emphasised this is an appropriate method to eliminate the potential tautology problem of the RBV.

The mixed method is most appropriate for this study for three reasons. Firstly, the mixed method approach avoids the tautology issue of the RBV approach. The mixed methods approach helps to define the PM resources and project success independently and eliminates the tautology trap. Secondly, there is a need to explore PM resources in-depth since no studies have yet revealed PM resources in NGOs. Therefore, for this case, qualitative methods are the most suitable to do in-depth study on PM resources. Thirdly, it is important to develop measures to evaluate PM resources and examine the associations between PM resources and project success. Therefore, quantitative methods are appropriate in developing measures and finding associations between variables. In addition, the researcher has been able to generalise the findings to the population with statistical validity.

3.4. Strategy of Inquiry

This study has been carried out under a mixed method approach combining both qualitative and quantitative approaches (Mertens, 2003). Creswell and Plano-Clark (2007) identified four mixed method designs: triangulation, embedded, explanatory and exploratory. In triangulation design, multiple methods are applied concurrently to assess the same phenomenon while in embedded design, data are collected concurrently or sequentially where one method is located within another design (Cameron, 2009; Creswell & Plano-Clark, 2007; Caracelli and Greene, 1993). In explanatory design, data collection takes place in two phases, where the first phase is quantitative and the second qualitative, which helps to enlighten the quantitative results, while exploratory design occurs vice versa, where the first phase is qualitative, which is used to support or test the qualitative findings (Cameron, 2009; Creswell & Plano-Clark, 2007). Exploratory design is most appropriate to understand the nature of a phenomenon or develop theories on which little or no previous research has been done (Cameron, 2009; Brown, 2006). Table 3-2 explains the mixed methods design types.

Design Type	Timing	Mix	Notation
Triangulation	Concurrent: quantitative	Merge the data during	QUAN + QUAL
	and qualitative	analysis	
Embedded	Concurrent and	Embed one type of data	QUAN(qual)
	sequential	within a larger design	or QUAL(quan)
Explanatory	Sequential: quantitative	Connect the data between	$QUAN \rightarrow QUAL$
	followed by qualitative	the two phases	
Exploratory	Sequential: qualitative	Connect the data between	$QUAL \rightarrow QUAN$
	followed by quantitative	the two phases	

Source: Adapted from Creswell and Plano-Clark (2007, p.85)

Table 3-2: Mixed Methods Design Types

The present study is exploratory in nature because there is a necessity to critically examine the nature of PM resources and capacities as there is no research done in the past on NGOs. Therefore, the researcher selected the exploratory design which follows a sequential procedure in which findings of one method are elaborated on or expanded with another method. This may involve beginning with a qualitative interview for exploratory purposes and following up with a quantitative survey method with a large sample so that the researcher can generalise the results to a population (Creswell, 2003). Consequently, combining the strengths of both methods provides an opportunity for deeper understanding of PM resources at the early stage and then testing the relationships between resources and project success at the later stage of quantitative research.

Table 3-3 shows how the research methods support addressing the research questions and achieving the research objectives of the study. In the first phase of the qualitative study, the researcher used 'exploratory case study' which is recommended approach for rich exploration of nature of themes from multiple sources of evidence (Eisenhardt, 1989). Therefore, case study supports in-depth examination of nature of PM applications and resources and identifies the measuring variables of project success in NGOs. In the second phase, survey method is used to test aspects of emergent theory and test the conceptual model developed in the first phase (Creswell et al., 2007).

Research Objectives	Research Question	Research	Expected Outcomes
		Methods	
To explore and document PM activities in order to understand the nature of PM resources	What are PM applications in NGOs?		Identification of PM applications
To identify and categorise the PM elements to explain how PM resources are developed in NGOs	Which PM elements exist in the NGOs?How PM elements can be pooled to classify PM resources?What PM resources are identified in NGOs?		Identification of PM elements Identification of PM resources
To identify assessment factors of project success in NGOs	What are the factors used by NGOs to evaluate project success?	Case Study	Identification of measuring variables of project success
To build a model to develop an understanding of the contribution of PM resources to project success	What is the association between PM resources and project success dimensions? How can a model be developed to explain the relationship between PM resources and project success?		Identification of association between PM resources and project success Development of a model to explain the relationship between the PM resources and project success
To evaluate and identify the critical elements of PM resources in NGOs	What are the critical elements of PM resources?		Identification of key elements of PM resources
To evaluate and identify the underlying assessment factors of project success in NGOs	What are the underlying assessment factors of project success?		Identification of underlying assessment factors of project success?
To validate a best model that explains associations between PM resources and project success	What is a best model that explains the association between PM resources and project success dimensions? How can PM resources improve project delivery in the NGOs? What are the limits and validity of the model?	Survey Study	TestingandIdentification of a bestmodel to explain therelationshipbetweenPMresourcesandproject successExplaining howPMresourcesimproveproject delivery in theNGOs?

 Table 3-3: Research Objectives, Question, Methods, and Expected Outcomes

Figure 3-1 shows an exploratory sequential design, whereby qualitative explorations lead to quantitative empirical investigations (Creswell et al., 2007). The model explains how the researcher plans to develop the model to evaluate PM resources in NGOs and identifies associations between PM resources and project success. Phase one of the qualitative case study used three data collection techniques, namely, in-depth interviews, semi-structured interviews and archival data analysis in order to identify PM elements, PM resources, identify assessment factors of project success, identify the associations between PM resources and project success and finally, develop the taxonomy for the study which led to the conceptual framework for the next survey study stage.

The phase-two survey study used a structured questionnaire to evaluate the elements of PM resources, project success and test the qualitative findings and finally, modify a valid model which would best explain the association between PM resources and project success. Advanced multivariate analysis techniques – Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) – were used to identify the factor structure and refine the valid best model (Byrne, 2013).

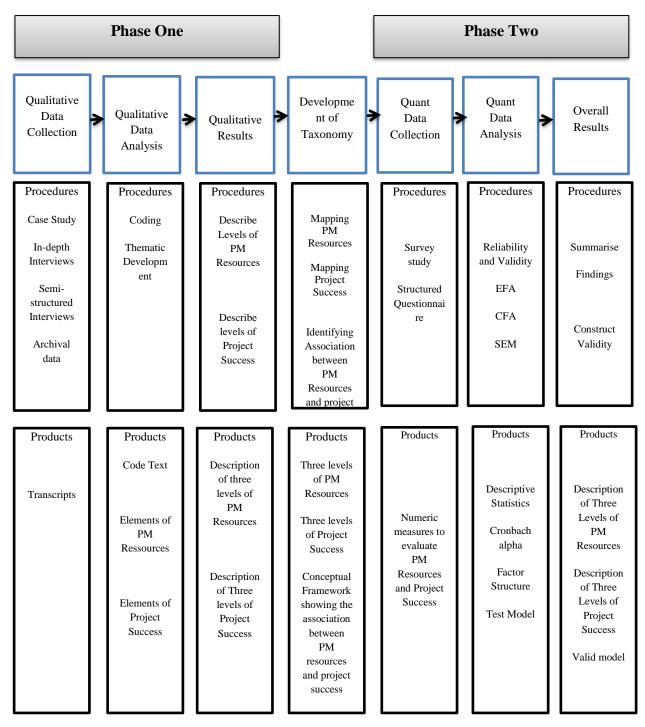


Figure 3-1: Exploratory Design: Propositions development Model (Adapted from Creswell and Plano-Clarke, 2007)

3.5. Phase 1: Case Study

Case study research is defined as an investigation into a current phenomenon (Yin, 1984) which is applied as it is a powerful method in order to conduct in-depth, detailed examination of the study themes and to develop a new conceptual model (Yin, 2009). The researcher adopted exploratory case study method for this study mainly for three reasons. Firstly, case studies are applied where the nature of a phenomenon is not clearly revealed (Streb, 2010; Yin, 2009). In NGOs, PM resources have not been explored in the past; therefore, the case study is useful approach to explore and understand the nature of PM resources. Secondly, the case study helps to develop the hypotheses and conceptual model of the study (Streb, 2010; Yin, 2009). In NGOs, this is the first study undertaken to identify the association between PM resources and project success; therefore, the case study will help to modify the hypotheses and initial conceptual model derived in the literature review, primarily from private and public sector studies. Finally, case studies enable the combination of different data collection methods to enhance the reliability and credibility of the study (Eisenhardt, 1989). Therefore the case study will help to understand the holistic view of PM resources in NGOs with the support of various sources of evidence.

For this case study, in-depth interview, semi-structured interview and archival analysis were selected. In-depth or unstructured interviews are particularly suited for collecting data on individuals' personal histories, perspectives and experiences and provide opportunities to connect different participants' perspectives to understand the research themes; semi-structured interviews are useful to clarify or obtain additional information; while archival data will aid in verifying or supporting information provided from interviews (Yin, 2009, Lofland and Lofland, 2006).

The case study was organised in two stages, prepared open-ended questions with the support of the literature review, followed with pretesting exploratory interviews. The first stage of the in-depth interviews helped the researcher for in-depth examination of tangible and intangible resources and exploring the assessment factors of project success. The second stage of the semi-structured interviews confirmed the themes, classification of PM resources and identified the association between PM resources and project success. The archival data helped to verify the tangible resources in forms of documents, charts and diagrams in the NGOs. Finally, the case study led to deriving the hypotheses and proposes the conceptual model for the survey study.

3.5.1. Case Selection

In order to gain an understanding of the nature of PM resources in NGOs, case studies were selected using a purposeful sampling method where phenomena are most likely to serve the theoretical purpose of research and its questions (Silverman, 2000; Stake, 1995). Within each category, a matching strategy was employed (Seawright and Gerring, 2008) in which cases were selected from NGOs with the same mission, but with different scopes of operation: national and international. This supported comparison as organisations with similar objectives and undertaking similar projects were evaluated. It also enabled a range of PM resources to be identified since the organisations have varying internal structures based on their scope of operation (national vs international).

The most similar setting employs a minimum of two cases (Skocpol and Somers, 1980). Eisenhardt (1989) suggested that there is no rule for the ideal number of cases; however, a number between four and ten usually works well. Therefore, the researcher selected four cases from the NGOs to do in-depth analysis on PM resources and find similar patterns to identify PM resources (Eisenhardt, 1989). The researcher designed four case studies to explore and confirm PM elements, resources and project success. The two international organisations (I1 and I2) and the two local NGOs (L1 and L2) were selected.

Step	Activity		
Defining research question	How does project management resource support the successful delivery of projects in NGOs?		
Selecting cases	Four cases selected, based on the most similar setting theory.		
Crafting instruments and protocols	In-depth interviews and semi-structured interviews are organised to identify the existing PM elements and confirm the PM resources and project success of NGOs. For the interview instruments, an open format questionnaire is used to collect data through face-to-face and Skype interviews. Archival data: The NGOs' PM documents and tools are considered to verify information.		
Analyse the data	All interviews are recorded by using audio recording aids and fully transcribed, coded and analysed using Ms Office Excel 2010. Visual mapping diagram is used to show the pattern of PM resources and project success.		
Reaching closure	All coding of interviews are grouped under the relevant levels and linking of PM elements, resources and project success is illustrated with the help of Visual Mapping strategy. The data collection is completed with data saturation.		

The case study approach is summarised in table 3-4.

 Table 3-4: Case Study Protocol

3.5.2. Case Study Sample Characteristics

The interviews for this exploratory case study were from two local NGOs (L1 and L2) and two international NGOs (I1 and I2), all in Sri Lanka. These organisations have similar objectives focusing on community rehabilitation and development.

Interview participants were organisational project management staff members from the four NGOs. The interview participants included project and program heads, consultants, managers, coordinators and officers. Seven project staff members in each case were selected for interviews. The interviews were conducted in two stages, firstly, the exploratory in-depth interviews conducted to identify the nature of PM resources in NGOs. Twenty participants, five from each NGO were interviewed in the first stage. Secondly, the confirming semi-structured interviews were conducted to confirm the identified items of PM resources and project success. Eight participants, two from each NGO, were interviewed in the second stage. A total of 28 participants, 15 male and 13 female, were interviewed in this exploratory

case study in order to get broader contextual understanding of PM resources and project success in NGOs. Participants' work experience includes between 5 and 10 years in NGO projects. These 28 in-person field interviews were conducted in the four NGOs over a one-year period in 2012/13.

The participants selected for interviews represented a variety of projects, including Emergency and early recovery response, Integrated livelihoods, Protection of internal displaced people and returnees, Reconstruction/rehabilitation, Peace building, Gender equity, Organisational development, Micro economic initiative, Disaster management, Health and care, Ensure the well-being of vulnerable community, Promote sustainable rural development, and Strengthening civil societies.

Table 3-5 presents the sample characteristics of exploratory qualitative case study.

Name of NGO	Organisational	Organisational Focus	Cases	Designation	Project/	Experienc	Gen
	Objectives				Program	e (years)	der
Case Study 1	We want to be the best		I1 R1	Program Officer	E & R	12	Μ
	problem-solver with		I1 R2	M & E Officer	IL	13	Μ
	regards to	Integrated livelihood (IL)	I1 R3	Field Officer	IDP	05	F
International NGO (I1)	displacement and	Protection of Internally	I1 R4	Team Leader	IL	10	Μ
(11)	integration	Displaced Persons (IDPs) and returnees (IDP)	I1 R5	District Coordinator	IL & IDP	15	F
		Reconstruction/rehabilitati	I1 R6	Senior Program Manager	R&R	20	М
		on (R&R)	I1 R7	Head of Program	E & R	15	F
Case Study 2	We seek a world of	Sustainable Livelihoods	I2 R1	Project Manager	SL	10	М
·	hope, tolerance and	(SL)	I2 R2	Field Coordinator	PB & GE	12	F
	social justice, where	Peace building (PB)	I2 R3	Project Coordinator	SL	08	М
International NGO (I2)	poverty has been	Emergency Preparedness	I2 R4	Program Manager	SL	25	F
()	overcome and people live in dignity and		I2 R5	M & E Officer	EP	08	М
	security		I2 R6	Senior Program Manager	SL	20	F
	security		I2 R7	Program Manager	EP	10	F
Case Study 3	Safer, resilient and	Organisational	L1 R1	Senior Program Manager	OD	15	М
-	socially inclusive	Development (OD)	L1 R2	Program Coordinator	MEI	12	М
Local NGO	communities through	Micro Economic Initiative	L1R3	Project Officer	IDP	07	F
(L1)	improving lifestyles	(MEI)	L1 R4	Consultant	DM	20	F
	and changing mind- sets	IDP Programme (IDP) Disaster Management	L1 R5	Project Coordinator	OD	10	М
	5015	(DM)	L1 R6	Head of Program	IDP	20	М
		Health and Care (HC)	L1 R7	Consultant	OD	10	F
Case Study 4	Enhances the capacity	Ensure the well-being of	L2 R1	Program Officer	EW	12	М
·	of rural communities	Vulnerable community	L2 R2	Program Officer	RD	10	F
Local NGO	and provides services	(EW)	L2 R3	Head of Project	RD	20	М
(L2)	that contribute to the	Promote sustainable rural	L2 R4	Project Coordinator	SC	15	F
	sustainable	development (RD)	L2 R5	Program Coordinator	BI	10	М
	development of Sri Lanka	Strengthening Civil Societies (SC)	L2 R6	Consultant	RD	30	M
		Building Institutional Capacities (BI)	L2 R7	Program Manager	SC	15	F

 Table 3-5: Qualitative Case Study: Sample Characteristics

3.5.3. Ethical Issues and Risk Assessment

The data collection focuses on collecting information on PM elements, resources and project success. The researcher contacted the head of the organisations and permission were sought to conduct interviews and review the documents relevant to the research. Then, the meetings were organised with the staff of the organisations and information about the research project was conveyed to them. The information sheet consisted of explaining the research project, objectives, data collection methods, storing and using information, and details on publication of the research. Their consent was then sought; the aim is to collect quality data. The data collection process did not gather any sensitive personal information from the respondents. The general, personal respondent information was collected to organise the sampling framework. This information was not shared or disclosed to anyone. Therefore, the study reduced the ethical issues on data collection.

Since the data collection aimed to collect information on PM resources and project success of the organisations, any severe questions affecting the participants were not included. Therefore, physical or psychological risks were avoided in this study. In addition, the study participants were selected from the project staff. Therefore, vulnerable groups or children were not considered in this study. Further, the researcher has over eight years of experience working in NGOs and has carried out other research on capacity building in NGO sectors in Sri Lanka. Therefore, his access to NGOs and collecting information from the respondents was a low-risk task.

3.5.4. Validity of Case Study Research

The researcher has considered the various validity techniques to ensure the validity of qualitative findings. Firstly, the researcher has done qualitative in-depth and semi-structured interviews for a one-year period (2012/13). This longer period of qualitative work in NGOs helped to get more complete data on PM resources and project success of NGOs in Sri Lanka (Maxwell, 2008). Secondly, the researcher has fully transcribed all the interviews; this helped him to effectively analyse the rich data which have been found in each of the interviews.

Thirdly, the researcher has done confirming interviews after completion of findings of the exploratory interviews. He has interviewed NGOs staff with the previous findings and

obtained their opinions as to whether he has derived accurate findings. In addition, the final model has been sent to the respondents who have then been interviewed to obtain their comments on the final design of PM resources and project success of NGOs. Finally, by comparing data over four organisations and two types of organisation, local and international, the researcher is more confident that findings are consistent across interviews and represent the PM resource dimensions and project success assessment factors. He has been able to compare the data between the two types of organisation, which also contributed to increase the validity of the findings.

3.6. Phase 2: Survey Study

The exploratory case study (Phase 1) findings led to developing the conceptual framework for this study and this framework is used to design the final survey that quantitatively evaluated the relationship between PM resources and project success (Collis and Hussey, 2009). The aims of the quantitative study were: first, develop the measures to evaluate PM resources and project success; second, identify and evaluate the key factors that determine PM resources; and, third, test the model in order to generalise the validated model to the selected population (Babbie, 1990). This quantitative phase therefore focuses on the numerical testing and analyses as identified in phase one.

Phase 2 is described in the following sections. This begins by using the initial descriptive statistics to explain the key dimensions of PM resources and project success (see chapter 6) (Bryman and Cramer, 2009), and exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and structural equation modelling (SEM) process then allows for exploration of variables and identifying relationships between PM resources and project success (see chapter 7) (Byrne, 2010).

3.6.1. Method—Questionnaire

The survey method includes a self-administered structured questionnaire (Mazzocchi, 2008; Hair et al., 2003). The survey instrument for assessing PM resources and project success in NGOs was developed by the researcher based on the findings of the qualitative interviews that were conducted with Sri Lankan NGOs, and closely followed the survey instruments

designed by previous researchers for assessing PM assets, PM success and organisational capacities in private, public and non-profit organisations. These previous standard questionnaires were already well-tested in the field survey, and therefore improve the validity and reliability of the present study (Mathers et al., 1998). The questionnaire development section 5.3 explains in detail the process of questionnaire development for the survey study.

3.6.2. Procedure

The nature of the present study is exploratory in nature. Hence, the survey technique used as the second phase of study is best suited to the research purpose. The researcher selected the 'in-person' method of data collection. This method increases the credibility of the data collection and make it possible for respondents to get immediate clarification for vague answers (Bowling, 2005). However, the researcher did not interact with respondents filling out the questionnaire. Firstly, the researcher contacted the managers of selected organisations by telephone or mail and informed them of the research objectives of the study, and then received their consent for this study. Thereafter, he delivered the questionnaire in person and collected the questionnaire from the respondents when it had been completed. This improved the quality of data collection and increased response rates (Bowling, 2005).

3.6.3. Sample Selection

The target population is the whole population that the research study was defined for, from which the sample will be selected (Zikmund, 2000). In this researcher's study, the population is the 4,000 NGOs functioning in Sri Lanka (Ministry of Social Service and Welfare, 2012). However, only 1,426 NGOs are registered with the National Secretariat for NGOs, of which 1,042 are local NGOs and 384 are international NGOs (National Secretariat for NGOs, 2014). Therefore, the researcher selected these 1,426 registered NGOs as the study population because other NGOs' details are not available (Zikmund, 2000).

For this research, the sample size was 500 local and international NGOs (35% of the population). The selection of the sample size was based on the designated statistical analysis technique, structural equation modelling, which requires the largest sample size (Chin and Newsted, 1999). The study population consisted of local and international NGOs; therefore, stratified random sampling technique was used to select a sample in equal proportion from

each stratum and represent the sample to the population (Levy and Lemeshow, 2009). It helps the researcher to select a randomised probabilistic sample from the population and increase the generalisability of the survey findings to the population (Levy and Lemeshow, 2009). The researcher contacted 500 NGO managers, out of which 463 managers indicated their interest to participate in the survey study, of which, in turn, 447 questionnaires were used for further data analysis, while 16 questionnaires were eliminated due to incomplete data. Therefore, the finally selected 447 questionnaires were good for SEM analysis because the ratio of responses (447) to the number of variables (42) is greater than 10:1 (Chin and Newsted, 1999) and is much higher than the rule of thumb 200, recommended by Garver and Mentzer (1999). Section 6.4 explains the sample characteristics of the study.

3.6.4. Quantitative Study: Sample Characteristics

Table 3-6 shows the sample characteristics of the study. The sample size is 447 NGOs. Out of these, 327 are from the local NGOs and 120 are from the international NGOs. The local NGOs represent 73% of the sample size and rest, 27%, represents the international NGOs. The local NGOs represent 31.4% and the international NGOs represent 31.1% of the total individual population.

Age distribution groups in the sample are categorised as 18–27, 28–37, 38–47, 48–57 and Above 57. Age 28–37 is highly represented in the sample, at 41% of the sample. Age 48–57 and Above 57 are less represented in the sample.

Experience in NGO projects is categorised as 0–5, 6–10, 11–15, 16–20 and 20/above years worked in NGO projects. Managers having experience 0–5 and 6–10 years are represented highly in the sample, at 68%, while 11–15 years are represented at 17%. Other categories have approximately equal contribution.

Types of project are classified under 11 categories, namely, Livelihoods, Infrastructure, Relief and Disaster Management, Water and Sanitation, Health and Nutrient, Training and Education, Protection, Social Mobilisation, Capacity Building, Women Development, Gender Equity, and Others. The Livelihoods and Training and Education projects are highly represented (31%) in the sample. The Gender Equity and Women Development categories are less represented (11%) in the sample, while other project categories have contributions between 7% and 10%.

The male-to-female ratio in the sample is 55% to 45%. The slightly higher percentage of male managers reflects the higher number of male managers working in the NGOs in Sri Lanka.

Education of selected NGO managers is organised as High School, Bachelor's Degree, Postgraduate Degree, and Doctoral Degree. The NGO managers holding bachelor's degree is highly represented at 45% in the sample, with higher education at 32% and postgraduate degree at 22%. Doctoral degree contributed the least (1%) in the sample. Some 77% of NGO managers responded that they have followed PM courses, while 20% said they have not followed any PM courses, and 3% did not respond.

Characteristics	Frequency	Percentage (%)
Non-Governmental Organisation		
Local	327	73
International	120	27
Age		
18 - 27	84	19
28 - 37	181	41
38 - 47	104	23
48 - 57	54	12
Above 57	24	5
Experience in NGO Projects (years)		
0-5	162	36
6 - 10	144	32
11 – 15	77	17
16 - 20	29	7
Above 20	35	8
Type of Project		
Livelihoods	71	16
Infrastructure	36	8
Relief and Disaster Management	36	8
Water and Sanitation	30	7
Health and Nutrient	38	9
Training and Education	68	15
Protection	25	6
Social Mobilisation	46	10
Capacity Building	32	7
Women Development	27	6
Gender Equity	20	5
Others	15	3
Missing data	3	-
Sex		
Male	243	55
Female	202	45
Missing data	2	-
Education		
High School	142	32
Bachelor's Degree	201	45
Postgraduate Degree	96	22
Doctoral Degree	5	1
Missing data	3	-
Project Management Courses Attended		
Yes	344	77
No	89	20
Missing data	14	3
		Source: Survey data

Source: Survey data

 Table 3-6: Sample Characteristics of the study (N=447, NGO Managers)

3.6.5. Survey Analysis

Statistical software packages were used to analyse the final survey data. The Statistical Package for Social Sciences (SPSS v16) was used to do the preliminary data analyses (Hopkins, 2008) and Analysis of Moment Structures (AMOS v21) was used to do the advanced analyses of the measurement model and testing the hypothesised model (Byrne, 2013). Univariate and multivariate analyses were used to examine the variables of the study. In statistical analyses, the first step is to understand the data set by looking at individual variables using univariate analyses techniques which summarise the data and analyse the individual variables (Bryman and Cramer, 2009) and multivariate analysis to analyse relationships of the multiple variables at once (Byrne, 2010; Abdi, 2003). Commonly, multivariate procedures are recommended if the study has multiple variables and requires identifying associations between variables (Byrne, 2010; Abdi, 2003). The study is primarily oriented to exploratory purposes and identifying associations among the multiple variables, so the researcher applied three main multivariate techniques: EFA, CFA and SEM (Byrne, 2013). The following sub-sections explain and justify using these statistical analysis techniques.

3.6.5.1. Univariate Analyses

Univariate techniques analyse one variable at a time and helps to describe the measures of central tendency (mean, median, and mode), dispersion (standard deviation) and normal distribution (kurtosis and skewness) of the data set (Mazzocchi, 2008; Sekaran, 2000). The central tendency is the statistical measure which identifies, for example, mean, median and mode values and every single value represented in an entire data distribution (Gravetter, Wallnau, 2000). The data dispersion shows the variation among the sample data and standard deviation is used to measure variability of sample data (Mazzocchi, 2008). Normality is defined as the "shape of the data distribution or an individual metric variable and its correspondence to the normal distribution, which is the benchmark for statistical methods" (Hair et al., 2006). Normality of the data set improves the results of multivariate analyses (Hair et al., 2006). Normality can be examined using the skewness and kurtosis indices. The skewness index shows the symmetry of distribution while the kurtosis index indicates flattening or peakedness of a data distribution compared with the normal distribution (Hair et al., 2006). Generally, zero scores of skewness and kurtosis is known as

92

the normal distribution, however, Garson (2012) emphasises when skewness and kurtosis values lie between -1 and +1, the data will closely meet normal distribution. Chapter 5 presents and discusses the results of the univariate analyses of the survey study.

3.6.5.2. Multivariate Analyses

Multivariate techniques analyse more than one variable at a time and help to reduce the dimensionality of the complex of variables, classification and grouping of variables, analysing of interdependence and dependence of variables and hypothesis construction and testing (Byrne, 2013). The multivariate analysis techniques EFA, CFA and SEM are applied in order to do the concept testing, model testing and theory testing, respectively (Byrne, 2013). Further, a construct validity test is performed to examine how well it measures the construct it claims to be measuring (Hair et al., 2006; Brown, 1998). The study data are ordinal in nature, so are not likely to meet the strict assumptions of the EFA, CFA and SEM modelling. The appropriate statistical tests were performed to check the parametric requirements. The researcher has used similar, tested instruments (questionnaire, survey) to ensure the quality of data collection. In addition, the dependent latent variables have been tested by previous researchers and performed with parametric tests (Ika et al., 2012). Therefore, this practice has improved the measurement properties (Harwell and Gatti, 2001; Embretson, 1996).

EFA is applied to explore the structure among a set of variables and determine the latent structure or is used as a data reduction method (Conway and Huffcutt, 2003; Cramer, 2003). In previous studies related to RBV, the EFA technique is applied to identify the latent structure of organisational or PM resources (Jafari and Rezaee, 2014; Jugdev, 2006). The present study is new in NGOs contexts and exploratory in nature, therefore using EFA is an appropriate technique to understand the nature of PM resources in NGOs. However, the first phase of the exploratory case study identified latent constructs of PM resources in NGOs. Therefore, EFA is used to test the generated concepts and identify the critical elements in each level of PM resources (Lewis-Beck, 1994).

CFA is applied to evaluate the overall measurement model based on a priori theory or the results of EFA and it is widely used to study the associations between a set of observed

variables and their underlying latent constructs (Brown, 2014; Bryne, 1994). The CFA technique is applied in previous RBV research to confirm the measurement model of organisational resources (Jafari and Rezaee, 2014; Wahjudono et al., 2013). The present study consists of latent constructs of PM resources and project success and CFA is used to examine that the measures of constructs are consistent with the understanding of the nature of constructs derived from the exploratory case study.

SEM is used to evaluate the validity of substantive theories and further determine whether a certain model is valid with empirical data (Lei and Wu, 2007). This is the extension of general linear modelling procedure (Lei and Wu, 2007). SEM is now used in many fields of study since it is widely recognised as an important multivariate technique to study the relationships among latent constructs that consist of multiple indicators (Hair et al., 2006; Cooper and Schindler, 2003). In a recent study on RBV conducted by Jafari and Rezaee (2014), SEM helped the authors to identify the hypothetical relationships between organisational resources and sustained competitive advantage. However, very little research in RBV using SEM technique has been conducted in private organisations and further, examining PM resources with the view of the RBV approach was not examined by the SEM technique in the literature. The present study is undertaken in the new context of NGOs and aims for developing theories in PM resources and identifying associations between PM resources and project success. Therefore, it requires the highly sophisticated SEM technique for testing proposed relations between latent constructs and assessing structural model validity for theory development (Hair et al., 2006; Stephenson et al., 2006). Therefore, this SEM technique is a new approach to examine the association between PM resources and project success, compared to the existing literature.

Figure 3.2 shows the univariate and multivariate techniques used by researcher in order to analyse the survey data and derive the appropriate findings for the study. The multivariate analyses were used to test a refined model evaluating the effect of PM resources on project success (Babbie, 1990). As discussed, the research is exploratory in nature and seeks to understand the nature of PM resources in NGOs and its associations with project success. Therefore, initially the exploratory case study is organised to explore the concepts and identify the fundamental associations between PM resources and project success.

Next, the univariate analysis is used to analyse and explain every factor of PM resources and project success. Then, exploratory factor analyses (EFA) was used to examine the factor structure and identify the good sets of indicators to represent them in subsequent CFA (Brown, 2006). These analyses allow for exploration of the main latent variables of PM resources in NGOs. Then confirmatory factor analysis (CFA) was used to ensure that the measurement model is sufficiently robust to perform the SEM (Byrne, 2010). SEM was then be used to identify a 'best' model that shows the associations between PM resources and project success.

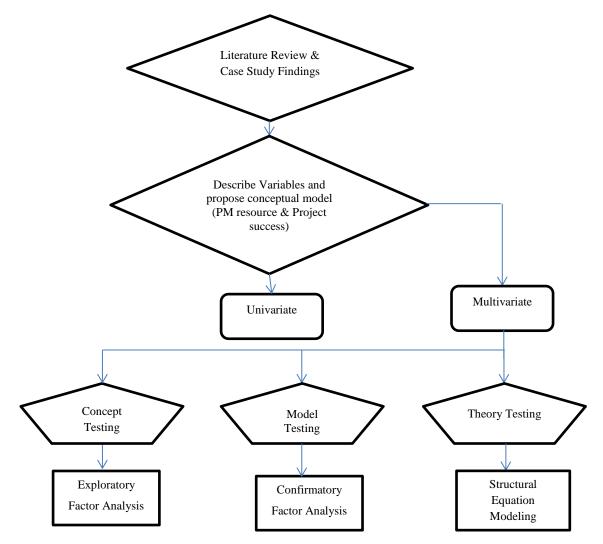


Figure 3-2: Survey Analysis

3.6.6. Multivariate Analysis Process

The multivariate analysis process was planned by the researcher to apply the multivariate techniques from the findings of the exploratory case study. The factor analysis and SEM analysis steps are briefed below.

3.6.6.1. Factor Analysis

Factor analysis is a multivariate analysis procedure (Thompson, 2004) that is used to test the underlying factors of PM resources. Therefore, the identified variables from the literature review and exploratory case studies can be grouped together theoretically (Thompson, 2004). EFA steps are as follows (Cudeck, 2000).

- 1. Examine the univariate analysis of the variables (PM resources) to be included in the factor analysis
- 2. Preliminary analyses and diagnostic tests
- Identify the best number of items for each factor for which Principal Axis Factoring (PAF) (Field, 2005) will be performed.
- 4. Use of selected items of each factor in further analysis, CFA and SEM.

CFA steps are as follows (Hoyle, 2000).

- 1. Identification of factor structure (PM resources and Project success which is theoretically supported)
- 2. Estimation (maximum likelihood)
- 3. Goodness of fit
- 4. Use of measurement model in further analysis, SEM.

3.6.6.2. SEM

SEM allows researchers to test theoretical propositions and directionality of significant relationships between independent and dependent variables (Schreiber et al., 2006). The researcher examines the structural model to identify the relationships between PM resources variables and project success variables (Byrne, 2001). The following SEM steps follow Byrne (2010):

- 1. Specify the process of models (Comparison and Optimisation)
- 2. Determine the model is identified
- **3.** Analyse the model (Covariance matrix, Variance-covariance matrix, Goodness of fit)
- **4.** Evaluate the model fit.

SEM can determine the association between PM resources and project success of NGOs. The primary objective for SEM to perform in this study is to identify a best model which explains the relationship between PM resources and project success (Hoyle, 1995). The planned process of analysis is illustrated in figure 3-3.

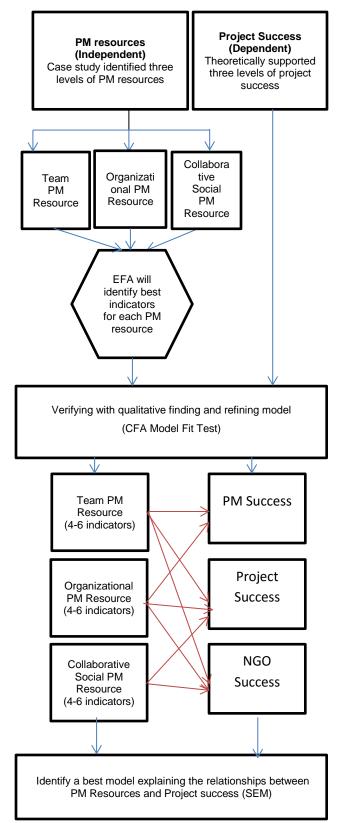


Figure 3-3: The Analysis Process

Step 1: Qualitative research identified three levels of PM resources (exogenous) and hypothesised relationships with project success (endogenous) which are theoretically supported on three levels.

Step 2: A questionnaire is designed with sections corresponding to these three latent variables of PM resources and to three latent variables of project success.

Step 3: EFA is used to select a best group of indicators for each PM resource.

Step 4: If the latent variables do not meet expectations, then the hypotheses about the latent variables are modified, and indicators are then selected.

Step 5: Using CFA and SEM, test the relationships between PM resources derived in steps 3 or 4 and project success.

Step 6: Identify a best model to explain the relationship between PM resources and project success.

3.7. Research Implementation Plan and Connecting Research Methods

The initial conceptual model was developed from previous research conducted in private organisations. Subsequently, the findings of the case study (phase 1) gave preliminary understandings of the nature of PM resources and factors, evaluating project success in NGOs and helped to propose an updated conceptual framework for this study. Next, the phase-two quantitative study originated from the findings of qualitative study. It is essential when using empirical investigations to review the qualitative findings to generalise the best model. The findings regarding the nature of PM resources were refined through EFA as it identified the best dimensions of PM resources (Thompson, 2004). Then, CFA and SEM were used to test and identify the best model explaining the relationships between PM resources and project success.

Finally, both sets of findings (qualitative and quantitative) were compared to generate insights into the PM resources of NGOs (Creswell, 2003). The sequential exploratory methods helped the researcher to propose a model from the qualitative study and test and refine the model by using quantitative methods (Creswell, 2003). Therefore, the researcher would be able to generalise the findings to the selected population with statistical validity. The generated model will support the NGOs to understand PM resources and its association with project success. A Gantt chart (Appendix 1) shows the timeline of stage 1 and 2 research activities. Figure 3-4 presents an overview of the research implementation plan and connected research methods.

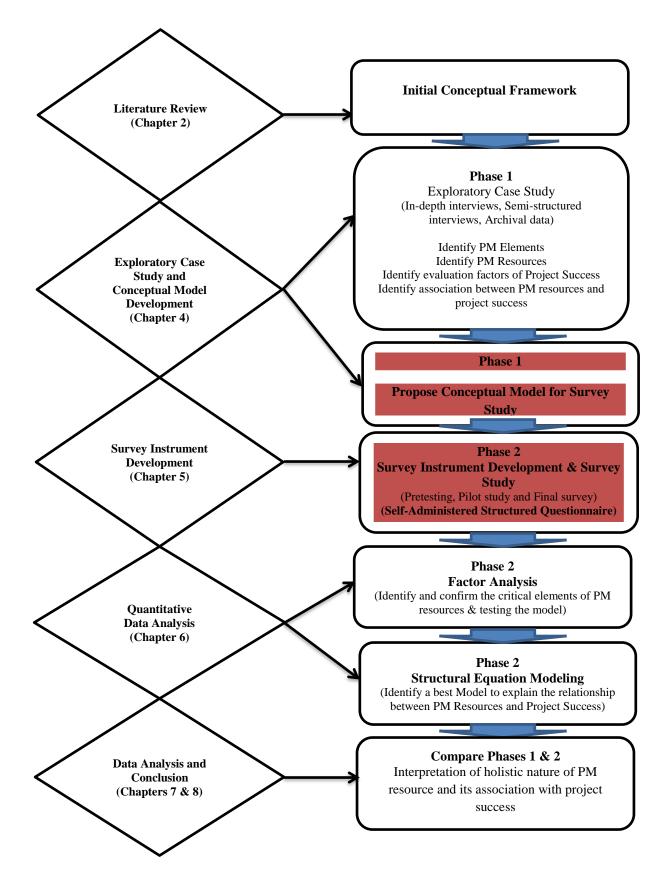


Figure 3-4: Research implementation Plan and Connecting Research Methods

3.8. Summary

The chapter rationalised the mixed method approach adopted by the researcher as appropriate for this study. The mixed method supported the researcher, firstly, the inductive method to explore and understand the nature of PM resources in NGOs, identify associations between PM resources and project success and propose the conceptual model for the study. Next, a deductive method was employed to test the theory and validate the model developed in the inductive study and further justified how the selected advanced sophisticated techniques support refinement to a valid model for the study.

Further, the chapter explained, since the study is based on exploratory and mixed methods, in the first phase of the case study, how the researcher used multiple data collection techniques to increase the validity and credibility of the study. In the second phase, advanced multivariate techniques were applied to improve the validity and reliability and further, the findings can be generalised to similar types of organisation and country in similar contexts, such as post-conflict and post-disaster recovery. Further, it is highlighted that the SEM technique has been applied in this study which supports theory testing and theory development of PM resources and project success in the new context of NGOs.

The next chapter explains the exploratory case study results and discusses the findings with the support of the literature. Further, the findings support development of the understanding of PM resources and led to construct hypotheses and the conceptual model for the present study.

CHAPTER FOUR EXPLORATORY QUALITATIVE STUDY and CONCEPTUAL MODEL DEVELOPMENT

4.1. Introduction

The previous chapter explained the study's mixed method, sequential exploratory design in which phase one is a qualitative case study and phase two is a survey study. This chapter presents the exploratory case study results and findings and subsequently formulates the research hypotheses and develops the conceptual model. The purpose of the exploratory case study was to explore PM elements, PM resources and project success in NGOs. The findings of the case study were used to update the initial conceptual model, which was derived from the literature review.

As described in the case study protocols (section 3.5.1), four organisations were selected using a matching strategy of firms with similar missions but varying scopes of operation: national vs. international. The first pair of firms focuses on disaster relief while the second two focuses on poverty alleviation. Data was collected using semi-structured interviews in two stages. Firstly, the researcher conducted 20 semi-structured interviews to explore PM elements, resources and project success. These interviews were analysed and then, eight semi-structured interviews were conducted to confirm the themes identified earlier. Twenty-eight project staff members, seven from each organisation, were selected for interview. The interviews took place in 2012 and 2013.

The chapter is organised into 11 sections. Section 4.2 explains the initial thematic framework identified from the literature. Section 4.3 explains the implementation of case study interviews. Section 4.4 illustrates the explored elements of PM resources and project success from the exploratory case study. Section 4.5 categorises and classifies the elements detected. PM resources are classified into three levels: team, organisational and collaborative social PM resources, and Project success is classified into three levels: PM success, project success and NGO success. Subsequently, Section 4.6 illustrates the findings in a visual mapping diagram and critically discusses the case study findings using respondents' quotations with

the support of the literature review. Section 4.7 identifies and explains the associations between PM resources and project success from the exploratory study results. Subsequently, section 4.8 constructs hypotheses for the study. Section 4.9 presents the updated conceptual model from the findings of the case study and finally, section 4.10 summarises the key findings of the chapter.

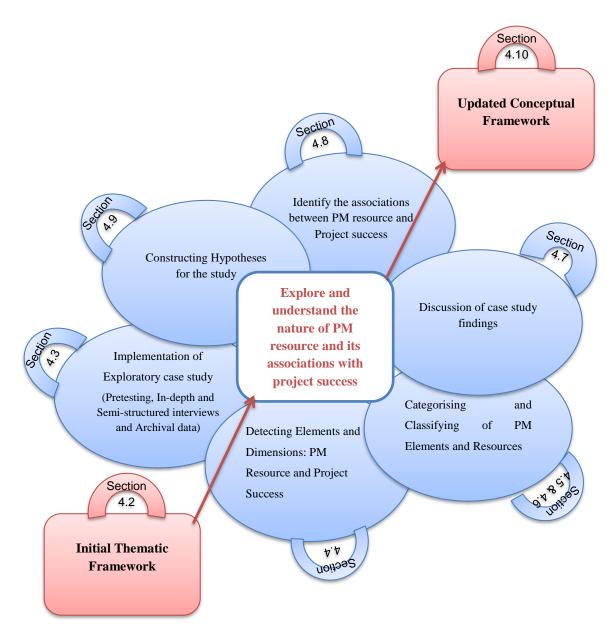


Figure 4-1: Structure of Exploratory Case Study

4.2. Initial Thematic Framework: PM Resource and Project Success

The researcher developed the initial thematic framework for the study variables based on the conceptual framework presented in chapter 2. Initially, PM resources were classified as Team PM resources and Organisational PM resources. The project success factors were classified according to Project Management Success (Scope, Budgets, Time, and Quality) Project Success (Stakeholders' Satisfaction and Impacts), and NGO Success (NGOs Sustainability). Table 4-1 shows the initial thematic framework developed by the researcher.

1.0.	Background
	NGO details
	Respondent details
2.0.	Project Team Resources
	 Project Management Expertise
	 Project Management Practices
	Informal Meetings
	 Project Orientation Programs
	Peer Learning
	• On-the-job training
	 Personal coaching and Training
	Mentoring
	Other resources
3.0.	Organisational Project Resources
	 Staff capacity-building programs
	• Effective project coordination and leadership
	• Shared project vision, objectives and policy
	 Effective project communications
	 Project organisational structure
	 Process for sharing knowledge
	Other resources
4.0.	Project Success
	Meeting Scope / Objective
	Meeting Budget
	Meeting Time
	Meeting Quality
	Stakeholders' Satisfaction
	Project Impacts
	NGOs Sustainability
	• Others

Table 4-1: Initial Thematic Framework

4.3. Implementation of Exploratory Case Study

The in-depth interviews and semi-structured interviews were organised to explore the themes for the study. These techniques helped the researcher to obtain qualitative data from the project managers where they discussed PM practices in NGOs. Additionally, archival data helped to verify what tangible PM resources are applied in NGOs. The researcher used open questionnaires to provide opportunities for in-depth data collection. Initially, two pretesting interviews – one participant from a local NGO, and one participant from an international NGO – were conducted to understand the nature of the diversity of PM resources and evaluating factors of project success in NGOs. The case study coding table (Appendix 2) was prepared with the help of pretesting interviews and further helped to plan and design the first stage of the in-depth interviews to explore deeply PM resources and identify the evaluation factors of project success in NGOs.

After the pretesting interviews, four case studies were conducted in two stages. The first stage of the interviews was done to explore PM resources, capacities and project success. Twenty project staff members, five from each selected NGO, were interviewed. The second phase was conducted to confirm the first-phase findings and to identify the associations between PM resources and Project success. Eight senior project staff members, two from each selected NGO, were interviewed.

In the first stage, an open questionnaire was used by the researcher. This consisted of 21 questions (Appendix 3). The set of questions was prepared by the researcher to ensure all the aspects of the study were covered. Although this is an in-depth interview, the researcher did not impose the predetermined questions and the participants were given opportunities to discuss whole PM practices in the NGO in order to draw deep exploration of themes. Table 4-2 presents the interview instrument domains, list of questions and brief explanations on the purpose of each set of questions used to collect information from the NGO managers. The first three questions (Q1 to Q3) dealt with collecting information on the NGO's projects, PM activities and prevailing challenges that they face during implementation of projects. Next, questions Q4 to Q6 asked the manager's opinion about what they understand of success and failure in their organisations. Questions Q7 and Q8 explored PM resources, and questions Q9 to Q12

examined the PM team and organisational resources in the NGO. Afterwards, questions Q13 to Q15 and questions Q16 to Q20 deeply explored the explicit and tacit knowledge-sharing activities within the organisation and outside the organisation, respectively. Finally, question Q21 explored any other PM applications which had not been discussed already in the dialogue.

Domains	Explanation	Interview Questions
NGO projects, activities and challenges	Information towards NGO project activities and challenges they face in implementing projects	 What types of projects does your organisation undertake? Give examples. What are the project management activities do you carry out in your project? What are the challenges do you face to implement projects? Explain why?
Project success evaluation factors PM Resources	Opinion about successful and failure projects Explore PM	 4. How do you define a successful project? 5. What are factors does your organisation consider to evaluate the project success? 6. What are the factors causes to the project failure? 7. What do you consider to be project management resources?
	resources in NGOs	Relate to success factors?8. What are the Project Management Resources commonly existing in your organisation?
Team and Organisational Resources	Examine PM team and organisational resources	 9. Does Project Management Office exist in your organisation? Do you think is it an asset to your organisation? Why? 10. Is your organisation has effective PM standards, Policies and Procedures? Briefly explain of these assets? 11. Did your organisation well establish the PM Methodology, Tools and Techniques? What are the PM tools and techniques used by the organisation in needs identification, planning, implementing, monitoring and controlling and closing stage of projects? 12. What do you say about the project management capability of your organisation staff members?
Explicit and tacit knowledge- sharing process within organisations	Explore PM knowledge-sharing process	13. How is explicit knowledge sharing process taking place in your organisation?14. How is tacit knowledge sharing process taking place in your organisation?15. How does Organisation Project Culture support to the knowledge sharing?
Explicit and tacit knowledge- sharing process through external social networking	Explore PM knowledge-sharing process through social networking	16. How does social networking support to the knowledge sharing?17. Does your organisation use Social Marketing in order to attract the community? How is taking place?18. How do Skills and experience sharing take place through community of practice?19. Do you find any other ways of knowledge sharing taking place in your organisations?20. Social networking how does impact on project success in your organisation?
Any other PM applications	Explore any other PM applications	21. Do you wish to say anything that we did not discuss so far but that is important to note down while talking about project management.

Table 4-2: Development of Interview	Instrument (Stage 1: Interviews)
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The second stage of the open questionnaire consisted of 11 questions and was organised into four divisions: project success, collaborative social PM resources, organisational PM resources and team PM resources (Appendix 4). This was conducted after the themes explored in each division of the first-stage interviews and aimed to confirm or modify the themes explored and identify the associations between PM resources and project success. Table 4-3 explains the interview instrument domains, list of questions and brief explanations on the purpose each set of questions used to collect information. Initially, the first two questions (Q1 and Q2) dealt with confirming or modifying the evaluation factors of project success and subsequently, three sets of three questions (Q3 to Q11) were used to confirm or modify the themes of each resource and identify the associations with project success, respectively.

Domains	Explanations	Interview questions
Project Success	Confirm or modify the factors that evaluate project success	 Could you say your views on project success? Could you add any more factors that you consider for project success?
Collaborative social PM resources	Confirm or modify the elements of collaborative social PM resources and identify associations with project success	 Could you add any more resources which are available in your organisation? How these resources influence on project success? (Scope, Schedule, Budget, Stakeholder satisfaction, Project impacts) Why are these resources important to your organisation?
Organisational PM resources	Confirm or modify the elements of organisational PM resources and identify the associations with project success	 6. Could you add any more resources which are available in your organisation? 7. How these resources influence on project success? (Scope, Schedule, Budget, Stakeholder satisfaction, Project impacts) 8. Why are these resources important to your organisation?
Team PM resources	Confirm or modify the elements of team PM resources and identify the associations with project success	 9. Could you add any more resources which are available in your organisation? 10. How these resources influence on project success (Scope, Schedule, Budget, Stakeholder satisfaction, Project ? impacts) 11. Why are these resources important to your organisation?

 Table 4-3: Development of Interview Instrument (Stage 2: Interviews)

4.4. Detecting Elements and Dimensions: PM resources and Project Success

As discussed in the previous section, the exploratory interviews were conducted in order to explore and identify the PM elements and key dimensions of PM resources. Exploratory interviews were recorded with the help of audio devices and fully transcribed. Next, MS Office Excel 2010 was used to extract the key dimensions of PM resources from the explored PM elements. The excel table of case study interviews and coding (Appendix 5) shows actual responses of the respondents on PM elements and relative codings assigned for each response. The table helped to extract the PM elements and identify the key dimensions of PM resources which are applied in NGOs. The explored elements and identified dimensions

from the case study are described table 4-4. The first column shows the explored elements and the second column explains the key dimensions based in the explored elements. The third column presents how many times specific elements were reported in the four case studies (C: Case). The reported times specified are useful to see the respondents' ease or familiarity in recalling their PM applications. However, these numerical codes are not used to analyse the elements of PM resources.

The case study identified 36 key dimensions in PM resources and 12 key dimensions in project success. Five key dimensions were counted frequently (>50 codes) in the case study interviews. Those are: PM tools and techniques (146), Formal meetings for sharing knowledge (92), PM methodology, standards and process (71), PM office (59), and Social marketing (55).

			N	o of c	ounts	
Detected Elements across the data set	Key Dimensions	C1	C2	C3	C4	Total
Conducting Informal meetings	Informal Meetings	04	05	06	05	20
Informal Discussions						
Skills and Experience Sharing meetings						
Experience sharing discussions						
Lesson-learning sessions						
Casual Discussions with colleagues	Casual	00	01	00	01	02
	Conversations					
We do brainstorming sessions to discuss important issues	Brainstorming	02	00	03	00	05
We organise sessions to generate new ideas	Sessions					
We do brainstorming sessions to find out better solutions						
Field level discussions	Field Level	01	00	00	03	04
Field level meetings	Discussions &					
Review visits and discussions	Review Visits					
Review visits and observations						
We do personal coaching sessions	Personal Coaching	00	05	02	03	10
We got personal coacher						
I did on job training in the field level	On-the job training	03	00	03	00	06
On job training we use to share our skills to junior staff						
Shadowing through observations	Job shadowing &	04	02	03	01	10
Shadowing through meetings	Mentoring					
Mentoring sessions and expert guidance						
Cases discussions	Case Studies &	01	06	04	00	11
Case study writings	Success Stories					
Success story-telling and presentations						
Bringing people under one program team	Team Cohesion and	01	01	04	00	06
changing their mind set under one common goal	Trust					
Some staffs are not willing to work together						
Some people are facing difficulties to adopt team culture						

m m		07	00	0.4	0.2	1.4
Team Transparency	Team Values	05	02	04	03	14
Team Accountability						
Following team norms						
Working for the team objectives						
Team work and team commitment are more important						
We have very committed team members						
Participatory decision-making						
Accepting members suggestions						
Using the resources at maximum level by doing proper	Deeper	07	06	05	07	25
planning and controlling.	understanding of					
Understanding of project life cycle and operations	project Lifecycle					
	and operations					
We got very experienced and competent staff	PM Expertise	05	06	08	07	26
Project management experience is good	*					
Strong PM skills						
Good PM practices	Best PM Practices	01	01	08	04	14
We have improved in all stages of our process	Synthesise new	01	02	01	00	04
We design new tools for PM practice	knowledge in PM	01	02	01	00	04
Designing tailor-made software	Kilowieuge ili i Mi					
	PM Office &	25	06	23	05	50
We got project office		25	06	23	05	59
Project organisation , Matrix, Functional, effective	Structure					
structure						
Program Handbook, Strategic Program document,	PM Methodology,	19	15	18	19	71
Administration Handbook, Humanitarian Assistance Plan,	Standards & Process					
Operational Manual, Logistic Manual, Humanitarian						
Accessibility Framework, Organisational hand book,						
Finance Hand book, HR Hand book, individual project						
implementation agreement (IPIA), Project manual, Ethics						
Handbook, PMBOK, Prince II, Agile, Sphere Humanitarian						
Handbook, CBOs assessment standards, Policy,						
Guidelines, Procedures, Grant policy, Organisational						
policy, Project policy guide, Child right policy, women						
protection policy, HR Policy, Terms of Reference						
Action Plan, Work break down structure, Gantt Chart,	PM Tools &	41	34	38	33	146
budget, Logic frame, Check List, LFM, Venn diagram,	Techniques		υ.	20	00	1.0
Resource Mapping, Problem tree analysis, objective tree	reemiques					
analysis, Network Analysis, Seasonal Calendar, Risk						
Mapping, Service delivery analysis, Step by step guide,						
Social Mapping, Income circle, Structural/Architectural						
design, implementation plan, PM Software, Stakeholder						
mapping, Analysis software, Indicators, BOQs, Village						
development plan, Needs prioritisation list, Operational						
Plan, Work plan, Monthly and weekly plans, Staff monthly						
targets, Risk planning						
Participatory needs identification, Vulnerable capacity						
assessment, Right based approach, Data collection, PRA						
(Participatory Rural Appraisal), Observations, Interviews,						
Questionnaires, Results based management, Results Based						
Reporting, Base Line survey, End Line Survey, Secondary						
data, RRA (Rapid rural appraisal), PNA (Participatory						
Network Analysis), Bottom Up Approach, Tailor-Made						
Program,						
Project Management Information System (PMIS),	PM Information	00	03	01	00	04
Knowledge management system, Executive Decision tools,	System			~ •		÷.
Data base management,	- ,					
Dum ouse management,		I				

Process and Impact Monitoring plan, Sustainability Plan, Evaluation plan, Field reports, Complaint mechanism,	Project M & E Mechanism	04	10	08	09	31
Standard manual for M & E, M & E framework, Internal and external audit, suggestion box from community, Review						
visits, indicators, Mid evaluation plan, End evaluation plan,						
Post evaluation plan, Field level assessment, Desk based						
assessments, Pocket based assessments						
Training, Short courses, Online courses, PM certifications,	Staff Capacity-	08	07	09	07	31
Formal PM courses, capacity-building trainings, Foreign	building programs					
workshops Induction programs, Superior staff inform to the junior	Shared project	08	07	07	06	28
staff, Diary, Wall hanger, Meetings, Handbooks, staff	vision, objectives	08	07	07	00	28
meetings, workshops, Project orientation programs	and policy					
Progress Meetings, Formal Meetings, Reporting, Annual	Formal Meetings for	19	36	21	16	92
program review, Displays in boards, Technical Meetings,	sharing knowledge					
Online documents, Open documents, project meetings, staff						
meetings, Review meetings, Planning meetings, Integration						
meetings, Regular meetings, Team planning. Field level discussions, Field level reports, M&E Co-group meetings,						
Milestone meetings, Project Team meetings, Annual						
Reports, Meeting minutes						
Appropriate channel, Telephone, Email, Skype, Online,	Effective project	17	13	03	04	37
TELE conference, Facebook, Network-sharing system	communication					
Job design, Selection of team, Motivation system,	Right team	14	03	05	05	27
Rewarding system, Career path	selection, Team motivation & Career					
	path					
Organisation culture promotes project works and its	Supportive	07	02	04	00	13
transparency	organisational					
Culture motivates the team works	Culture to PM					
Non-project staff support to project staff						
Supervisor guidance, project manager guidance,	Supportive	02	13	01	23	39
conducting project review meetings, conducting financial review meetings, Monthly meetings (Bottle neck),	Organisational Leadership to PM					
Management level meetings, Technical Support, Planning	Leadership to I W					
support, Report writing, proposal development, Advisory in						
implementation, M &E support						
Technical support, Project Approval, Policy & Guidance,	Project Advisory	06	03	02	05	16
Government advocacy, Meetings, GA review, Government	from Gov. Bodies					
policy Technical surgert, Cuidance, Field level discussions	Project Advisory	01	02	02	05	11
Technical support, Guidance, Field level discussions, Project review discussions, Planning and implementing	Project Advisory from Donors	01	02	03	05	11
support	from Donors					
Regular meetings, Intra forum, Cluster meetings, Peer	Intra and	07	01	01	07	16
review meetings, Partners meetings, Consortium meetings,	Consortium					
Coordination meetings, Sectoral meetings	meetings					
Community advocacy	Community	01	00	01	00	02
Advocacy task force Magazines, Publications, Websites, Social media,	Advocacy Official Information	08	05	04	12	20
Magazines, Publications, Websites, Social media, Meetings, Leaflets, , ministry level meetings, Broachers,	releases	08	05	04	13	30
final reports, Regional Manual, Reports, Government	Tereases					
websites, Letters						
Joint planning, Joint implementation, Participatory	Joint project	08	09	07	13	37
monitoring, Regular meetings, Group Discussions,	Interactions					
informal meetings, Lesson-learning sessions, Outsourcing						
programs, Technical support, Inter-exposure visits, Joint field visits, Peer group discussions						
neiu visits, reel gloup uiscussiolis	1	1				

Face-to-face discussions, telephone, email, video	Networking with	10	10	05	07	32
conferences and meetings, Informal interactions, informal	stakeholders					
meetings, experience sharing meetings, Stakeholders						
informal meetings, CBOs Meetings, Focus group						
discussions						
Planning, Technical, Decision-making, Implementing,	Beneficiary	03	04	06	08	21
Experience sharing, Meetings, Review meetings, CBOs	integration in					
meetings, Producer group discussions, community level	projects					
meetings, Complaint Box	Projecto					
Inauguration programs, Propaganda programs, Meetings,	Social Marketing	14	17	10	14	55
Awareness programs, Home Visits, Exhibitions, Theater	Sootal Marketing	1.	17	10	11	00
Program, Stakeholders meetings, community meetings,						
stakeholders meetings, Notice board, Direct interviews,						
Facebook, Community discussions, Twitter, Google,	Community of	02	08	06	07	23
· · ·	practice	02	08	00	07	23
	practice					
Discussions with beneficiary, informal meetings,						
Delegates/Expatriates sharing their experiences, Delegates						
Visits and discussions, Exposure visits to other countries,						
International Forums, Regional conferences			<u> </u>	0.1	0.5	
Meeting project objectives is very much important	Meeting Scope	02	04	06	02	14
Meeting project goals						
Firstly Identified needs should be fulfilled						
Fulfilling right needs of right people						
Achieving the LFA planned activities &indicators						
Deliverables are met with plans	Meeting Quality	01	02	03	01	07
Quality achievement						
We normally see the quality outcomes of the project						
Meeting planned budget	Meeting Budget	01	00	00	01	02
Complete projects within budgets						
On-time / Timely completion	Meeting Time	02	00	00	02	04
Project completion within time						
Donors satisfied with projects	Stakeholders'	01	00	00	03	04
Implementing NGO is satisfied with projects	Catiafastian					
Beneficiary satisfaction	Satisfaction					
Projects contribution to development objectives	Contribution to	01	02	00	01	04
·J····································	Development					
	Objectives					
Reducing the domestic violence in community level	Project Impacts	03	16	05	09	33
Household income increases after livelihoods projects	(Intended and				~ /	20
How many employments provided by business projects	unintended)					
youth starting their own businesses	annicenced)					
incomes of beneficiary after project completion						
Indirect benefits to community						
Improvements in living conditions.						
Project Direct impacts Attitude and behavioural changes in the community						
Life style changes after projects						
	Drojaat	01	02	02	04	00
Profitability of Business	Project	01	02	02	04	09
Regular recovery of revolving loans	Sustainability					
Sustainability of project						
Project continuity in community						
Exit strategies	~					
Contributing to achieve the vision	Contribution to	01	00	00	01	02
Contributing to achieve the Mission and Goals	NGOs' Vision,					
Contributing to organisational objectives	Mission and					
	Objectives					

Community relationships with NGO	Stakeholders'	01	03	01	02	07
Implementing NGO acceptance and rapport	Rapport					
Donors interactions and involvements in projects						
Government interactions with NGO						
Government recommendation to projects,	NGOs Reputation	03	00	01	01	05
Government acceptance to NGOs,						
Community acceptance to NGOs						
Stakeholders acceptance to NGOs						
Stakeholders Rapport						
Fundraising ability	NGOs Sustainability	00	00	00	02	02
Donors continuous funding for projects						
Increasing community fund raisings						
Increasing government funding						

Table 4-4: Detecting Elements and Dimensions: PM resources and Project Success

4.5. Categorising and Classifying of PM Elements and Resources

PM resources have been classified based on the detected elements from the first and second stages of the case study results. PM resources were classified into three levels: Team PM resources, Organisational PM resources and Collaborative Social PM resources. Project success was classified into three levels: PM success, project success and NGO success. Table 4-5 shows the categorisation and classification of PM resources and Project Success of NGOs.

PM Resources	(Categorising)	Levels of PM
1 st Stage	2 nd Stage	Resources
Exploratory Interviews Informal Meetings Casual Conversations Brainstorming Sessions Field Level Discussions & Review Visits Personal Coaching On-the job training Job shadowing & Mentoring Case Studies & Success Stories Team Cohesion and Trust Team Values Deeper understanding of project Lifecycle and operations PM Expertise Best PM Practices	Confirming InterviewsCasual conversations and InformalmeetingsBrainstorming sessionsField visitsOn-the job trainingJob shadowing and mentoringSuccess and failure storiesTeam Cohesion and TrustTeam ValuesTeam PM ExpertiseTeam Best PM practices	Team PM Resources

PM Office & Structure PM Methodology, Standards & Process	Effective PM Office PM Methodology, Standards & Process	
PM Tools & Techniques	PM Tools & Techniques	
PM Information System	PM Information System	
Project M & E Mechanism	Project M & E Mechanism	
Staff Capacity-building programs	Staff Capacity-Building Programs	
Shared project vision, objectives and	Formal Meetings for sharing knowledge	Organisational
1 0 0	Project Communication Systems and	PM Resources
policy	Technology	
Formal Meetings for sharing knowledge Effective project communication		
Right team selection, Team motivation &	Defined organisational PM culture Supportive Organisational Leadership to	
	PM	
Career path	PM	
Supportive organisational Culture to PM	During the device multiple of Community Devices	
Project Advisory from Gov. Bodies Project Advisory from Donors	Project Advisory from Government Bodies	
	Project Advisory from Donors	
Intra and Consortium meetings	Intra and Consortium meetings	
Community Advocacy Official Information releases	Official Information releases	Collaborative
	Joint Project Formal Interactions	
Joint project Interactions	Joint Project Informal Interactions	Social PM
Networking with stakeholders	Networking with stakeholders	Resources
Beneficiary integration in projects	Beneficiary Connections in projects	
Social Marketing	Project Marketing	
Community of practice	Community of practice through online	
	social networks	
Elements of Project S	social networks	Lovels of
Elements of Project S	social networks Success (Categorising) 2 nd Stage	Levels of
Elements of Project S	social networks	Levels of Project Success
Elements of Project S 1 st Stage Exploratory interviews	social networks Success (Categorising) 2 nd Stage Confirming Interviews	
Elements of Project S 1 st Stage Exploratory interviews Meeting Scope	social networks Success (Categorising) 2 nd Stage Confirming Interviews Meeting Scope	Project Success
Elements of Project S 1 st Stage Exploratory interviews Meeting Scope Meeting Quality	social networks Success (Categorising) 2 nd Stage Confirming Interviews Meeting Scope Meeting Quality	
Elements of Project S 1 st Stage Exploratory interviews Meeting Scope	social networks Success (Categorising) 2 nd Stage Confirming Interviews Meeting Scope	Project Success
Elements of Project S 1 st Stage Exploratory interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time	social networks Success (Categorising) 2 nd Stage Confirming Interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time	Project Success
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Elements of Project S 1 st Stage Exploratory interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community)	social networks Success (Categorising) 2 nd Stage Confirming Interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community)	Project Success PM Success
Elements of Project S 1 st Stage Exploratory interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community) Contribution to Development Objectives	social networks Success (Categorising) 2 nd Stage Confirming Interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community) Contribution to Development Objectives	Project Success
Elements of Project S 1 st Stage Exploratory interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community) Contribution to Development Objectives Project impacts / Results(Intended and	social networks Success (Categorising) 2 nd Stage Confirming Interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community) Contribution to Development Objectives Project impacts / Results(Intended and	Project Success PM Success
Elements of Project S 1 st Stage Exploratory interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community) Contribution to Development Objectives	social networks Success (Categorising) 2 nd Stage Confirming Interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community) Contribution to Development Objectives	Project Success PM Success
Elements of Project S 1 st Stage Exploratory interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community) Contribution to Development Objectives Project impacts / Results(Intended and unintended)	social networks Success (Categorising) 2nd Stage Confirming Interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community) Contribution to Development Objectives Project impacts / Results(Intended and unintended)	Project Success PM Success
Elements of Project S 1 st Stage Exploratory interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community) Contribution to Development Objectives Project impacts / Results(Intended and unintended) Project Sustainability	social networks Success (Categorising) 2 nd Stage Confirming Interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community) Contribution to Development Objectives Project impacts / Results(Intended and unintended) Project Sustainability	Project Success PM Success
Elements of Project S 1 st Stage Exploratory interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community) Contribution to Development Objectives Project impacts / Results(Intended and unintended) Project Sustainability Contribution to NGOs' Vision, Mission	social networks Success (Categorising) 2 nd Stage Confirming Interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community) Contribution to Development Objectives Project impacts / Results(Intended and unintended) Project Sustainability Contribution to NGOs' Vision, Mission	Project Success PM Success
Elements of Project S 1 st Stage Exploratory interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community) Contribution to Development Objectives Project impacts / Results(Intended and unintended) Project Sustainability Contribution to NGOs' Vision, Mission and Objectives	social networks Success (Categorising) 2 nd Stage Confirming Interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community) Contribution to Development Objectives Project impacts / Results(Intended and unintended) Project Sustainability Contribution to NGOs' Vision, Mission and Objectives	Project Success PM Success Project Success
Elements of Project S 1 st Stage Exploratory interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community) Contribution to Development Objectives Project impacts / Results(Intended and unintended) Project Sustainability Contribution to NGOs' Vision, Mission and Objectives Stakeholders Rapport	social networks Success (Categorising) 2 nd Stage Confirming Interviews Meeting Scope Meeting Quality Meeting Budget Meeting Time Stakeholders Satisfaction (Donors, NGO, Community) Contribution to Development Objectives Project impacts / Results(Intended and unintended) Project Sustainability Contribution to NGOs' Vision, Mission and Objectives Stakeholders Rapport	Project Success PM Success Project Success

 Table 4-5: Categorising and Classifying PM Resources and Capacities

4.6. Visual Mapping of Case Study Results

This section explains the exploratory case study results. Visual graphical representations are particularly attractive for analysis of process data because they allow the simultaneous representation of a large number of dimensions, and they can easily be used to show precedence, parallel processes and the passage of time (Bate et al., 2008).

4.6.1. Visual Mapping of PM Elements and Resources in NGOs

The case study interviews produced three types of PM resources, namely, team, organisational and collaborative social resources. The visual mapping diagram (figure 4-2) shows the identified PM elements and how they formulate PM resources in NGOs.

Ten team elements are identified in the case study: Informal meetings and casual conversations, Brainstorming sessions, Field visits, On-the-job training, Job shadowing and mentoring, Success and failure stories, Team cohesion and trust, Team values, Team PM expertise, and Team best PM practices. These ten elements form the team PM resources in NGOs.

Ten organisational elements are identified in the case study: PM office, PM methodology, standards and processes, PM tools and techniques, PM information system, Project monitoring and evaluation mechanism, Staff formal capacity-building programs, Formal meetings for sharing knowledge, Effective project communications systems and technology, Defined organisational PM culture, and Supportive organisational leadership to PM. These ten elements form the organisational PM resources in NGOs.

Ten collaborative social elements are identified in the case study: Project advisory from government bodies, Project advisory from donors, NGOs intra and consortium meetings, Official information releases, Joint projects formal interactions, Joint projects informal interactions, Networking with stakeholders, Beneficiary connections in projects, Project marketing, and Community of practice through online social networks. These ten elements form the collaborative social PM resources in NGOs.

Subsequently, the study identified the RBV explicit and tacit characteristics of PM resources in a range of more-or-less explicit or tacit because most of resources are having mixed explicit and tacit characteristics in practice (Botha et al., 2008). Team PM resources has more tacit characteristics and Organisational PM resources have more explicit characteristics while collaborative social PM resources have mixed explicit and tacit characteristics.

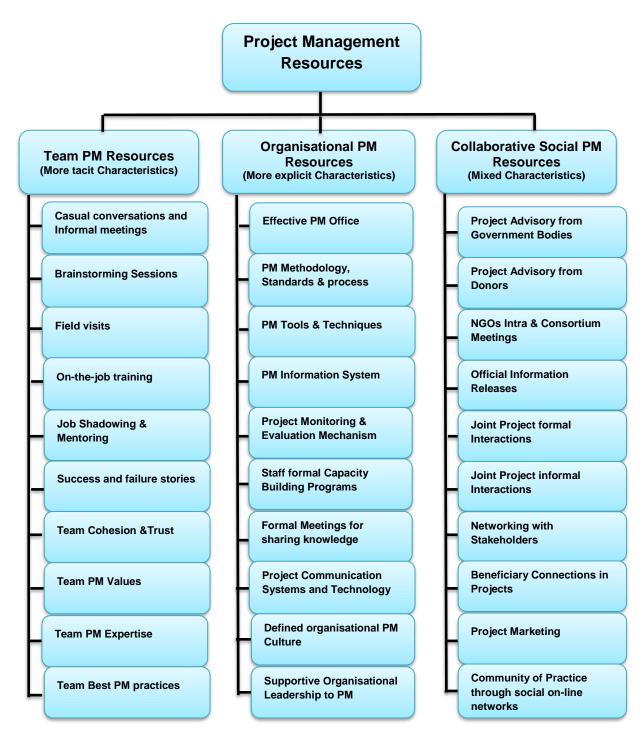


Figure 4-2: Visual Mapping of PM Elements and PM Resources

4.6.2. Visual Mapping of Project Success in NGOs

The NGO case study findings fit the models proposed by Cooke-Davies (2002) and Sutton (2005) and categorised the project success into three levels. The first level is project

management success, which focuses on completing the project within traditional parameters of time, budget and quality. This assesses project efficiency and outputs of projects within the short term. The second level is project success; this broadly assesses the stakeholders' satisfaction and impact of projects on the community. This evaluates the outcomes of the project in the medium term. The third level is NGO success. This evaluates how project outcomes impact on NGO strategy and success. This means how PM resources supports increasing the reputation of NGOs and leads to increased fundraising capability, and how it contributes to the sustainability of NGOs. The study identified the three levels of project success and measuring variables to evaluate the project success as shown in figure 4-3.

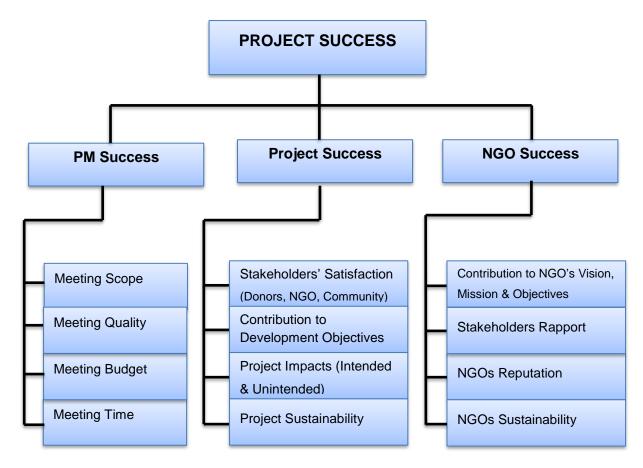


Figure 4-3: Visual Mapping of Project Success

4.6.3. Three Levels of PM Resources

The case study was organised to explore and understand PM elements and resources in RBV perspectives, which focuses both explicit and tacit PM resources as discussed in the literature

review chapter. The previous section initially updated the PM resource classification into three levels: team, organisational and collaborative social, where the literature identified PM resources in two levels: team and organisational. PM knowledge, skills and processes are evaluated at the team level known as team PM resources, while those assessed at the organisational level are called organisational PM resources and those assessed at the collaborative level, beyond the organisations, are then termed as collaborative social PM resources.

This section analyses these three levels of PM resources in the RBV perspective, with regard to explicit and tacit insights. As defined in the literature review chapter, explicit knowledge is codified and could be stored in physical or virtual databases and tacit knowledge is context specific, hard to formalise and can only be transferred through human interactions. However, in practice these explicit and tacit resources are mixed and interdependent (Evans and Easterby, 2001; Crossan et al., 1999; Nonaka and Takeuchi, 1995). Therefore, the study examines the nature of each type, then looks at definitive points, which means each level of PM resources is investigated in a range of more-or-less explicit or tacit (Botha et al., 2008; Inkpen and Dinur, 1998).

As this is the initial exploration of NGO PM Resources in RBV perspectives, the study focused on identification of PM applications to understand its nature in view of explicit and tacit terms; this is not examined in detail in the VRIO characteristics of each PM elements. However, the researcher draws subjective insights based on the quotations of respondents as to how these resources are valuable to the organisations. Barney (1991) highlights resources are valuable when they support organisations to exploit opportunities and neutralise threats. Further, valuable resources will improve organisational efficiency and effectiveness. Therefore, the researcher draws the general conclusions from the respondents' quotations as to how these resources contribute to the project success of the organisations.

Additionally, PM resources are intangible explicit and tacit knowledge resources; therefore, at least to some extent, they could have rare and inimitable characteristics (Barney and Hesterly, 2010). However, the degree of strength of these characteristics will vary from organisation to organisation and depend on how effectively applied in each organisation.

Mathur et al. (2007) highlighted tacit PM resources as having highly rare and inimitable characteristics compared with explicit PM resources. The findings of the qualitative case study are discussed below in the context of literature review. The quotations are provided to substantiate the discussion of the findings of the exploratory case study. The quotations codes are briefed as follows; TPR: Team PM Resources; OPR: Organisational PM Resources; CPR: Collaborative Social PM Resources; PMS: Project Management Success; PS: Project Success; NS: NGO Success; L1: Local NGO – Case 1; L2: Local NGO – Case 2; I1: International NGO – Case 1; I2: International NGO – Case 1; Q1: Quote number -1.

4.6.3.1. Team PM Resources

Team PM resources consist of team PM knowledge-sharing and skills development process, team PM culture and team competencies which contribute to effective and efficient team performance in an organisation. Lusthaus (1995) emphasises enhancing team individual abilities in pursuit of organisational objectives will improve organisational performance. Many researchers emphasised team works increase productivity and effective teams are more profitable to organisations (Katzenbach, 1998; McGovern, 1991; Goodman, 1986). In NGO literature, team level generic capacities were discussed as important assets for NGOs to sustain in the community (Tozier de la Poterie, 2011). However, team PM resources were not explored. Moreover, team PM resources were not extensively discussed in the PM literature of private and public sectors. However, the present study in particular, assigned to the NGOs and revealed most of team PM resources as applied in NGOs. It is highly important to look at team level PM resources in NGOs as it will improve the team project operations. One of the respondents explained:

"Improving team PM resources would improve the team PM applications which lead to effective and efficient project delivery in NGOs." (TPR-IIR1Q9)

In the present case study, all identified elements of team PM resources in NGOs are highly characteristic of tacit assets. Commonly, team knowledge-sharing activities take place highly informal where the team acquires knowledge and skills through team interactions. Moreover, team values and competencies are highly in-built within the teams. Therefore, these are intuitive knowledge and rooted in team context, experience, practice and values (Ghosh and

Scott, 2009; Cook and Brown, 1999). Therefore, these tacit PM resources are highly important to NGOs for successful operations of projects. Hence, these tacit assets are crucial for NGO success.

Altogether, ten PM elements were explored. Out of these, the first six elements – casual conversations and informal meetings, brainstorming sessions, field visits, on-the job training, job shadowing and mentoring, and success and failure stories – explain PM knowledge and skills development of team members through team knowledge-sharing and skills development activities. These activities commonly take place through team social interactions. The other four elements – team cohesion and trust, team values, team PM expertise and Team best PM practices – explain team PM culture and competencies. All these aspects overall develop team PM resources. All the identified elements of PM resources that take place in NGOs, their characteristics and how they contribute to develop team PM resources in NGOs are illustrated below.

4.6.3.1.1. Casual Conversations and Informal Meetings

Casual conversations and informal meetings can take place highly informally to share project experiences and ideas or feedback among the team members. Moreover, informal discussions could occur either on a one-to-one basis or in a small work group which will help not only for sharing knowledge but also to test ideas in a work group (Gorse and Emmitt, 2009; Volkema and Niederman, 1995). Informal meetings have been less discussed in the literature (Gorse and Emmitt, 2009, 2007; Dainty et al., 2006). However, Mathur et al. (2013) in their latest research emphasised this was the important know-how tacit resource in private sector organisations and Gorse and Emmitt's (2009) findings revealed that informal meetings are important in increasing interactions among the team members and act to influence the success of the groups and their ability to manage project outcomes in construction projects. However, this is a resource not explored in NGO literature.

The present exploratory case study revealed that the casual conversations and informal meetings help to share the project knowledge, skills and experiences among the team members in NGO projects. It takes place in different forms in NGOs. Participants' responses say how and why this is taking place in NGOs as noted below.

"We have face-to-face informal discussions among staff members to share our project experiences." (TPR-I1R4Q47)

"We have informal table-to-table discussions in our office place to share PM knowledge among our staff members." (TPR-L1R3Q32)

"We discuss our project experiences in informal get-togethers." (TPR-I2R3Q30)

Further, many respondents believe informal meetings are much quicker and stronger in solving project problems than formal meetings. However, they are agreed that in many cases due to negative emotions of team members, their informal meetings fail in reaching their goals. The researcher concluded this tacit resource is a valuable element of team PM resources as many respondents consent this kind of casual conversation and informal meeting improve team PM knowledge and skills and improve their project operations.

4.6.3.1.2. Brainstorming Sessions

Brainstorming sessions is a process for generating creative ideas and solutions for a specific problem through group discussion (Coskun, 2011; Osborn, 1963). Many researchers emphasised that effective brainstorming sessions are highly important to generate novel ideas for solving problems (Coskun, 2011; Connolly et al., 1993; Fernald and Nickolenko, 1993). However, there is a critical counterpart argument on brainstorming sessions and productivity (Isaksen, 1998). Some authors claim productivity loss in brainstorming teams, and nominal teams perform better than brainstorming teams (Mullen et al., 1991; Diehl and Stroebe, 1987; Buyer, 1988). However, many authors claim appropriate setting of brainstorming sessions leads to better productive outcomes in teams (Isaksen, 1998; McFadzean, 1998; Oxley et al., 1996; Hackman, 1990; Larson and LaFasto, 1989). Subsequently, in PM, the brainstorming sessions were revealed as an important tacit resource under the sharing know-how factor and contribute to competitive advantage in the private sector (Mathur et al., 2013; Jugdev and Mathur, 2006a).

The present exploratory case study revealed the brainstorming sessions in NGOs are more effective to identify community needs, plan projects and find solutions for project-related issues. Participants' responses about why and when this takes place in NGOs are noted below.

"We regularly organise brainstorming sessions in our team level to find out solutions to project related issues." (TPR- I1R2Q39)

"Our brainstorming activities help us to generate effective new ideas to solve a problem more than anyone generating them alone." (TPR-L1R3Q35)

"Whenever we come across problems in projects, we organise brainstorming activities to identify appropriate PM solutions." (TPR-I1R3Q35)

Many respondents say these brainstorming sessions are very helpful to them to get many new ideas from other team members and collectively improve team PM knowledge and skills. However, many views that success of brainstorming sessions depends highly on the quality of facilitation. Subsequently, effective brainstorming improves team members' relationships. Therefore, this is considered as one valuable element of team PM resources.

4.6.3.1.3. Field Visits

Field visits refers to project team members, mainly senior staff visits, to the project execution areas to observe and discuss the progress of projects with other team members or with beneficiaries where they are a part of project implementation in order to improve project activities. In field visits, learning takes place through field discussions and observations. This is a resource not revealed in either private or non-profit sectors as an important PM resource. However, the present case study revealed, especially in NGO projects, field visits take place frequently for continual improvement of project activities in order to deliver quality of outcomes to beneficiaries.

In NGOs, for example, if we take community health and livelihoods projects, those projects are carried out in every selected area in a community by project teams. Here, every area will be assigned to a number of project staff members. Therefore, project field staff or senior project management staff in every assigned area visit to project implementation areas to observe and discuss the progress of project activities. For example, if it is a livelihoods project then they could discuss with the beneficiaries as well to give advice to them on how to improve further livelihoods projects. If it is a construction project, a senior officer will provide expert advice to the team members to improve project activities. Field visits provide very good experiences to all project team members to know the progress of project works

and allow them to discuss and give innovative ideas on improving projects activities. The exploratory case study revealed field visits as an important tacit resource in NGOs. Participants' responses say how and why this takes place in NGOs as noted below.

"We have field visits and field-level discussions to discuss our experiences of project progress." (TPR-L2R3Q38)

"We used to have exposure visits; all other project staff members in similar projects from other areas will visit our project site and observe our project's progress. Mainly, we explain our project activities and technical works to them and get their suggestions on our execution of project activities." (TPR-L2R4Q24)

"Field visits or exposure visits provide us very good knowledge to improve our project works." (TPR-I1R2Q38)

"In livelihoods projects, through field visits, I got to know how beneficiaries implement projects, how do they spend aid money, how do they maintain accounts, and how do they carry out marketing activities." (TPR-I2R5Q36)

"I had lots of experiences, most times we do formal evaluations and prepare reports and presentations. But, most things while observing informally in the field, we could see a clearer picture of projects. Therefore, learning through field experience is most powerful and supports improvement of our project operations." (TPR-L2R1Q38)

Field visits improve sharing of PM knowledge and skills and lead to improve team PM resources in NGOs. Field visits may occur formally or informal and in most cases, field reports will be documented. However, not all the observations and discussions in the field could be articulated as documents. The members who are involved in the field visits and discussions would gain absolute knowledge, skills and exposure compared to the people who read the written field reports. Therefore, this is a highly tacit PM resource and it is considered as one valuable element of team PM resources.

4.6.3.1.4. On-the-job Training

On-the-job training is any type of instructive process that occurs in a workplace instead of a formal educational learning environment (Neill, 2014). The main object of such training is to gain knowledge from peers and managers in order to improve specific job skills. Previous studies pointed out there are positive associations between on-the-job training and

productivity of employees (Ariga et al., 2013; Liu and Batt, 2005; Sisson, 2001; Barron et al., 1997). Moreover, Duff's (1994) findings emphasise on-the-job training increases job satisfaction, work knowledge, responsibility and productivity of employees.

The case study revealed that for NGOs it is highly important to improve team members' PM skills, knowledge and competencies to perform specific projects for communities. NGOs provide various on-the-job training opportunities for their staff to develop their abilities in using PM tools, techniques in project planning and implementation and to learn effectively to carry out their project activities. On-the-job training taking place in NGOs may be either formal or informal. In addition, most on-the-job training is job-specific skills development and all things provided cannot be documented effectively. Therefore, this belongs highly to tacit characteristics. Participants' responses are quoted below on how on-the-job training improves their skills and performance in projects.

"We used to undergo on-the-job-training from our team manager to improve our project planning skills." (TPR-I1R3Q37)

"Most times, I got the on-the-job training in the field level to improve my specific technical skills." (TPR-L1R3Q36)

"On-the-job training has greatly increased my performance in projects."

(*TPR-L1R5Q31*)

In NGOs, on-the-job training are almost always provided by project managers or senior staff members to their subordinates and in very rare cases are provided by external experts, if the NGO lacks expertise. Many respondents believe that on-the-job training activities increase specific skills of employees and it leads improvement in team performance in projects. Further, they stated developing countries like Sri Lanka lack opportunities to study professional PM courses. Therefore, this kind of on-the-job training is crucial to develop their specific PM skills.

4.6.3.1.5. Job Shadowing and Mentoring

Job shadowing refers to an employee accompanying someone who may be skilled in the relevant job in the workplace and observing and learning about a particular job. Mentoring is similar to job shadowing, however it is more in-depth and involves more interaction

between the two people involved (Eby and Allen, 2008; Kram, 1985). These activities increase employees' skills and capabilities and develop positive attitudes about working (Harvey et al., 2009; Allen, 2007). In PM literature, these job shadowing and mentoring activities were recognised as important know-how tacit resource (Mathur et al., 2013). However, in the non-profit sector no research has yet revealed this PM resource.

The case study revealed this resource is widely applied in NGOs and helped project team members to gain deeper knowledge about a variety of project activities and develop their relationships with senior staff members. Participants' responses about improvements of their PM knowledge and skills through job shadowing and mentoring activities are indicated below.

"We got much PM knowledge and skills to carry out specific project activities through job shadowing and mentoring activities." (TPR-I2R1Q33)

"When I joined as new staff in my organisation, I had a job shadowing activity to learn how to carry out participatory rural appraisal in a village." (TPR-I1R3Q36) "Mentoring sessions helped me to expand my project planning skills."

(*TPR-L1R3Q31*)

Further, many participants emphasised that job shadowing and mentoring activities are highly important to the staff of Sri Lankan NGOs as there exists a large knowledge gap between junior and senior staff members. In addition, in the present context, a multi-national and -cultural working environment exists as staff from other countries work with them. Therefore, these activities would reduce knowledge gaps and cultural barriers between them. Hence, in conclusion, this is a PM resource identified as a crucial element of PM resources as it significantly improves team members' PM knowledge, skills and competencies.

4.6.3.1.6. Success and Failure Stories

A story can be "a structured, coherent retelling of an experience or a fictional account of an experience" (Schank and Berman, 2002, p.288). Story-telling is cognitive and social interactive process (Ritchie, 2011; Cameron, 2007; Bruner, 2002). This resource is rarely discussed in the PM literature. However, the exploratory case study revealed that story-telling of success and failure in projects commonly takes place in NGOs. Project team leaders or

senior staff members with experience of working in different countries or regions tell stories of successes and failures in projects to their team members as to how to get ahead at work. These stories will help them understand what led to successful projects and caused failures. As this process takes place commonly through team social interactions, it could be considered as a tacit resource for an organisation.

The case study revealed the success and failure stories provide team members with strong and novel ideas to work in projects to make projects very successful. Participants' responses about the importance of success and failure stories are indicated below.

"Mostly foreign delegates tell us success and failure stories of their work experiences in different countries. This is very helpful for us to know what best PM practices are." (TPR-L1R1Q45)

"Success stories of others motivated us to make our projects a success."

(*TPR-I1R4Q39*)

The NGOs' local staff in Sri Lanka have fewer opportunities to get direct field exposure from foreign countries. Therefore, these kinds of story-telling events are helpful for the project team members to improve their knowledge from stories of past experiences from various projects and from various countries. Hence, this highly supports them to organise their own projects in their local context to achieve great project success.

4.6.3.1.7. Team Cohesion and Trust

Team cohesion is the degree to which team members work together to pursue the team's objectives (Mach et al., 2010; Carron et al., 1998). Trust is confidence in another's goodwill (Ring and van de Ven, 1992). Trust among team members builds team cohesion (Calnan and Rowe, 2007; Thau et al., 2007; Hansen et al., 2002; Grossman et al., 2001). Previous studies revealed team cohesion and trust influence greater coordination among team members (Morgan and Lassiter, 1992), as well as improved satisfaction and productivity (Bettenhausen, 1991). Further, it increases team performance of organisations (Mach et al., 2010; Hempel et al., 2009; Schippers, 2003; Carron et al., 2002; Costa et al., 2001; Mullen and Copper, 1994; Lawler, 1992). In PM literature, this resource was not extensively discussed as crucial for organisations.

The case study revealed team cohesion and trust as an important tacit resource as it improves teamwork, team interactions and team performance in NGOs. Participants' responses about the importance of team cohesion and trust in improving team interactions and team performance are indicated below.

"Our team members are highly trusted by each other; this is a vital reason for our project success." (TPR- I2R3Q50)

"Team cohesion and trust improve our communications and interactions which lead to achievement of our project objectives." (TPR-I2R1Q11)

"I am more satisfied working in my highly cohesive team and it increases my commitment to conquer the tasks assigned to me. Overall, team cohesion is imperative to achieve our project objectives." (TPR-IIR1Q21)

Many respondents agreed that at present, Sri Lankan NGO settings are highly multicultural and especially international NGOs are multinational settings. Therefore, they fail sometimes to build up cohesive and trusted teams. Some of respondents stated the difficulties which they face as indicated below.

"As we are working in a multicultural setting, it is very challenging bringing team members to a common project objective. Sometimes we fail to change their mindset towards the project objective." (TPR-L1R1Q4)

"Sometimes we fail to bring people under a common goal; some cases take a very long time to reduce the gap between individual perceptions and establish cohesive and trusted teams." (TPR-L1R1Q6)

"As people work with different country origins and cultures and also different individual characteristics and competencies, practically, I observe communication problems or barriers occurring most times. For example, in some cases, experts accept less others who have lower skills than them or international staff accept less the locals or vice versa. This makes a big challenge to build harmonised teams in our projects." (TPR-L2R4Q26)

However, they firmly believe that building team cohesion and trust will be highly helpful to them to increase team performance of NGOs and lead to achieve their project objectives. Therefore, the study recognised this is as a valuable element of team PM resources.

4.6.3.1.8. Team PM Values

Values can be referred to as beliefs or norms (Schwartz, 1992; Rokeach 1979). Team members' values influence task performance (Jetu and Riedl, 2013; Jehn and Mannix, 2001) and team effectiveness (Klein et al., 2011; Bell, 2007; Mannix and Neale, 2005; Horwitz 2005). Team values determine the success of a team and a successful team will have a clear code of conduct for its operations (Parker et al., 2015; Parker, 2012). In addition, Parker (2012) highlights successful self-organised teams will have shared beliefs and values and excellent team spirit. However, in NGOs, team values were not discussed as an important PM resource.

The case study revealed team members' strong belief that PM practices improve teamwork and increase team PM applications in NGOs. Participants' responses about the importance of team values for their team effectiveness are indicated below.

"Our team members have strong belief in PM applications which will improve their performance." (TPR-L2R2Q11) "We have confidence that team work will bring synergistic effects more than working alone." (TPR-L1R5O13)

Moreover, respondents agreed that strong team PM values will guide their project activities and also their personal behaviour. They believe if they are highly committed to shared team PM values then they would get better results. Therefore, strong team PM values play an important role in PM practices of team members in NGOs in Sri Lanka. Therefore, this is acknowledged as a vital element of team PM resources.

4.6.3.1.9. Team PM Expertise

PM competencies are described as technical, behavioural and contextual competencies of PM (IPMA, 2006). Subsequently, Takey and Carvalho (2015) state competence in PM not only includes stocks of knowledge and skills but also capability of applications for delivering good values. Therefore, team PM expertise can be referred to as PM expert knowledge and skills acquired by a project team in order to be capable of applying it to project activities including needs analysis, project planning, implementing, monitoring and evaluation. Findings of recent research conducted in Ghana by Ofori (2014) highlight PM competencies

increase the project success proportions. PM competencies in private sector organisations are extensively discussed and point out this highly important factor for successful project operations (Rose et al., 2007; Dainty et al., 2005; Grant et al., 1997).

However, in NGOs, this PM resource has rarely been elaborated. The case study confirmed the findings of past researchers in private sectors and highlights this as an important PM resource to successful project operations of NGO projects. Participants' responses about the importance of team expertise for their project success are given below.

"Our project staff well understand the project life cycle and operations and they have very good expertise in planning and implementing the projects, which make us succeed our projects." (TPR-I2R2Q27)

"We have very experienced and competent staff for our projects. They effectively apply PM tools and techniques in project activities." (TPR-IIR4Q37)

"Team competency greatly increases the efficiency and effective operations of projects." (TPR-L2R3Q30)

However, many respondents agreed they do not have formal certification in PM. However, they have undergone training in their organisations and much improved their PM knowledge and skills through experience of working in NGOs. One of the respondents stated:

"We don't have very strong theoretical knowledge in PM concepts, theories and project life cycle. However, we had learnt through training and experience how to plan and implement our projects". (TPR-I1R2Q12)

The case study findings concluded that team PM expertise makes team members work efficiently and effectively, hence this is acknowledged as a dynamic element of team PM resources.

4.6.3.1.10. Team Best PM Practices

Best practices are a proven process that delivers measurable improvements in efficiency and/or effectiveness (Alias and Idris, 2012, p.110). Al Freidi (2014) highlights that best PM practices contribute to PM success of organisations. Hence, an understanding and practising of the best PM practices can make the team more effective. Therefore, team members should

understand the global best PM practices and should always adhere by best practices. Globally, a number of accredited PM associations, for example, the Project Management Institute – PMI, International Project Management Association – IPMA, standardise best practices in PM. Even though many studies ensured that the considerable global PM standards are experienced in private sector organisations (Al Freidi, 2014; Kerzner, 2004; Loo, 2002; Davies et al., 1994), there is less research on best PM practices in NGOs.

The case study revealed in Sri Lanka most NGOs are involved in less-complex projects, like livelihoods, community health, relief, and community capacity development projects and they follow some commonly designed NGOs standards in their project works. Practices of global common standards (for example PMI and IPMA) are found much less in their activities. Participants' responses are indicated below.

"Our team members do not strongly adhere by best practices; however, we generally follow our own NGO standards rather than global standards set by private accredited associations." (TPR-L2R2Q28)

"We understand the PM global standards less and practising those less in our project operations. However, we understand best PM practices make our team more effective in our project operations." (TPR-L1R5Q29)

The quotations explain that they accepted highly that they would be more effective if they adhere to best practices. However, they have fewer opportunities to learn these best global practices. However, they believe that NGOs' designed common standards help them to a certain extent to work more effective to succeed in their projects.

4.6.3.1.11. Summary of Finding of Team PM resources

The PM literature review revealed the following PM resources in the private sector organisations: project management expertise, project management practices, informal meetings, project orientation programs, peer learning, on-the-job training, personal coaching and training and mentoring (Ofori, 2014; Mathur et al. 2013; Gorse and Emmitt, 2009; Rose et al., 2007; Jugdev and Mathur, 2006a; Dainty et al., 2005). However, previous PM research did not reveal the team PM resources in public and non-governmental organisations. The case study identified ten elements of PM resources in NGO sectors: informal meetings and

casual conversations, brainstorming sessions, field visits, on-the job training, job shadowing and mentoring, success and failure stories, team cohesion and trust, team values, team PM expertise, and team best PM practices. All these ten elements have more tacit characteristics.

The literature has discussed PM knowledge and skills development and PM competencies to the successful project operations of private sector organisations. Research in NGOs has identified the importance of management structures (Khan et al., 2000) and appropriate team skills (Youker, 2003). The findings of this case study extend previous work to identify the importance of PM team values and culture. Since NGOs operate in complex, uncertain environments, a PM team culture is required to ensure that member skills are coordinated to generate appropriate outcomes.

4.6.3.2. Organisational PM resources

Organisational PM resources can be referred as PM resources, knowledge and processes employed by the organisations. Previous studies on NGOs emphasised that organisationallevel generic capacities influence organisational performance and organisational effectiveness (Connolly and Lukas, 2003; De Vita et al., 2001; Lusthaus et al., 1999; Lusthaus, 1995). However, PM resources in the organisational level were less discussed in the NGO PM literature (Ika, 2012). However, organisational PM resources were substantially explored by previous researchers in private sector organisations (Mahroeian and Forozia, 2012; Mathur et al., 2007).

The case studies revealed that explicit resources are widely held in the PM organisational capacity. This means organisational PM resources will be kept as written documents and/or transferable means in forms such as audio, video and software. Therefore, organisational capacities are commonly formal and easily transferable. These resources impart knowledge and skills more objectively while team PM resources are conveyed highly implicitly to staff. In addition, the case study discovered team PM resources are inherent capacities to the organisation and not easily codified or transferable. However, organisational PM resources are overt capacities which are easily codified and transferable. Subsequently, the case study findings ensure that team PM resources (tacit resources) which generate organisational explicit PM resources and organisational PM resources (explicit resources) facilitate generate

team PM resources. This reconfirms the findings of Cook and Brown (1999) which pointed out that each type of knowledge can be used to facilitate the acquisition of other knowledge.

Higher-level organisational PM resources reflect that an organisation practices PM knowledge, skills, tools and techniques at a very superior level in their project operations, and organisational culture and leadership are highly supportive of greater PM practices in organisations. Altogether, ten elements of organisational resources were identified in the case study. Those are, namely, effective PM office, PM methodology, standards and process, PM tools and techniques, PM information system, project monitoring and evaluation mechanism, staff capacity-building programs, formal meetings for sharing knowledge, effective project communications systems and technology, defined organisational PM culture, and supportive organisational leadership to PM. These capacities are highly important to execute projects well and achieve PM success. All these elements of PM resources are briefly explained below in terms of how they support improvement of organisational effectiveness, and further similarities and dissimilarities of PM applications in organisational levels compared with private and public sector organisations are discussed.

4.6.3.2.1. Effective PM Office

The PMO is a body which functions for systematically coordinating the project activities of an organisation (Andersen et al., 2007). The Project Management Institute (PMI, 2008, p.11) defines a PMO as: "An organizational body or entity assigned various responsibilities related to the centralized and coordinated management of those projects under its domain. The responsibilities of the PMO can range from providing project management support functions, to actually being responsible for the direct management of a project." Desouza and Evaristo (2006) identified the PMO as providing activities at operational, tactical and strategic levels to organisations. Effective functioning of PMOs is closely tied to success of projects (Hurt and Thomas, 2009; Andersen et al., 2007). Therefore, PMOs deliver sustained value to organisations (Hurt and Thomas, 2009). In private sector organisations, the importance of the PMO is recognised and it is emphasised by past researchers that the effectiveness of the PMO is vital for project success (Kaleshovska, 2014, Richman, 2011; Dai and Wells, 2004).

However, in NGOs, the PMO is not revealed as an important PM resource for successful operations. The present case study revealed the PMOs' effective performance leads NGOs' to deliver successful community projects. Participants' responses about the PMOs are noted below.

"We have a PM office consisting of three staff members. The PMO supports in a number of ways, such as project planning, execution and monitoring, progress report writing, and reporting and making contacts with stakeholders." (OPR-L1R2Q11) "The PMO provide technical support and other all support to field staff (vehicles, resources). Usually, PMO staff visit the fields and give necessary advice."

(OPR-L2R2Q14)

"The PMO is a centre of coordination and support for us. The PMO gives all necessary support to the project staff for successful project delivery." (OPR-IIR5Q17)

Further, the PMO is a formal entity in an organisation and its activities are formal processes, which means necessary communications and advice between the PMO and teams are highly formal and in most cases, is codified as documents and stored in an organisational system. Moreover, many respondents confirmed that an effective PMO is crucial for their successful operations. Therefore, the PMO is considered an important explicit resource in organisational PM resources.

4.6.3.2.2. PM Methodology, Standards and Processes

PM methodology, standards and processes refers to a defined series of steps thorough which projects are executed to accomplish an end. Labuschagne and Brent (2004) pointed out a well-defined PM framework helps successful project management. There are a number of commonly accepted PM methodologies in practice worldwide, for example, Project Management Body of Knowledge (PMBOK®), Projects in Controlled Environments (PRINCE2®), Business Development and Implementation (BD&I), and Staged Life Cycle Framework. In addition, PM4NGOs and PM4DEV are specifically developed for NGOs. Many studies highlighted the importance of PM methodology, standards and processes as crucial for successful project operations of private sector organisations (White and Fortune, 2002; Gunnarson et al., 2000).

However, the case study revealed that NGOs mostly practise PM methodologies and standards specially designed by the organisation itself. However, the commonly accepted standards have been supplemented by designing their own standards. Participants' responses about PM methodology, standards and processes are noted below.

"We have a program guideline manual to implement our projects, which is specifically developed to effectively execute our projects." (OPR-IIR5Q10)

"Our program methodologies help us to learn how to execute our projects in the appropriate way." (OPR-I2R5Q17)

"We mostly use the PM methodologies designed by our organisation and those specially designed for NGOs for global practice, for example, the Sphere Handbook for Humanitarian Charter and Minimum Standards in Humanitarian Response."

(*OPR-L2R5Q14*)

Moreover, many respondents stated that they widely use a program handbook, strategic program document, administration handbook, operational manual, humanitarian accessibility framework, individual project implementation agreement (IPIA), ethics handbook, Sphere humanitarian handbook, CBOs assessment standards and various policies and procedures for implementing projects while very few respondents stated that they use PMBOK, PRINCE2 or Agile. However, as a conclusion, PM methodology, standards and processes are extensively used by NGOs to execute their own projects. These are formal written documents and retained in NGOs. Therefore, this is highly accessible by others and therefore, is an explicit PM resource for an organisation.

4.6.3.2.3. PM Tools and Techniques

PM tools can be means for performing PM activities, while a technique is a method of performing an operation. PM tools and techniques help to implement PM activities very effectively (Benser and Hobbs, 2008; Kloppenborg and Opfer, 2002). Past research discovered many PM tools and techniques – such as work breakdown structure, cause-and-effect diagrams, Critical Path Method (CPM), Program Evaluation and Review Technique (PERT), Gantt charts, Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis are widely applied in private and public sector organisations (Milosevic, 2003; Kliem and

Ludin, 1999). However, logical framework matrix and cause-and-effect diagrams are much used by non-profit organisations (Ika and Lytvynov, 2011; Carroll and Kellow, 2011).

The present case study also revealed various PM tools and techniques are applied in NGOs, where common applications of tools and techniques are LFM, Gantt chart, action plan, work breakdown structure, social mapping, problem tree analysis, objective tree analysis, check list, risk mapping, stakeholder mapping, vulnerable capacity assessment, participatory rural appraisal, rapid rural appraisal, and participatory network analysis. However, advanced tools and techniques such as PM software, network analysis and CPM are very rarely used in NGOs. Participants' responses about the application of PM tools and techniques are noted below.

"In the needs identification stage, we use PM tools such as Venn diagram, resource mapping, problem tree analysis, needs prioritisation list, objective tree analysis, seasonal calendar, and stakeholder mapping and PM techniques as participatory rural appraisal (PRA), rapid rural appraisal (RRA), and participatory network analysis (PNA)." (OPR-IIR4Q22)

"In the planning stage, we use PM tools such as Logical Framework Matrix (LFM), action plan, Gantt chart, and monthly and weekly work plans and PM techniques such as results based management and rights based approach." (OPR-L2R1Q18) "We use LFM and Gantt charts as monitoring tools in most cases. Also, we have developed and use our own participatory monitoring tools." (OPR-L1R3Q17)

Moreover, the case study highlights PM tools and techniques provide much support to improve project operations in NGOs. Therefore, this is considered as a valuable explicit PM resource in organisational PM resources.

4.6.3.2.4. PM Information System

A Project Management Information System (PMIS) is a system which provides information for project team members or managers in order to support decision-making for planning, organising, executing and controlling projects (Braglia and Frosolini, 2014; Caniëls and Bakens, 2012). PMIS helps project managers to track project progress and understand how the project is going on. PMI (2008) emphasises each task of the project life cycle must constantly be tracked to have a project completed successfully to meet scope, budget, time and quality constraints. Therefore, PMIS enables this by providing lucid flow of complete information about project progress to the team members (Braglia and Frosolini, 2014).

Consequently, an effective PMIS contributes to project managers' timelier and more appropriate decision-making and helps to achieve project success (Caniëls and Bakens, 2012; Raymond and Bergeron, 2008). Moreover, superior information quality leads to quality of decisions, while poor information quality makes poor decision-making in organisations (Blichfeldt and Eskerod, 2008; Engwall and Jerbrant, 2003). PMIS applications in complex projects have grown to a great extent over the last decades (Ahlemann, 2009), and Raymond and Bergeron (2008) highlight PMIS as highly advantageous for complex project environments.

The present case study revealed PMIS applications are very rarely deployed in local NGOs compared with international NGOs in Sri Lanka. Participants' responses about the application of PMIS are indicated below.

"We don't have very extensive applications of Project Management Information Systems (PMIS) in our projects since it is hard to practise." (OPR-L2R4Q35) "We use PM software which is designed by our organisation to track our project progress in some cases." (OPR-I2R2Q55)

PMIS is considerably used by private sector organisations to get complete information on project progress; however, the NGOs rarely use these applications since most community development projects could be managed with the support of PM tools such as LFM and Gantt chart. However, a few respondents from international NGOs stated that they have considerable attention to PMIS as they are implementing multiple and complex projects around the nation. In addition, PMIS is an explicit resource where all information is stored in organisational memory and can be easily accessible by other members in an organisation.

4.6.3.2.5. Project Monitoring and Evaluation Mechanism

Monitoring and Evaluation (M & E) activities are inevitable for organisations to ensure the efficiency and effectiveness of projects. There are commonly a number of M & E

mechanisms in practice, namely, Gantt diagram, bench marking techniques, balanced score card, CPM and PERT (Tache and Ispasoiu, 2013; Dyczkowski, 2013). Adopting M & E systems is becoming a very large concern for NGOs to report their humanitarian works to their funding agencies and stakeholders (Bornstein, 2006). In addition, Mebrahtu (2002) highlights that an appropriate M & E system helps managers track projects through the project life cycle and this will improve their project activities and performance in NGOs. Therefore, it is vital to design appropriate M & E mechanisms to ensure the quality of project activities. At the same time, M & E reports should convince and satisfy the stakeholders.

The case study revealed that NGOs choose the M & E mechanism to fit with their program context and it is helpful to improve their project activities. Participants' responses about the M & E mechanism are noted below.

"We use appropriate M & E mechanisms in our organisation to meet the requirements of stakeholders sufficiently." (OPR-L1R5Q24)

"We have an M & E framework which explains how and by whom the monitoring and evaluation activities will be carried out and to whom the information will be reported."

(*OPR-I2R3Q19*)

"We have mid-, end- and post-evaluation plans and also conduct field-level assessments, desk-based assessments, and pocket-based assessments to evaluate progress and outcomes of our projects." (OPR-L1R1Q36)

Many respondents stress the importance of monitoring and evaluation mechanisms for NGO projects and pointed out this helps them to examine project activities whether they are executed in the way planned and produced the intended outcomes. In addition, they recognised that establishing an appropriate system will improve stakeholders' satisfaction. However, many agreed that in local NGOs they are still behind in appropriately designing a system to ensure quality reports, and because of this they fail to meet stakeholders' credibility. This M & E mechanism is recognised as a very crucial PM explicit resource for NGOs.

4.6.3.2.6. Staff Capacity-building Programs

Staff capacity-building training programs are widely discussed in NGOs in recent years (Brown, 2014; Poudyal et al., 2014; Low and Davenport, 2002; Lusthaus et al., 1999; Eade, 1997). Building staff capacities is a crucial activity for an NGO (Brown, 2014). These will improve the number of PM competencies of program staff members to work in emergencies and community development projects. Staff capacity-building programs not only improve employees' performance (Linz, 2003; Michael and Combs, 2008) but also increase their job satisfaction and commitment towards organisational objectives (Latif et al., 2013; Armstrong, 2009; Choo and Bowley, 2007). Jugdev and Mathur (2006a) emphasises the training and development will improve the project managers' competencies.

The case study revealed that capacity-building programs in NGOs sufficiently improve the capacities of project staff and leads to improve effective team operations. Participants' responses about the staff capacity-building programs are noted below.

"Our organisation is very keen on capacity building for their staff. For example, I am going to Bangkok this weekend for training. I have been twice to Denmark and Turkey for training. They have invested a lot of money for the capacity building of staff to execute quality programs." (OPR-I1R5Q13)

"We usually get training in project planning, proposal writing, monitoring and application of PM tools and techniques, which help us for performing our operations."

(*OPR-L1R4Q33*)

"I had no experience in NGOs project work when I joined this NGO as monitoring and evaluation officer. After capacity building training was provided to me, I became confident holding meetings with communities, donors and project teams to monitor and evaluate project activities." (OPR-L2R2Q29)

However, providing capacity development training programs is challenging for many local NGOs in Sri Lanka. The case study revealed most of the time budget constraints are stated as the prime reason why the NGO falls short on capacity development in local NGOs. However, the case studies warrant that international NGOs are greatly investing in staff capacity-building training programs in order to improve their staff PM skills. These staff capacity-building programs are highly formal and conducted in organisational levels. All

training materials are stored in organisational memory and widely accessible to everyone. Therefore, this is considered an explicit PM resource in organisational PM resources.

4.6.3.2.7. Formal Meetings for Sharing Knowledge

In organisations, knowledge sharing takes place through team interactions (Popadiuk and Choo, 2006; Reio and Wiswell, 2000). It could take place through formal or informal meetings (Reio and Wiswell, 2000). In team PM resources, many informal team interactions activities are discussed where PM knowledge and skills are transferred among team members and those support improvement of team PM resources. However, this resource talks about formal meetings which is an explicit resource contributing to sharing knowledge in an organisation (Liu and Liu, 2008; Nicholas and Steyn, 2008; Popadiuk and Choo, 2006). However, literature lacks study of the nature of formal meetings taking place in NGOs for sharing knowledge among the team members.

The case study revealed that there are various formal meetings taking place for communicating and discussing project-related aspects among staff in NGOs. Those are, progress meetings, technical meetings, review meetings, integration meetings, milestone meetings and monitoring and evaluation co-group meetings. Participants' responses about the types of formal meetings taking place and the importance of meetings are noted below.

"We conduct monthly meetings, milestone meetings and senior management meetings which help us to report our project progress and get suggestions from other team members." (OPR-L2R1Q22)

"Project review meetings where we discuss the ongoing issues of projects; usually we have weekly and monthly review meetings." (OPR-L1R1Q38)

"We organise monitoring and evaluation co-group meetings; here, we discuss the project experiences of similar projects implemented in different districts. This will call for monthly or quarterly ones." (OPR-I2R4Q24)

Further, case study findings highlight formal meetings contribute to the organisational learning of organisations through sharing knowledge and skills among team members. Respondents recognised formal meetings as an essential for team members to obtain knowledge from managers or other members and share their project experiences among team

members. Moreover, respondents emphasised the meetings should facilitate effective knowledge sharing and these are essential for knowledge generation among team members in organisations.

4.6.3.2.8. Effective Project Communications System and Technology

This is an important PM resource facilitating effective communications among the staff in organisations (Cervone, 2014; Mathur et al., 2013). Past research gives emphasis to quality of project communications where effective transmission of PM knowledge and skills takes place among team members and stakeholders (Obeidat and North, 2014; Samáková, 2012; Badiru, 2009; Pinto and Pinto, 1990). Further, Badiru (2009) highlights effective project communications leads to cooperation, which leads coordination, and finally, all lead to project success of organisations.

However, research in NGOs rarely discussed project communications systems and technology. The case study revealed effective project communication systems and technology support formal and informal communications in NGOs. Further, it explored communication technologies, namely, telephone, email, Skype, tele-conferencing, and network-sharing systems are widely used in NGOs. This contributes highly to improved communication between managers and project team members. Participants' responses about project communications and technology taking place in NGOs are indicated below.

"We do telephone, e-mail, and Skype communications among our staff members and those are effective for communicating our information." (OPR-I2R3Q35)

"We do have a network sharing system. This means we have shared folders within our organisation. Any staff can access all information within our organisation from anywhere and can share their experiences through emails." (OPR-I1R3Q20)

Further, respondents stated the effectiveness of knowledge sharing depends on appropriate selection of communication technologies, and effective project communication and technology promote better communications among team members. As a conclusion, the case study underlined this is a crucial explicit PM resource in organisational PM resources and key to effective team performance and project success in NGOs.

4.6.3.2.9. Defined Organisational PM Culture

Organisational culture could be defined as shared values of employees within an organisation (Alavi et al., 2005). Organisational culture should be well- defined and supportive to PM practices in organisations. This promotes organisations and project teams to effectively apply PM knowledge, skills, tools and techniques. PM maturity accompanied by an understanding of cultural orientation is a best strategy for today's project-based organisations (Yazici, 2009, p.14). Morrison, Brown and Smit (2006) point out that supportive organisational culture influences effective PM. At the same time, unfavourable culture for projects can be a cause of project failure (Muriithi and Crawford, 2003; Verma, 1995; Jaeger and Kanungo, 1990). Organisational culture that supports communication and cooperation between teams is significantly found to be related to team leader effectiveness and team member satisfaction (Doolen et al., 2003). Belassi et al. (2007) found a significant relationship between a positive work environment with strong leadership and new product development project success and firms with more flexible, change-oriented cultures associated with higher levels of technology transfer (Gopalakrishnan and Santoro, 2004).

However, the studies on NGOs have not explored the defined PM culture. The case study revealed this is an important PM resource to increase PM practices and achieve project objectives. In addition, past studies revealed organisational culture is the tacit resource for organisations as acquired values and beliefs are not easily transferable. However, the researcher sees this resource more as a mixed explicit and tacit PM resource (Cheyne and Loan-Clarke, 2009), as he considered the defined PM culture consists of organisational setting and well-articulated values and beliefs to the project teams by way of policies or written documents. Therefore, acquired culture (team in-built values and beliefs) belongs more to tacit resources, which were discussed in team PM resources and designed structure, and written policies of PM culture fits more with explicit PM resources. Participants' responses about defined organisational project culture are indicated below.

"Organisational culture should promote PM practices in the organisations where the team will apply PM tools and techniques very effectively to implement projects."

(OPR-I1R2Q52)

"Organisational cultural factors promote team work, team communication and team cooperation; these are important for project success." (OPR-L2R4Q37)

"Organisational culture should promote results-based management, transparency and accountability; which will induce effective team work in organisations."

(*OPR-I1R2Q51*)

"Organisational culture will influence team members' performance, and give appropriate direction for everyone to lead the projects to a success." (OPR-L1R5Q40) "Organisational culture has a significant influence on project performance and the continuing success of NGOs." (OPR-I2R5Q42)

Further, the case study explored supportive organisational culture to PM is indispensable for effective PM practices in organisations. Moreover, well-articulated PM values promote PM practices and PM knowledge-sharing activities within organisations. Therefore, this is considered as mixed of more explicit and less tacit PM resource in organisational PM resources.

4.6.3.2.10. Supportive Organisational Leadership to PM

Top management support has been acknowledged as vital for project success (Young and Poon, 2013; Poon et al., 2011; Young and Jordan, 2008; Schmidt et al., 2001; Lederer and Mendelow, 1988). The case study findings agree with the past studies and emphasise supportive organisational leadership to PM is central to ensure good PM practices in NGOs. Subsequently, good leadership will motivate project team members by offering them best support for successful project operations. Organisational top management provides support to PM in several ways for their effective project operations. Mainly, they conduct bottle neck meetings, review meetings and provide technical support, coordination support, and M & E support for good project operations. Participants' responses about the supportive organisational leadership to PM are noted below.

"Project-centred visionary leadership and values are the most important factors to project success." (OPR-L2R2Q38)

"Actually, we are in the top management, we call it senior management. We provide technical support and M & E support to the project teams." (OPR-I2R1Q39)

"We ensure the right team appointments for the projects which are crucial for project success." (OPR-I2R2Q40)

Further, the case study pointed out even though supportive organisational leadership is vital for efficient and effective team operations, sometimes team members fail to get effective support from the top management because of low communication and coordination between top management and project teams. Participants' statements on this issue are noted below.

"Coordination between the top management and project staff is less in my NGO. Sometimes the top management approach is different and not very supportive"

(*OPR-L2R5Q39*)

"Some cases, top management staff don't know project ground situations in the field. Therefore, leaders' instructions are not appropriate to the situations. Sometimes, their decisions passed on to the teams are reasons for project failure as well."

(*OPR-I1R3Q44*)

Therefore, it is highly important to improve the appropriate communications and coordination between top management and project teams in order to improve effective leadership support to project teams. Top management instructions and advice are highly formal, codified and available as documents. Therefore, this is a valuable explicit PM resource in organisational PM resources.

4.6.3.2.11. Summary of Finding of Organisational PM resources

The PM literature discovered various organisational PM resources in private, public and non-profit sector organisations; In private sector organisations the following resources were identified: staff capacity-building programs, effective project coordination and leadership, shared project vision, objectives and policy, effective project communications, project organisational structure and process for sharing knowledge (Kaleshovska, 2014, Caniëls and Bakens, 2012; Richman, 2011; Hurt and Thomas; 2009; Raymond and Bergeron, 2008; Jugdev and Mathur (2006a); White and Fortune, 2002; Gunnarson et al., 2000). In public sector organisations, various PM tools and techniques were identified (Milosevic, 2003; Kliem and Ludin, 1999). Further, in non-profit sector organisations, more specific PM tools and techniques, logical framework matrix and cause-and-effect diagrams (Ika and Lytvynov, 2011; Carroll and Kellow, 2011), monitoring and evaluation systems (Bornstein, 2006; Mebrahtu, 2002) and staff capacity- building activities (Brown, 2014) were identified.

The case study identified ten organisational PM resources: PM office, PM methodology, standards and processes, PM tools and techniques, PM information system, project monitoring and evaluation mechanism, staff formal capacity-building programs, formal meetings for sharing knowledge, effective project communications systems and technology, defined organisational PM culture, and supportive organisational leadership to PM. The resources identified have more explicit characteristics.

The literature on NGOs was highly focused on more specific PM tools and techniques and staff capacity- building programs as organisational capacities, however, the case study revealed more elements of organisational capacity such as PM information system, formal meetings for sharing knowledge, effective project communications system and technology and defined organisational PM culture as crucial elements for project success of NGOs. The resources identified in the case study are more similar to the resources identified in the private sector since the NGOs currently, like the private sector, operate high complexity projects for rebuilding vulnerable communities.

4.6.3.3. Collaborative Social PM Resources

Team and organisational PM resources were discussed in terms of explicit and tacit resources and exist within the organisational level. Team PM resources consist of highly tacit resources and organisational PM resources comprises of highly explicit resources. However, this section explains the collaborative social PM resources which comprise of formal/ know-what (explicit) and informal/ know-how (tacit) elements. This is the broader level of resource feeding the organisation with new knowledge from external sources. Burn (2004) highlights receiving information from the external setting promotes organisations getting new knowledge and achieving competitive advantage. Collaborative social PM resources have been revealed as a new capacity to the existing literature and these are most important to NGOs successful operations.

Since NGOs are non-profit mission-driven organisations, unlike private sector organisations, they face limits on how they can direct their resources and they are formally accountable to their stakeholders. These stakeholders are heterogeneous and have different needs and objectives (Reed et al., 2006). Therefore, NGOs need extensive social networking activities

in order to successfully complete their projects. Also, in developing countries such as Sri Lanka, institutions (government/regulations) may not be very strong (DeVotta, 2005). One respondent stated:

"The developing countries like Sri Lanka; collaborative social PM resource is a very important asset for NGOs as knowledge gap is a big issue for us."

(*CPR-L1R5Q45*)

Therefore, focusing only on the internal team and organisational resources – such as informal (tacit) team values, mentoring and story-telling – or formal (explicit) processes – such as methodologies, processes and tools – may not be able to adapt to host community requirements. These, collaborative social capacities enable NGOs to configure operations appropriately in the host environment.

Further, the case study identified that collaborative social PM resources could be seen in two types as formal collaborative social PM resources and informal collaborative social PM resources. Subsequently, both resources were explored as crucial for NGOs to attain new ideas for successfully implementing projects for improving community benefits. Liu and Liu (2008) say organisations relying only on within-the-boundary is not adequate to meet competitive forces. Hence, absorbing external knowledge is indispensable for survival of organisations (Liu and Liu, 2008; Grant, 1996).

Formal collaborative social resource refers to the capacity of the organisation to formally receive knowledge and advisory recommendations from external networking sources. The case study identified knowledge transfer takes place in NGOs with external bodies through formal means such as project advisory from government bodies, project advisory from donors, NGOs intra and consortium meetings, official information releases and joint project formal interactions.

Informal collaborative social resource refers to the capacity of the organisation for getting knowledge from informal external interactions. The case study explored that informal knowledge transfer takes place with external bodies such as joint project informal interactions, networking relations with stakeholders, beneficiary integration in projects, project marketing, and community of practice through online social networks. One respondent commented on the importance of informal collaborative resource as quoted below.

"From my personal experience, I could say that informal knowledge sharing is the most important and gives more knowledge to us than formal collaborative resource. Sometimes, formal sources don't give all knowledge and skills to us and people fail to impart their knowledge to others. But, informal interactions make our works more effective. For example, having informal discussions with stakeholders, community discussions and community of practice give more skills to me to develop my personal competency." (CPR-L2R2Q46)

Further, the case study reveals that both resources are vital exclusively for local NGOs which function in developing countries like Sri Lanka because people who work in these NGOs comparably have fewer or lower PM competencies compared with people who work in international NGOs. Therefore, absorbing knowledge from experts promotes performance of team members. At the same time, the collaborative means promotes team members' successful project operations through knowledge transfer not only between the NGOs but also among the stakeholders, such as community, donors and government agencies. All the identified elements of collaborative social PM resources are explained below.

4.6.3.3.1. Project Advisory from Government Bodies

The exploratory case study revealed that project advisory from government bodies is a new PM resource in collaborative social PM resources. In many countries, governments use NGOs as a tool to carry out humanitarian projects (Pact, 2012; Agg, 2006; OECD, 1988). Therefore, they support NGOs in a number of ways including funding and advisory support to implement their projects (Agg, 2006; Coston, 1998; Salamon, 1995). In some cases, the relationship occurs as explicit partnerships or joint projects (Reilly, 2013; OECD, 1988; De Laat, 1987). In this, the knowledge transfer takes place very effectively on both sides since government imparts professional expert knowledge to the NGO and the NGO conveys specific project social knowledge (Coston, 1998; Lipsky and Smith, 1990; Thomas, 1985).

In Sri Lanka, the government established a body called the National Secretariat for Non-Governmental Organizations to make a conducive environment for NGOs to implement relief and development projects (National Secretariat for NGOs, 1996). The national secretariat coordinates the NGO sectors and ensures they conduct projects within the legal framework and the national framework of the country. In addition to that, relevant government bodies, for example, district and divisional secretariats, health departments and educational departments, provide their sector-wide support to NGOs.

Therefore, the case study found out that Sri Lankan NGOs receive much project advisory from government agencies, such as establishing regulatory framework for NGO projects, developing necessary policies and guiding instruments for NGO projects, technical support for projects, government advocacy, project approval and conducting district-level government agent meetings for reviewing projects. These project advisory supports from government bodies highly contribute for successful NGO projects. Participants' responses about the project advisory from government bodies are noted below.

"In government agent review meetings of NGO projects, we get useful suggestions and ideas from government staff for our projects." (CPR-I2R5Q7)

"We get government approval for initiating some specific health projects, where we get policy and guidance support from relevant government authorities about what they expect in projects." (CPR-L1R5Q44)

"In some projects, we work with government authorities, especially in disaster management, education and health; we need to adhere to government advisory and policy." (CPR-L2R5Q48)

"Government NGO project policies and guiding instruments support us to organise our projects according to the government's national framework." (CPR-L2R2Q42)

However, many participants informed that a lack of communication and coordination exists between NGOs and government agencies in Sri Lanka and emphasise the importance of improving communication and coordination in order to improve effective government support leading to successful NGO projects. Commonly, all government advisory support takes place formally and is recorded as documents. All policies and guiding instruments are accessible by all organisations. Therefore, this is considered an explicit PM resource in collaborative social PM resources.

4.6.3.3.2. Project Advisory from Donors

The case study revealed project advisory from donors as a new element in collaborative social PM resources. In developing countries, donors providing technical assistance and advisory are common for their funded projects (Godfrey et al., 2002; Low et al., 2001; Berg, 1993; Gray, 1997). This support aims for improving project operations and leads the projects succeeding (Low et al., 2001; Berg, 1993). The case study explored in Sri Lanka; foreign donor agencies provide not only the funding but also project advisory, for example, technical support and innovative sustainable ideas on key aspects of projects for successfully executing projects. Participants' responses about project advisory from donors are noted below.

"Donors visit every three months and review the progress of projects and will give their expert advisory to the project staff." (CPR-L2R3Q51)

"Regional conferences are conducted by donors to share best practices and make their advisory on NGOs projects." (CPR-L2R2Q40)

"Donors' advisory makes our projects more effective and sustainable." (CPR-I2R2Q48)

Further, participants indicated that they receive formal training and project execution policies and guidelines from donors to improve the competencies of project team members and to organise projects well. Sri Lankan NGOs face competency challenges; these donor supports are necessary to utilise the donors' extensive experience, knowledge and skills to successfully carry out their project activities. This makes NGO projects more viable and successful. In addition, all supports are highly formal and codified and available as documents. Therefore, this is considered an explicit PM resource in collaborative social PM resources.

4.6.3.3.3. NGOs' Intra and Consortium Meetings

NGOs' intra and consortium meeting was explored as another crucial element of collaborative social PM resources. Modern NGOs' setting recognised the importance of coordination among the NGOs to deliver quality of service to vulnerable communities (Bennett, 2014; Currion and Hedlund, 2011). The NGOs' intra and consortium meetings aim for understanding of all aspects of NGO projects in the region and identify and find solutions collectively by all NGOs to improve project operations for producing sustainable benefits to the community. Participants' responses about NGOs' intra and consortium meetings are noted below.

"At district level, we do have consortium meetings. A consortium, in a sense, is a group of NGOs registered under one umbrella. In this meeting, every NGO presents their challenges, opportunities and plans." (CPR-L1R4Q52)

"NGO sector-wise meetings inform each NGO's projects and progress to other NGOs." (CPR-I2R1Q53)

"We normally do cluster meetings for individual programs. In these cluster meetings, all NGOs which are doing similar projects and other relevant stakeholders will attend. Here, we normally discuss our projects' progress and allocation of locations for each NGO, and we develop standards for livelihoods projects amongst the NGOs."

(CPR-L1R3Q38)

"In my experience, most livelihoods projects fail in other countries. But, most of our livelihoods projects achieved success, because common standards are established through cluster meetings." (CPR-L2R3Q48)

Hence, NGOs' intra and consortium meetings help to exchange knowledge between the NGOs and contribute to producing sustained projects to meet stakeholders' requirements. Subsequently, it has highlighted the importance of NGOs' intra and consortium meetings in a country like Sri Lanka where many NGOs exist to improve community well-being. In this sense, it is crucial to ensure all beneficiaries are receiving equal support from one source. Therefore, these coordination meetings support to allocate areas and share projects to each NGO, hence duplication is removed and all areas of development are focused rather than missing in any areas. Moreover, NGOs' intra and consortium meetings promote establishment of common standards among the NGOs for their projects and ensure transparency and accountability among them. NGOs' intra and consortium meetings are highly formal, codified and recorded as documents, therefore, this is considered an explicit PM resource in collaborative social PM resources.

4.6.3.3.4. Official Information Releases

The exploratory case study revealed another explicit PM resource called official information releases. It is a responsibility for NGOs to report their project works to their stakeholders and to the general public and this will bring strong public reputation to NGOs (Ron et al., 2005). Official information releases refer in this study to NGOs, donors and government bodies

officially releasing information about NGO projects. Subsequently, the case study revealed this information is of much help to NGOs to know every other NGO's works in the region or other countries and their success, failures and benefits to the community. Participants' responses about official information releases are noted below.

"Government releases the NGOs' project information on their own websites, which help us to see the information of all NGOs and what they are involved in."

(CPR-L1R3Q47)

"A regional manual is published by donors. This manual will give information of similar regional projects being undertaked in other countries." (CPR-L2R2Q54) "We distribute news letters to our stakeholders and receive news letters from other NGOs in which every NGO explains their projects." (CPR-I2R4Q41)

In Sri Lanka, the government releases NGOs' project information on their own websites assigned for NGOs. However, many participants from the local NGOs specified that they poorly disclose their project information to the public or other NGOs. However, the international NGOs release their project information through their own websites. Moreover, these official information releases contribute much to share project information among the NGOs and help to organise their own projects. Therefore, this is considered an explicit PM resource in collaborative social PM resources.

4.6.3.3.5. Joint Projects Formal Interactions

The case study revealed formal interaction occurs through joint projects between the NGOs. Joint projects among the non-profit sectors improve knowledge transfer between them (Steelcase Inc., 2010; Shuya, 2009; Rogers, 1974). Subsequently, team members of both joint NGOs constantly get opportunities to share new ideas and techniques with each other to apply in their projects. Therefore, this will enhance PM knowledge and skills among team members.

Further, the case study identified this formal interaction takes place through formal regular meetings, review meetings, joint planning meetings and participatory meetings. Participants' responses about how they are involved and what are the benefits of joint projects formal interactions are noted below.

"We do have formal meetings with our partner organisations where we discuss our projects' progress, issues and solutions." (CPR-I1R5Q45) "Joint formal meetings are very useful to share project views among staff." (CPR-I2R3Q39)

"Joint planning meetings increase help to design appropriate plans for our projects." (CPR-L2R3Q46)

Therefore, joint projects formal interactions give good opportunities among project members in two different organisations to share their ideas and experiences and hence, this increase PM competencies of team members to improve their project work. As these meetings take place formally, the information exchange is codified and kept in organisational memory. Therefore, this is considered an explicit PM resource in collaborative social PM resources.

4.6.3.3.6. Joint Projects Informal Interactions

The case study revealed that increasingly informal interactions take place among team members in addition to the formal interactions through implementing joint projects between two or more NGOs. Past studies enlightened that collaborative relationships between organisations support effective change and survival of organisations (Delone, 2009; Alter and Hage, 1993; Baum and Oliver, 1991). Moreover, Meyer (1997) point outs NGOs share knowledge very effectively while doing joint projects.

The case study identified informal interactions take place in NGOs through informal meetings, informal team discussions, lessons-learnt sessions, joint field visits and interexposure visits. These kinds of informal interactions enhance PM knowledge and skills through sharing new ideas among team members. Participants' responses about joint projects informal interactions are noted below.

"Joint field visits where we both (our organisation and partner organisation) will visit the field and will have discussions." (CPR-L2R5Q40)

"In some cases, we visit other countries and observe their project mechanisms. I have visited Cambodia and learnt their system for livelihood projects. This gave me very good experience to work locally." (CPR-I1R3Q48)

Further, respondents enlighten that mutual learning takes place among field staff through exposure visits and joint field visits. Hence, joint projects informal interactions support improving field staff PM competencies. Moreover, this promotes effective communications and coordination among team members of two or more NGOs who implement joint projects. Finally, these informal interactions frequently occur though face-to-face interactions and experiential knowledge gained in interactions largely resides in the heads of participants. Therefore, this is considered a tacit PM resource in collaborative social PM resources.

4.6.3.3.7. Networking Relations with Stakeholders

The case study identified, apart from the formal meeting, that NGOs are increasingly involved in informal interactions with their stakeholders, for example, beneficiaries, government bodies, community organisations, donors and private sectors. Networking relations enhance opportunities for accessing and sharing information and knowledge among the stakeholders in NGOs (Dalaibuyan, 2010; Madon, 1999). The case study identified that the networking relations take place through informal meetings, face-to-face and telephone conversations and other informal events. Subsequently, this highlights strengthening of the relations with stakeholders facilitates new PM knowledge and skills to flow among the stakeholders and promotes high leaning for team members. Participants' responses about networking relations with stakeholders are noted below.

"We have informal meetings with grassroot level organisations and attend the events organised by them, where we share our project information between us."

(*CPR-L1R3Q34*)

"Networking relationships with beneficiaries and other NGOs support us to implement our projects very successfully." (CPR-I1R2Q57)

"We do have informal communications with government bodies to share our project experiences and progress." (CPR-L2R5Q43)

Therefore, these networking relationships open up some new connections among the stakeholders and help knowledge and skills development among staff. Moreover, this helps to avoid duplications of work among the NGOs, as previously discussed in the NGOs intra and consortium meetings.

4.6.3.3.8. Beneficiary Integration in Projects

The case study revealed that NGOs promote effective and lasting participation of beneficiaries in projects and this contributes to the success of projects. Further, the case study recognised that beneficiaries' involvement takes place in needs analysis, planning, and execution of NGO projects. Mainly, beneficiaries participate in decision-making processes which help the NGOs to reflect their expectations in projects. In addition, this increases beneficiary satisfaction in projects.

One participant stated community people know more about their village information therefore, getting information from the village people helps them to plan appropriate projects in the community. A participant response is quoted below.

"When we do internal renovation of the road, we should construct the culvert, but we don't know where to locate? But old people in the community sometimes know where natural drainage is. Then our people will analyse this technically and also will get some ideas from the community. This kind of knowledge sharing process takes place with the community." (CPR-L1R4Q46)

Two respondents emphasised that community people know more about their community problems and in certain cases, how those community issues can be resolved. Therefore, getting their involvement in needs analysis and planning, greatly helps to identify appropriate community problems and to plan effective projects to address community problems. Participants' responses are noted below.

"MOH [Ministry of Health] has given a report on community problems and issues and requested these problems be addressed. After this, we had visited the community and rural hospitals and conducted face-to-face interviews with people. This gave us a proper, actual picture of community problems and also they have given ideas on how these issues can be addressed. The project achieved great success because of community involvement in needs identification and planning." (CPR-L2R5Q50)

"This is the most important capacity for NGOs to take all the knowledge and skills from outside of the organisations. Mainly, community knowledge and skills are the most important capacity that we need to use. They are the people who know more about their village, what problems they are facing and sometimes how these problems can be solved. Therefore, if we integrate them in the projects, then we can identify the proper needs of the community; we can design proper planning and implementation."

(*CPR-I2R5Q43*)

Another respondent stated that allowing beneficiaries to implement projects will increase beneficiary satisfaction and make projects more sustainable. A participant response is quoted below.

"Making beneficiaries implement the projects and we do only the observation and advice. For example, we established a livelihoods co-operative society and allowed the community to run it. In this project, the community will implement the project and we will give necessary advice, ideas and trainings to them." (CPR-L1R2Q41) "Beneficiary implementation in projects increases their satisfaction over projects and makes projects more sustainable." (CPR-I1R1Q49)

Therefore, promoting the involvement of beneficiaries in projects helps to encourage community initiatives for their development and helps to sustain the projects for a long period of time even after the exit of implementing NGOs. Therefore, this is considered an important tacit PM resource in collaborative social PM resources.

4.6.3.3.9. Project Marketing

Non-profit organisations' social marketing events create a trustful atmosphere with stakeholders and lead to sustaining the organisations (Jackson and Smith, 2014; Rothschild and Milofsky, 2006). However, the case study identified project marketing events – NGOs marketing or informing their project details to their stakeholders – creates opportunities to get stakeholders' feedback to modify or improve their projects. Further, the case study revealed that project marketing events contribute to the NGOs effectively getting the views of stakeholders in order to reflect their needs and expectations and support to improve the projects. Participants' responses about project marketing events are noted below.

"We conduct project inauguration meetings with the stakeholders. In this meeting, we disclose all information on the project and planned activities; and there, stakeholders share their views over projects." (CPR-I2R3Q43)

"In many cases, we reorganised our projects based on suggestions of stakeholders during the project marketing events." (CPR-L2R5Q23)

"We organise awareness programs and displays about projects to community people to get their views on our projects. These greatly help us to amend our projects to meet community requirements." (CPR-I1R5Q43)

Therefore, these project marketing events increasingly support NGOs to reorganise or improve project objectives and activities. Further, project marketing events are considered a highly tacit resource because events taking place may be formal but the knowledge obtained from these marketing events is highly cognitive and cannot be codified fully in written documents. Therefore, this is considered a tacit PM resource in collaborative social PM resources.

4.6.3.3.10. Community of Practice through Online Social Networks

Social networking sites are increasingly popular for sharing information and building relations among the public in the recent decades (Hird, 2010; Bortree and Seltzer, 2009; Waters, 2009; Kent, 2008; Eyrich et al., 2008; Christ, 2005; Kent and Taylor, 1998). Private organisation use social networking sites often for promoting their products and improving their relationships with their customers (Hird, 2010; Waters et al., 2009). However, Waters et al. (2009) states that non-profit organisations use social networking sites in order to promote their missions and programs to their stakeholders. Further, they point out, though, that they lack in taking full advantage of social networks to cultivate strong relationships with stakeholders. Briones et al.'s (2011) recent study on the American Red Cross highlights that Twitter and Facebook contribute a pivotal role to building strong lasting relationships with publics, scholars and professionals.

However, the present study focuses on how PM knowledge, skills and experiences are shared through social networks in NGOs. The study reveals online social networks become effective means for the professional learning of NGOs staff. Commonly, NGO staff use Twitter and NGO websites for sharing their knowledge. Participants' responses about the community of practice through online social networks are noted below.

"On-line social networking gives more new ideas on project practices. It gives more confidence to the project staff to get ideas from similar practices from the professionals of other organisations and from other countries." (CPR-L1R3Q45)

"On-line social networks sometimes help to solve our technical issues in projects." (CPR-I2R1Q50)

Therefore, communities of practice through online social networks enhance staff knowledge. Moreover, many respondents agreed social networks build stronger relationships with the external community, therefore this agrees with the beliefs of past researchers. Hence, this enhances effective knowledge sharing between the staff of NGOs. However, the study identified online social networking is less in practice in local NGOs. These knowledgesharing activities are highly informal and in most of cases not codified or recorded as documents. Therefore, this is considered a tacit PM resource in collaborative social PM resources.

4.6.3.3.11. Summary of Findings of Collaborative Social PM resources

The collaborative social PM resources were newly identified in PM literature in the present case study. The following explicit and tacit resources were identified. The explicit resources are: project advisory from government bodies, project advisory from donors, NGOs' intra and consortium meetings, official information releases, joint projects formal interactions. The tacit resources are: joint projects informal interactions, networking with stakeholders, beneficiary connections in projects, project marketing, and community of practice through online social networks.

The literature has focused more on team and organisational resources. However, the case study newly identified the collaborative social PM resource in the existing PM literature. NGOs are required to manage political, social, legal, technical and cultural issues in host environments (Struyk, 2007). Managing these factors may require stakeholder engagement in order to develop approaches that are sensitive to the host country (Yu and Leung 2015). This capacity enables NGOs to adapt to external environment by acquiring external knowledge via a network of relationships to develop other internal PM capacities. For NGOs, these capacities will be a critical to get the knowledge, skills, tools and techniques from the other NGOs or stakeholders, and collaborative works with other NGOs can improve the effective delivery of community projects.

4.6.4. Three Levels of Project Success

The NGO case study findings fit the models proposed by Cooke-Davies (2002) and Sutton (2005) and categorised the project success into three levels. The first level is project management success, which focuses on completing the project within traditional parameters of time, budget and quality. This level assesses project efficiency and outputs of the project within the short term. The second level is project success; this broadly assesses stakeholders' satisfaction and impact of projects on the community. This evaluates the outcomes of the project in the medium term. The third level is NGO success. This evaluates how project outcomes impact on NGO strategy and success. This means how PM resources supports increasing the reputation of NGOs and leads to increased fundraising capability, and how it contributes to the sustainability of NGOs. The study identified the three levels of project success and measuring variables to evaluate project success.

4.6.4.1. Project Management Success

PM success refers to how projects are completed according to planned time, budget, quality and scope parameters (Shenhar et al., 2000; Baccarini, 1999). The case study ensured the similar factors are used to evaluate PM success in NGOs. Participants' responses about PM success evaluation factors are noted below.

"We will see how far the project achieved the objectives, meeting the planned budget (not exceeded or not under spent), and timely completion of the projects."

(*PMS-L2R5Q7*)

"We have to consider whether we executed the projects as we planned. The most important thing is managing the resources very efficiently and effectively to achieve the project objectives." (PMS-L1R5Q4)

"We mainly consider objective achievement and meeting quality requirements. If we met the objectives and quality parameters then we can say it is a successful project."

(PMS-I2R5Q6)

Many respondents assented that the traditional measures of meeting scope, quality, time and budget are considered to evaluate PM success in NGOs. Therefore, the case study concludes these traditional measures are to be used in the subsequent survey study to evaluate PM success in NGOs.

4.6.4.2. Project Success

Project success was identified in the case study into three levels as the literature informed. However, new evaluating factors of project success were explored in this case study. Project success refers to the degree to which projects outputs produce the desired outcomes. Previous studies underlined stakeholders' satisfaction and project impacts are crucial factors to evaluate project success (Diallo and Thuillier, 2005, 2004; Cooke-Davies, 2002; Shenhar et al., 2001). However, the exploratory case study revealed two more factors in addition to those factors, namely, contribution to development objectives and project sustainability. Participants' responses about project success evaluation factors are noted below.

"If we take project success, the donor, implementing NGO and beneficiary should be satisfied with the project. If anyone in these three is not satisfied then it is not a project success." (Stakeholders satisfaction) (PS-L2R4Q5)

"If we conduct youth vocational training, we would see whether they have got jobs or started their own businesses. We also consider other outcomes like income of youth and their lifestyle changes." (Project impacts) (PS-I2R2Q5)

"We consider reducing domestic violence in the community. We would see the attitude and behavioural changes in the community through projects."

(Project impacts) (PS-L2R2Q7)

"In the initial stage, we will do a base line study to identify the community needs. We will see how much we fulfilled the needs of the community from this project. We should have achieved at least 20–30% outcomes. For example, if it is infrastructure projects, normally we do paddy field areas. In this case, before this project, we will do a base line study and see which roads farmers used to access paddy fields. Then, after completion of the project, we will see how many people use the newly constructed roads. We will see how the behavioural changes happened in the community."

(Project impacts) (PS-L1R4Q7)

"We need to consider the unintended impacts of projects to society, in addition to the expected impacts. These unintended impacts can be good results to society; then we can say this is also a project success. Sometimes bad results make a project a failure." (Project impacts) (PS-I2R5Q9) The above quotes make clear that the NGOs consider that stakeholders' satisfaction and project impacts to evaluate project success of NGOs. The NGOs' stakeholders are mainly the donor, implementing NGO and beneficiary, who should all be satisfied with the outcomes of the project. Further, project success can be evaluated based on the degree to which intended impacts and unintended favourable results are produced by the projects in the community. It is also highlighted that the unfavourable impacts also should be accounted for to evaluate project success. In addition to these two factors, the case study explored two more factors which can used to evaluate project success, namely, contributing to the development objectives and project sustainability. Participants' responses are noted below.

"A development objective needs to be considered. This is a very broad term and normally project objectives lead to development objectives. For example, our relief and livelihoods projects should contribute to the development objective of poverty alleviation. Therefore, in addition to the project objectives, we can consider what the developments objectives are; and if they have been achieved in the project."

(Development objectives) (PS-I2R3Q5)

"We look into the sustainability of the project. For example, if it is an income generation project, we would see how long the business will be stable and how much income it would generate for a longer period for the community."

(Project sustainability) (PS-L2R5Q4)

"Normally, we start from the community and will do the beneficiary selection, implementing projects and linking them with government bodies to ensure the sustainability of projects, because we will not stay with them for a long time. Mainly the organic projects linked with the agriculture department."

(Project sustainability) (PS-L2R2Q5)

For NGO projects, the above two factors explored are highly crucial to evaluate project success. NGO project success is not complete once the project objectives are completed. For example, a respondent stated that a relief project once completed will not alone fulfil poverty alleviation in the community. Therefore, it is very important to ensure every NGO project should contribute to the NGO's development objectives and finally all projects, for example, relief, livelihoods, education, health, infrastructure development together, will fulfil wider objectives of the community.

Another main concern in NGOs is that the implemented projects should be sustained for a long time to provide fullest support to get rid of poverty or vulnerability in the community. For example, once a livelihood project is completed by the NGO, it cannot say the beneficiaries' poverty has been reduced. They need to ensure whether the livelihoods projects are sustainable or they are linked with reliable bodies to ensure long-term sustainability. Therefore, the case study identified these two new factors: contribution to development objectives and project sustainability to evaluate project success in NGOs, in addition to stakeholders' satisfaction and project impacts.

4.6.4.3. NGO Success

Past studies stressed that project success is not ended on either achieving scope, quality, time and budget parameters or meeting stakeholders' satisfaction and project impacts, but also should contribute to the business success of organisations (Sutton, 2005; Cooke-Davies, 2002). Subsequently, project success contributes to achieve organisational objectives and support to business strategies to achieve competitive advantage of organisations (Cooke-Davies, 2002; Shenhar et al., 1997).

As the case study focuses on NGOs which are a basis for humanitarian orientations, the study revealed that achieving NGOs' vision, mission and objectives and NGOs sustainability are fundamental concerns of NGO success. Participants' responses about NGO success evaluation factors are noted below.

"I could say, we must also consider how far the projects contribute to achieve the NGOs' vision, mission and objectives. This will be a very important factor, when we talk about the NGOs' success." (NS-I2R4Q8)

"The projects should match with organisational vision and objectives of NGOs and at the same time support to sustain the NGOs for a long period." (NS-I1R3Q52)

The case study explored two further new evaluation factors of NGO success, namely, stakeholders' rapport and NGO reputation. The participants stated that NGO projects should contribute to increase the stakeholders' rapport since it will help the NGOs to improve their relationships with other organisations and lead to work collaboratively with other

organisations in future projects. Further, it has noted that good projects will improve the NGO's reputation with stakeholders. Participants' responses are noted below.

"While projects are achieving success, NGOs' reputation and fundraising ability increase; this makes NGOs sustainable in the community for a long period."

(NS-L2R5Q5)

"Some organisations stay with the community for a long term and implement projects, if an NGO is doing projects that are achieving success, then the community and government acceptance of that particular NGO will be enhanced."

(*NS-L1R5Q50*)

Further, many participants highlighted NGOs sustainability highly depend on how far NGOs implement appropriate projects in the community and in what degree NGOs succeed those projects. Because, When NGOs successfully fulfil the community needs then their reputation among the stakeholders goes up and therefore their future funding will be ensured for their continuity. Moreover, the case study underlined projects should build strong rapport with project stakeholders for example with community members, donors and government agencies because this will ensure continuous support in future projects from them.

4.6. Association between PM Resources and Project Success

The previous section explained the dimensions of PM resources and project success in NGOs. This section presents the associations between PM resources and overall project success of NGOs, which are identified from the confirming interviews of the case study. Previous research findings highlighted that there are significant positive associations between PM resources and the first two levels of PM and project success (Jugdev et al., 2013; Fortune et al., 2011). However, the present study identifies and organises PM resources into three levels and assesses these associations with three levels of project success. Therefore, this is a new approach to link 'PM resources and project successes' in PM literature. In addition, the exploratory study identified a new resource called 'collaborative social PM resources' in PM literature, therefore, it is necessary for an extensive examination to identify how this is related with project success of NGOs.

The confirming interviews justify the general understanding of how PM resources contribute to the project success of NGOs, the construction of the hypotheses and the proposal of conceptual model for the study. Then, the survey study was designated to scientifically test these relationships and conclude the best model explaining the associations between PM resources and project success. The confirming interviews ensured that there are direct positive associations between the three levels of PM resources and the three levels of project success. Further interviews highlighted these three levels of PM resources support the wider level of NGO success through the first two levels of PM and project success. Figures 4-4, 4-5 and 4-6, show the association between PM resources and project success of NGOs.

4.7.1. Team PM Resources and Project Success

The case study revealed positive associations exist between team PM resources and the three levels of project success. Respondents stated the associations between team PM resources and overall project success as quoted below.

"I could say, team PM resources will be the most imperative resource for NGOs to achieve the three levels of project success." (TPR-PS-L1R7Q10)

"I say this is the most important capacity for overall project success. In the initial stage, all the organisations should build up strong team capacity, at least to successfully implement the projects. Without strong team PM resources we cannot execute any projects successfully." (TPR-PS-I2R6Q7)

These statements give general understanding of how team PM resources contribute to the three levels of project success in NGOs. Team PM resources help to improve projects operations and lead to achieve PM success in terms of completing projects within planned quality, time and budget requirements. Next, this will help to achieve project success in meeting stakeholders' satisfaction and providing favourable impacts. Finally, it helps to achieve NGO success in meeting organisational vision, mission and objectives, and supports the organisation to remain in the community for a long period with high credibility.

Further, two respondents highlighted that there are direct and indirect associations between team PM resources and the three levels of project success. They stated, on one hand team PM resources contribute directly to the three levels of project success and on the other hand team PM resources contribute to project success through PM success and contributes to NGO success through either PM or project success or both. Respondents commented on the direct and indirect associations between team PM resources and project success as below.

"Team resources are the most important capacities for overall project success. But, achievement of PM and project success greatly contribute to achieve NGO success." (TPR-PS-L2R605)

"Team PM resources could be directly linked with PM, project and NGO success. However, I could say significant indirect associations are there in between the first two levels of project success and the third level of project success. For example, without achieving PM and project success it is hard to meet organisational vision, mission and objectives." (TPR-PS-I1R7Q6)

Further, another respondent stated that team PM resources contributes to developing other levels of resources as well:

"These resources are crucial for project success. At the same time, team PM resources support the increase of other resources, too. For example, strong teams support the development of appropriate organisational resources and collaborative resources, as well." (TPR-PS-L1R6Q5)

Therefore, as per case study discussions, the researcher concludes that team PM resources contributes a pivotal role to overall project success; the contribution may occur in three ways:

- Team PM resources directly contribute to PM success, project success and NGO success.
- Team PM resources indirectly contribute to project success through PM success.
- Team PM resources indirectly contribute to NGO success either through PM success or through project success and/or PM and project success.

The association between team PM resources and project success is shown in figure 4-4.

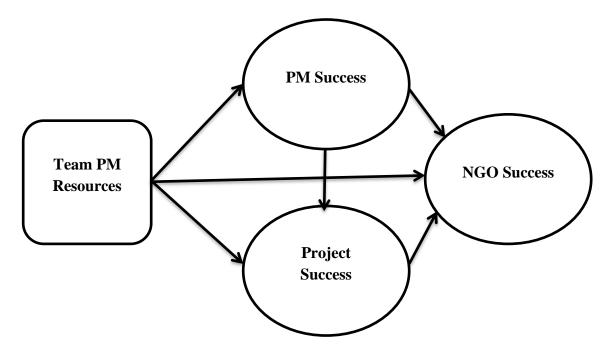


Figure 4-4: Association between Team PM resources and Project Success

4.7.2. Organisational PM Resources and Project Success

The case study revealed positive associations exist between organisational PM resources and the three levels of project success. The respondents' views on the associations are quoted below.

"I could say the organisational PM resources greatly contributes to PM success of NGOs." (OPR-PS-L2R6Q3)

"These are important resources for successfully implementing projects. For example, if we say organisational culture and leadership will influence team members' performance and give appropriate direction for everyone to lead the projects to success." (OPR-PS-I2R7Q4)

"These resources contribute in every stage of successful implementation of projects. For example, if you use appropriate tools then you can make appropriate planning and effective implementation of projects. This achieves PM success and project success and then leads to NGO success." (OPR-PS-L2R7Q4)

"Organisational resources take the central role to make effective team PM resources and improve collaborative social PM resources." (OPR-PS-IIR6Q11) Case study quotations provide similar results as discussed in the previous section. Therefore, the researcher concludes that organisational PM resources contribute a significant role to achieve overall project success and the contribution may occur in three ways:

- Organisational PM resources directly contribute to PM success, project success and NGO success.
- Organisational PM resources indirectly contribute to project success through PM success.
- Organisational PM resources indirectly contribute to NGO success either through PM success or through project success and/or PM and project success.

The associations between organisational PM resources and project success are shown in figure 4-5.

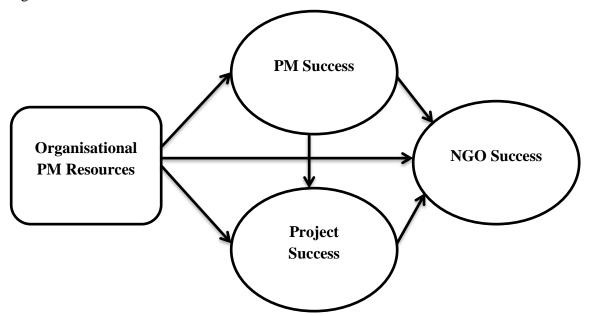


Figure 4-5: Association between Organisational PM Resources and Project Success

4.7.3. Collaborative Social PM Resources and Project Success

The case study identified this new collaborative social PM resources and revealed positive associations exist between collaborative social PM resources and the three levels of project success. Respondents' statements are quoted below.

"All areas of formal and informal resources contribute to overall project success. For example, if you want to identify the community needs, you must have discussions with community people. Only then you can get the actual needs of the community. Therefore, it helps to fulfil the actual needs of the community. Another example, if you take official information releases and consortium meetings, these give good knowledge to us on how to properly plan and implement projects. As such, every capacity is important in contributing to project success." (CPR-PS-L1R7Q12)

"Because of collaborations among NGOs, all NGOs get a clear picture where they want to work and which needs they want to address. In addition, knowledge and resources are shared amongst them. Therefore, this improves the implementation of community projects very successfully." (CPR-PS-I2R6Q14)

"This is a very important resource for NGOs. Through this networking we could avoid the duplication of works among the NGOs, and can ensure the benefits are distributed to the community properly. This could increase the NGO's reputation."

(*CPR-PS-I2R7Q17*)

"Sometimes, if we take developed countries, the organisational resource might be more important. But if we take developing countries, the knowledge gap is a big problem. Therefore, I feel collaborative resources are very important. It is very important to establish a system to share knowledge among external bodies to a project success."

(CPR-PS-L2R6Q18)

"Collaborative social PM resources support organisations to accomplish NGO success through achieving either PM success or project success." (CPR-PS-I1R6Q19)

The case study results conclude there is significant association between collaborative social PM resources and overall project success. The contribution may occur in three ways:

- Collaborative social PM resources directly contribute to PM success, project success and NGO success.
- Collaborative social PM resources indirectly contribute to project success through PM success.
- Collaborative social PM resources indirectly contribute to NGO success either through PM success or through project success and/or PM and project success.

The associations between collaborative social PM resources and project success are shown in figure 4-6.

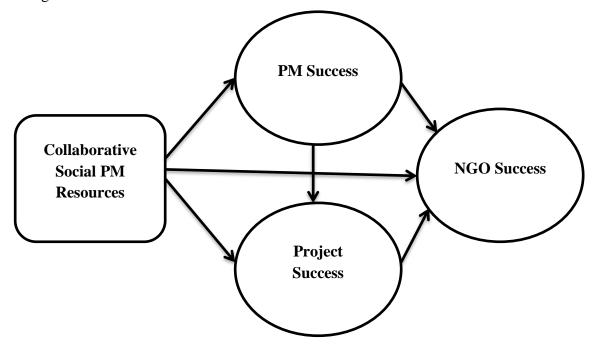


Figure 4-6: Association between Collaborative Social PM Resources and Project Success

4.7. Hypothesis Generation from Exploratory Case Study

The previous section identified the associations between PM resources and project success in NGOs. Based on those findings, the researcher formulates the hypotheses for this study in order to develop a conceptual model and test these findings with large- scale survey data and statistical evidence. Table 4-6 briefly explains the hypotheses formulated for this study to show the associations between PM resources and project success.

Findings concluded that the three levels of PM resources contribute directly to PM success, project success and NGO success. Further, it identified NGOs' success will be accomplished indirectly through the achievement of PM and project success. This is warranted by past studies ensuring that PM success and project success lead to the business success of organisations (Cooke-Davies, 2002; Shenhar et al., 1997).

Latent Factors	Levels of Project Success	Hypothesis Generation		
	Team PM resources contribute to PM success directly	TPR		
Team PM Resources (TPR)	Team PM resources contribute to Project success directly and indirectly	TPR		
	Team PM resources contribute to NGO success directly and indirectly	TPR -> NGO Success		
	Organisational PM resources contribute to PM success directly	OPR		
Organisational PM Resources (OPR)	Organisational PM resources contribute to Project success directly and indirectly	OPR		
	Organisational PM resources contribute to NGO success directly and indirectly	OPR → NGO Success		
	Collaborative Social PM resources contribute to PM success directly	CPR		
Collaborative Social PM Resources (CPR)	Collaborative Social PM resources contribute to Project success directly and indirectly	CPR		
	Collaborative Social PM resources contribute to NGO success directly and indirectly	CPR → NGO Success		
PM Success	PM Success contribute to Project success directly	PM Success		
	PM Success contribute to NGO success directly and indirectly	PM Success		
Project Success	Project Success contribute to NGO success directly	Project \longrightarrow NGO Success Success		

Table 4-6:	Hypothesis	Generation	from Ex	ploratory	Case Study

4.8.1. Proposed Hypotheses

The exploratory case study findings proposed the hypothetical associations between PM resources and project success. Hence, table 4-7 shows the 19 proposed hypotheses for this study which are tested by the survey study findings.

Hypotheses	Exploratory Case Study				
H1	Team PM resources have a direct and positive effect on PM Success				
H2	Team PM resources have a direct and positive effect on Project Success				
H2a	Team PM resources have an indirect and positive effect on Project Success through the				
п∠а	mediating effect of PM Success				
H3	Team PM resources have a direct and positive effect on NGO Success				
H3a	Team PM resources have an indirect and positive effect on NGO Success through the				
115a	mediating effects of PM success and Project Success				
H4	Organisational PM resources have a direct and positive effect on PM Success				
H5	Organisational PM resources have a direct and positive effect on Project Success				
H5a	Organisational PM resources have an indirect and positive effect on Project Success through				
115a	the mediating effect of PM Success				
H6	Organisational PM resources have a direct and positive effect on NGO Success				
Нба	Organisational PM resources have an indirect and positive effect on NGO Success through				
110a	the mediating effects of PM Success and Project Success				
H7	Collaborative Social PM resources have a direct and positive effect on PM Success				
H8	Collaborative Social PM resources have a direct and positive effect on Project Success				
H8a	Collaborative Social PM resources have an indirect and positive effect on Project Success				
1100	through the mediating effect of PM Success				
H9	Collaborative Social PM resources have a direct and positive effect on NGO Success				
H9a	Collaborative Social PM resources have an indirect and positive effect on NGO Success				
117a	through the mediating effects of PM Success and Project Success				
H10	PM Success has a direct and positive effect on Project Success				
H11	PM Success has a direct and positive effect on NGO Success				
H11a	PM Success has an indirect and positive effect on NGO Success through the mediating effect				
1111a	of Project Success				
H12	Project Success has a direct and positive effect on NGO Success				

 Table 4-7: Proposed Hypotheses for the Study

4.8. Updated Conceptual Model from Exploratory Case Study

The revised conceptual model is proposed by the researcher based on the results of the exploratory case study conducted in the NGOs. The model shows PM resources and its association with project success. The model shows the three levels of PM resources: team resources, organisational resources and collaborative social resources. These are the independent variables and project success is the dependent variable. The study is exploratory in nature. Therefore, the model is refined based on findings of empirical quantitative investigations and these findings lead to testing the hypotheses for this study. The conceptual model of the research is shown in figure 4-7.

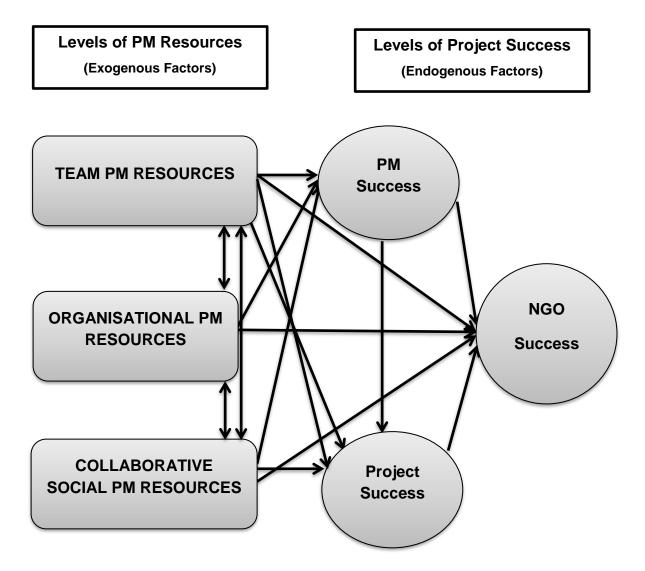


Figure 4-7: Proposed Conceptual Model of PM Resources and Project Success for NGOs

4.9. Summary

The chapter explained the whole development process of the conceptual model for the next stage of the survey study. The literature review followed by the exploratory case study revealed the elements of PM resources and project success. It supported development of three levels of PM resources and three levels of project success and discovered the associations between PM resources and project success. It led to formulating the research hypotheses and updating the conceptual model for the study.

The case study identified new PM elements in every level of PM resource of NGOs. The identified new elements to the existing literature are: team cohesion and trust, team values, field visits, defined organisational PM culture, project advisory from government bodies, project advisory from donors, NGOs intra and consortium meetings, official information releases, joint projects formal meetings, joint projects informal interactions, networking with stakeholders, beneficiary integration in projects, project marketing and community of practice through online social networks. Further, the chapter explained the nature of every PM element and each level of PM resource in detail with the backing of quotations of participants and existing literature support.

Further, the case study identified new evaluation factors of project success in the NGO context. The factors explored are: contributing to development objectives and project sustainability in the second level of project success and stakeholders' rapport and NGOs reputation in the third level of project success. Next, it identified associations between the three levels of PM resources and the three levels of projects success and helped to formulate the hypotheses for the study.

Therefore, the first phase of the exploratory study is completed and helped to explore and understand the nature of PM resources and their potential associations with project success. Next, the second phase of survey study is oriented, based on these findings, to test the case study qualitative findings and validate the best model to explain PM resources and project success in NGOs, as explained in the next chapter.

CHAPTER FIVE SURVEY INSTRUMENT DEVELOPMENT AND DATA PRESENTATION

5.1. Introduction

The exploratory case study findings informed the conceptual model for this study. Three levels of PM resources were explored; Team PM Resources, Organisational PM Resources and Collaborative Social PM Resources and the project success was evaluated into three levels, namely, PM success, project success and NGO success. In addition, the case study revealed that there is a strong positive association between PM resources and project success. From the exploratory findings, the survey instrument was developed in order to collect a large quantity of data, and using advanced statistical techniques to test the findings of the case study results and generalise the study results with high validity, reliability and statistical significance.

This chapter on survey instrument development and data presentation comprises the brief demonstration of steps followed for survey development and descriptive analysis to summarise the sample data of survey exhibiting PM resources and project success. This chapter is organised in six sections. Section 5.2 presents the operationalisation table of variables for survey study. Section 5.3 explains the questionnaire development process and examines the reliability and validity of pilot study. Section 5.4 presents the descriptive statistics of PM resources and project success and examines the data distribution of study variables, Section 5.5 presents the results of independent sample t -test between local and international NGOs and finally, section 5.6 summarises key aspects of the chapter.

5.2. Operationalisation of Variables

The operationalisation table 5-1 shows the study concepts, variables, indicators and measures to assess the indicators for this study. The concepts of this study are PM resources and project success. Variables of PM resources are, namely, team, organisational and collaborative social PM resources and variables for Project success are, namely, PM success, project success and NGO success.

Team PM resource comprises ten indicators, namely, casual conversations and informal meetings, brainstorming sessions, field visits, on-the job training, job shadowing and mentoring, success and failure stories, team cohesion and trust, team values, team PM expertise and best PM practices. Questions Q1 to Q10 are used to measure the indicators, respectively.

Organisational PM resource comprises ten indicators, namely, effective PM office, PM methodology, standards and process, PM tools and techniques, PM information system, project monitoring and evaluation mechanism, staff capacity-building programs, formal meetings for sharing knowledge, effective project communications systems and technology, defined organisational PM culture, and supportive organisational leadership to PM. Questions Q11 to Q20 are used to measure the indicators, respectively.

Collaborative social PM resource comprises ten indicators, namely, project advisory from government bodies, project advisory from donors, NGOs intra and consortium meetings, official information releases, joint projects formal interactions, joint project informal interactions, networking relations with stakeholders, beneficiary integration in projects, project marketing, and community of practice through online social networks. Questions Q21 to Q30 are used to measure the indicators, respectively.

PM success comprises four indicators, namely, meeting scope, meeting quality, meeting time and meeting budget. Questions Q31 to Q34 are used to assess the indicators, respectively. Project success comprises four indicators, namely, stakeholders satisfaction (donors, NGO, community), contribution to development objectives, project impacts (intended and unintended) and project sustainability. Question Q35 to Q38 are used to assess the indicators, respectively. NGO success consists of four indicators, namely, contribution to NGOs' vision, mission and objectives, stakeholders' relationships, NGOs reputation and NGO sustainability. Questions Q39 to Q42 are used to measure the indicators, respectively.

Concepts	Variables	Indicators	Measur
			es
		Casual conversations and informal meetings	Q1
		Brainstorming sessions Field visits	Q2
			Q3
	Teen DM	On-the job trainings	Q4
	Team PM	Job shadowing and mentoring	Q5
	Resource	Success and failure stories	Q6
		Team cohesion and trust	Q7
		Team values	Q8
		Team PM expertise	Q9
		Team best PM practices	Q10
		Effective PM office	Q11
		PM methodology, standards and process	Q12
		PM tools and techniques	Q13
		PM information system	Q14
PM	Organisational	Project monitoring and evaluation mechanism	Q15
Resources	PM Resource	Staff capacity-building programs	Q16
		Formal meetings for sharing knowledge	Q17
		Effective project communications systems and	Q18
		technology	010
		Defined organisational PM culture	Q19
		Supportive organisational leadership to PM	Q20
		Project advisory from government bodies	Q21
		Project advisory from donors	Q22
		NGOs intra and consortium meetings	Q23
	Collaborative Social PM Resource	Official information releases	Q24
		Joint projects formal interactions	Q25
		Joint projects informal interactions	Q26
		Networking relations with stakeholders	Q27
		Beneficiary integration in projects	Q28
		Project marketing	Q29
		Community of practice through online social networks	Q30
		Meeting scope	Q31
	PM Success	Meeting quality	Q32
		Meeting time	Q33
		Meeting budget	Q34
Project Success	Project Success	Stakeholders satisfaction (donors, NGO, community)	Q35
		Contribution to development objectives	
		Project impacts (intended and unintended)	Q36
		Project sustainability	Q37
			Q38
		Contribution to NGOs' vision, mission and objectives	Q39
	NGO	Stakeholders relationships	
	Success	NGOs reputation	Q40
	Success	NGO sustainability	Q41
			Q42

5.3. Questionnaire Development Process

The researcher followed a multi-step process to develop a survey instrument. Figure 5-1 illustrates the questionnaire development process for this study. Firstly, the draft survey questionnaire was developed based on the three dimensions of PM resources and three levels of project success found in the first phase of the exploratory case study. Items were generated within each level of PM resource and project success based on the findings from the case study interviews and relevant literature in organisational capacity, PM resources and project success in private, public and non-profit organisations, using these approaches:

- For drafting the PM resources, the researcher followed Judgev and Mathur (2006b) and the Pact *OCA Handbook*'s (1996) validated survey instruments, in addition to the qualitative findings.
- For drafting project success, the researcher followed Ika et al.'s (2012) validated survey instruments, in addition to the qualitative findings.

After completion of the draft survey instrument, pretesting interviews were conducted to improve the draft survey instrument (Presser et al., 2004; Fowler 1993; Oksenberg et al., 1991). The pretesting is useful for examining wording, clarity, ease of use and suitability of every question included in the questionnaire and constructive suggestions of respondents help to revise the questionnaire appropriate to achieve the survey objectives (Caspar et al., 2011; Presser et al., 2004; Fowler, 1993). The researcher organised ten expert and cognitive interviews for testing the draft survey questionnaire.

Firstly, two expert interviews were conducted with a senior university academic in the relevant area and an NGO's organisational development consultant. This aimed to obtain suggestions for revising the questionnaire from experts and systematically analyse the response task for each item in terms of comprehension, retrieval, judgement, and response generation (Czaja, 1998; Czaja and Blair, 1996; Presser and Blair, 1994).

After corrections made from the experts' feedback, eight cognitive interviews were conducted one-on-one by the researcher with a respondent from the target population of NGO managers. Cognitive interview techniques were employed. The think aloud process – was applied to check how respondents verbalised their thoughts while responding to the survey

questions (Willis et al., 1999; Czaja, 1998; Fowler 1993) and the Probing method was applied to examine how respondents arrive at answers to the survey questions (Willis et al., 1999). Moreover, cognitive interviews helped the researcher to recognise how respondents understand the questions, how easy or difficulty they feel answering questions, how they retrieve the information, how accurately they recall the summary of information, how they feel about answering the questions and how they rate their responses (Drennan, 2003; Collins, 2003; Czaja, 1998).

Pretesting interviews contributed to the development of the survey instrument in providing appropriate structure and clarity in questions. The summary of the pretesting information sheet and table of examination of previous survey tools related to PM resources and project success are attached in Appendices 5 and 6, respectively. Finally, following these pre-test modifications, the survey instrument was piloted to test the survey administration method and to examine the questionnaire with 'real' respondents (Cook ad Beckman, 2006; De Vaus, 1993).

A pilot study is a small-scale preliminary study of the full survey project for evaluating a survey instrument including: questionnaire, survey plan such as time, cost, sample size and feasibility, and statistical reliability and validity of the survey instrument (Caspar et al., 2011; Van Teijlingen and Hundley, 2002). Therefore, the pilot study will improve the survey design and increase the likelihood of success of the main study (Van Teijlingen and Hundley, 2002). Generally, in pilot studies, 30 to 50 responses are obtained and examined for getting useful information to refine the survey instrument prior to the full-scale study (Caspar et al., 2011).

The researcher conducted the pilot study with 30 respondents from the target population of NGOs in order to ensure the adequacy and credibility of the survey instrument and ensure that the research protocols and methods could work well (Thabane et al., 2010; Lancaster et al., 2004; Teijlingen, and Hundley, 2001). The pilot study indicated convincingly the reliability and validity of the survey instrument. Reliability examines the internal consistency of the survey instrument and the Cronbach alpha measure is commonly applied to assess the reliability (De Vaus, 1993; Nunnally, 1978). Validity examines the accuracy of measurement of the survey instrument (De Vaus, 1993) and the researcher applied communality values to

check the validity of this initial pilot study (Anastasiadou, 2011). The pilot study results show (Reliability – Appendix 7, Communality values – Appendix 8) all latent Cronbach alpha values are greater than the standard value of 0.7 (Cronbach, 1951) and Communality values of each indicator are greater than 0.50 (Burton and Mazerolle, 2011; Anastasiadou, 2011). Therefore, the reliability and validity results of pilot study ensured the survey instrument is appropriate to proceed to the final data collection.

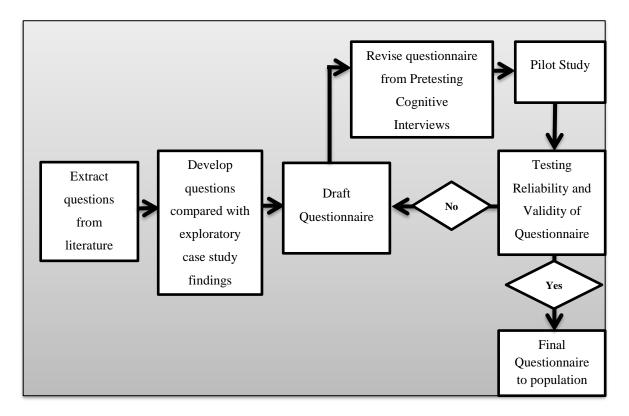


Figure 5-1: Questionnaire Development Process

5.3.1. Final Survey Instrument

Sri Lanka is multilingual country (English, Tamil and Sinhala); therefore, the survey questionnaire is prepared in three languages: English, Tamil and Sinhala (See Appendices 9a, 9b and 9c, respectively) to help participants answer the questions more appropriately and more comfortably (Jonasson, 2012). The survey instrument consists of 42 questions to assess PM resources and project success of NGOs. The survey instrument is divided into two parts: Part 1 consists of 30 questions to assess PM resources; and Part 2 consists of 12 questions to

assess project success of NGOs. In addition to that, six questions were used to collect demographic information of respondents.

PM resources comprise three divisions: Team PM Resource, Organisational PM Resource and Collaborative Social PM Resource, and each division consists of ten questions. The project success section is comprised by three divisions: PM success, Project success, NGO success, and each division consists of four questions. Further, the demographic information includes type of organisation, age of respondent, experience in NGO projects, type of project, sex and education. A seven-point Likert scale is used for this study, as it can best assess the study variables (Judgev, 2006a) and is recommended for increasing the quality of data characteristics: having a longer discrete scale acts slightly more like a continuous scale, and this permits to effectively performing statistical parametric and factor analysis (Preston and Colman, 2000; Hinkin, 1998).

5.4. Descriptive Statistics of Construct Items

Descriptive statistics help to summarise and describe the survey data. It describes the central tendency, dispersion and normal distribution of survey data as explained in the quantitative methods chapter (section 3.6.4.1). This section comprises of two sub-sections. The first sub-section presents the percentage of respondents reported on the constructs of PM resource and project success. The second sub-section presents central tendency, mean, median and mode (Mazzocchi, 2008), Standardised deviations (Chow and Shao, 2002) and univariate normality: skewness and kurtosis (Looney, 1995) of the study variables. The latent variables consist of exogenous variables: Team PM resource, Organisational PM resource and Collaborative social PM resource and endogenous variables: PM success, project success and NGO success.

5.4.1. Valid Percentage of Respondents on PM Resource and Project Success

5.4.1.1. Team PM Resource

Team PM Resource comprises ten items. Table 5-2 presents the valid percentage of respondents reported on each construct of team PM resource. The highest percentage of respondents reported in each construct is as follows: casual conversations and informal meetings (Agree: 28.2%), brainstorming sessions (Agree: 29.5%), field visits (Somewhat

agree: 28%), on-the-job training (Agree: 27.3%), job shadowing and mentoring (Agree: 30.9%), success and failures stories (Agree: 31.1%), team cohesion and trust (Agree: 27.3%), team values (Agree: 28.6%), team PM expertise (Somewhat agree: 30.9%), and team best PM practices (Somewhat agree: 30.9%).

Overall, less than 1% of total respondents reported that they "strongly disagree" with team PM resource of NGOs while 11.96% respondents "disagree and somewhat disagree". However, the majority of respondents (54.13%) reported they either "agree or somewhat agree", while 17.39% of respondents "strongly agree" with applications of elements of team PM resources.

Toom DM Deservess	Valid Percentage of Respondents (Out of 100%)							
Team PM Resources	1	2	3	4	5	6	7	
Casual Conversations and Informal Meetings	4	8.7	9.6	16.3	20.4	28.2	12.8	
Brainstorming Sessions	0.7	4.7	7.8	17.4	26.6	29.5	13.2	
Field Visits	0.9	2.2	6.7	10.5	28.0	27.3	24.4	
On-the-job Training	2.0	5.1	11.9	17.4	17.2	27.3	19.0	
Job Shadowing and Mentoring	0.0	3.6	6.9	15.9	26.8	30.9	15.9	
Success and Failure Stories	0.2	1.8	5.1	11.2	25.7	31.1	24.8	
Team Cohesion and Trust	0.4	3.8	5.8	17.4	24.2	27.3	21.0	
Team PM Values	0.9	3.1	6.9	17.9	26.0	28.6	16.6	
Team PM Expertise	0.2	5.1	9.4	16.6	30.9	28.2	9.6	
Team Best PM Practices	0.4	3.1	8.3	14.5	28.9	28.2	16.6	
Total (Out of 100%)	0.97	4.12	7.84	15.51	25.47	28.66	17.39	

Note:

1 - Strongly disagree

2 - Disagree 6 - Agree

3 - Somewhat disagree

4 - Neither agree nor disagree

5 - Somewhat agree
 Table 5-2: Valid Percentage of Respondents (N=447)

7 - Strongly agree

5.4.1.2. Organisational PM Resource

Organisational PM resources comprise ten items. Table 5-3 presents the valid percentage of respondents reported on all constructs of organisational PM resources. The highest percentage of respondents reported on each construct is as follows: PM office (Agree: 32.7%), PM methodology, standards and process (Agree: 27.7%) and Somewhat agree: 27.7%), PM tools and techniques (Somewhat agree: 33.6%), PM information system (Agree: 25.7%), monitoring and evaluation mechanism (Agree: 31.5%), staff capacity-building programs (Agree: 29.1%), formal meetings for sharing knowledge (Agree: 29.1%), effective project communication system and technology (Somewhat agree: 29.1%), defined organisation PM culture (Somewhat agree: 29.5%), and supportive organisational leadership to PM (Agree: 28%).

Overall, only 1.09% of total respondents reported that they "strongly disagree", while 13.24% respondents "disagree and somewhat disagree". However, the majority of respondents (54.61%) reported either they "agree or somewhat agree", while 12.87% of respondents that they "strongly agree".

Organizational PM Pasauras	Vali	id Perce	ntage of	Respon	dents (O	ut of 10	0%)
Organisational PM Resources	1	2	3	4	5	6	7
PM Office	0.2	3.8	9.4	19.5	21.9	32.7	12.5
PM Methodology, Standards and Process	0.4	3.1	7.4	20.4	27.7	27.7	13.2
PM Tools and Techniques	0.7	3.8	8.5	18.6	33.6	25.5	9.4
PM Information System	2.7	10.1	16.3	19.9	15.4	25.7	9.8
Monitoring and Evaluation Mechanism	1.8	3.1	7.8	13.2	29.3	31.5	13.2
Staff Capacity-Building Programs	1.8	4.5	8.7	14.5	28.2	29.1	13.2
Formal Meetings for Sharing Knowledge	1.3	3.8	6.7	16.1	28.2	29.1	14.8
Effective Project Communication System and Technology	0.7	4.7	10.3	18.6	29.1	26.6	10.1
Defined Organisation PM Culture	0.4	3.8	8.3	17.7	29.5	28.2	12.1
Supportive Organisational Leadership to PM	0.9	3.6	4.7	17.2	25.3	28.0	20.4
Total (Out of 100%)	1.09	4.43	8.81	17.57	26.82	28.41	12.87

Note:

1 - Strongly disagree2 - Disagree3 - Somewhat disagree4 - Neither agree nor disagree5 - Somewhat agree6 - Agree7 - Strongly agree

Table 5-3: Valid Percentage of Respondents (N=447)

5.4.1.3. Collaborative Social PM Resources

Collaborative social PM resources comprise ten items. Table 5-3 presents the valid percentage of respondents reported on all constructs of collaborative social PM resource. The highest percentage of respondents reported on each construct is as follows: project advisory from government bodies (Somewhat agree: 23.9%), project advisory from donors (Agree: 28.9%), NGO intra and consortium meetings (Agree: 27.1%), official information releases (Neither agree nor disagree: 18.8%), joint projects formal interactions (Somewhat agree: 25.3%), joint projects informal interactions (Somewhat agree: 26.6%), networking with stakeholders (Somewhat agree: 29.1%), beneficiary connections in projects (Agree: 33.3%), project marketing events (Agree: 31.3%), and community of practice through social networks (Somewhat agree: 19.7%).

Overall, 24.73% of total respondents reported from "strongly disagree" to "somewhat disagree", while 18.55% respondents reported "neither agree nor disagree". However, the majority of respondents (56.72%) reported "somewhat agree" to "strongly agree".

Callaborative Social DM Deservoor		Valid Per	centage of	f Respond	ents (Out	of 100%))
Collaborative Social PM Resources	1	2	3	4	5	6	7
Project Advisory from Government Bodies	4.9	11.6	12.3	21.7	23.9	18.1	7.4
Project Advisory from Donors	1.8	4.9	7.6	17.0	24.8	28.9	15.0
NGO Intra and Consortium Meetings	2.0	7.8	11.4	20.6	23.7	27.1	7.4
Official Information Releases	7.8	17.2	23.3	18.8	13.6	15.7	3.6
Joint Projects Formal Interactions	4.5	8.7	12.8	17.4	25.3	25.1	6.3
Joint Projects Informal Interactions	3.4	9.4	12.8	19.7	26.6	21.0	7.2
Networking with Stakeholders	1.3	6.7	9.8	17.9	29.1	27.5	7.6
Beneficiary Connections in Projects	0.7	2.5	6.3	17.9	29.1	33.3	10.3
Project Marketing Events	2.0	2.7	9.6	15.0	26.4	31.3	13.0
Community of Practice through Social Networks	11.6	14.5	15.4	19.5	19.7	14.5	4.7
Total (Out of 100%)	4.0	8.6	12.13	18.55	24.22	24.25	8.25
Note:		•					

1 - Strongly disagree

5 - Somewhat agree

3 - Somewhat disagree 7 - Strongly agree

4 - Neither agree nor disagree

6 - Agree
 Table 5-4: Valid Percentage of Respondents (N=447)

2 - Disagree

5.4.1.4. Three Levels of Project Success

Table 5-5 shows the percentage of respondents reported on all three levels of projects success in NGOs. The highest percentage of respondents reported in each construct is as follows: in PM success, meeting scope (Agree: 36%), meeting quality (Agree: 34.2%), meeting time (Agree: 30.6%), and meeting budget (Agree: 29.8%); next, in project success, stakeholders' satisfaction (Agree: 40.5%), contribution to development objectives (Agree: 26.6%), project impacts (Agree: 30.2%), and project sustainability (Agree: 34.2%); and finally, in NGO success, contribution to NGOs' vision, mission & objectives (Agree: 33.1%), stakeholders rapport (Agree: 26.8%), NGO reputation (Agree: 37.8%), and NGO sustainability (Agree: 28.2%).

Overall, the majority percentage of respondents reported that they "agree" that their NGOs achieve PM success (32.65%), project success (32.88%), and NGO success (31.48%) and next to "agree", a high percentage of respondents reported that they "somewhat agree" to achieving PM success (27.08%), project success (22.55%), and NGO success (22.28%), while respondents reported "strongly agree" to achieving PM success (13.85%), project success (11.58%), and NGO success (17.63%). In addition, respondents reported "strongly disagree to somewhat disagree" to achieving PM success (10.15%), project success (14.78%), and NGO success (12.73%), while respondents reported "neither agree nor disagree" to achieving PM success (16.25%), project success (18.18%), and NGO success (15.88%).

		Valid Per	centage o	f Respond	lents (Out	of 100%)	
Levels of Project Success	1	2	3	4	5	6	7
PM Success							
Meeting Scope	0.2	1.8	5.4	16.3	26.0	36.0	14.3
Meeting Quality	0.7	0.7	6.5	17.4	28.0	34.2	12.5
Meeting Time	0.4	2.7	8.5	15.9	25.7	30.6	16.1
Meeting Budget	0.9	1.8	11.0	15.4	28.6	29.8	12.5
Total (Out of 100%)	0.55	1.75	7.85	16.25	27.08	32.65	13.85
Project Success							
Stakeholders Satisfaction	0.7	2.2	5.8	15.2	23.5	40.5	12.1
Contribution to Development Objectives	2.0	6.0	15.2	18.8	18.8	26.6	12.5
Project Impacts	1.8	6.9	8.7	22.4	23.3	30.2	6.7
Project Sustainability	0.9	2.9	6.0	16.3	24.6	34.2	15.0
Total (Out of 100%)	1.35	4.5	8.93	18.18	22.55	32.88	11.58
NGO Success							
Contribution to NGOs' Vision, Mission & Objectives	0.0	1.1	3.8	13.0	24.4	33.1	24.6
Stakeholders Rapport	2.2	7.8	12.8	16.1	19.5	26.8	14.8
NGO Reputation	0.0	1.1	6.5	14.5	21.3	37.8	18.8
NGO Sustainability	1.1	5.6	8.9	19.9	23.9	28.2	12.3
Total (Out of 100%)	0.83	3.9	8.0	15.88	22.28	31.48	17.63

Note:

Strongly disagree
 Somewhat agree

3 - Somewhat disagree7 - Strongly agree

4 - Neither agree nor disagree

5 - Somewhat agree 6 - Agree 7 - Strongly agree **Table 5-5: Valid Percentage of Respondents (N=447)**

2 - Disagree

5.4.2. Central Tendency and Univariate Normality of PM Resources and Project Success

5.4.2.1. Team PM Resources

Table 5-6 presents the mean, median; mode, standard deviation, skewness and kurtosis for all items. The mean scores of all constructs of team PM resources achieved good values, ranging between 4.76 (\pm 1.65) and 5.53 (\pm 1.24). This shows team resources are applied to a considerable level in NGOs. However, success and failure stories (mean score 5.53, \pm 1.24) and field visits (mean score 5.42, \pm 1.34) received high mean values while casual conversations and informal meetings (mean score 4.76, \pm 1.65) and team PM expertise (mean score 4.96, \pm 1.34) achieved lower mean values compared with the other items.

All items skewness and kurtosis values lie between -1 and +1. Therefore, the team PM resource items closely meet univariate normality (Garson, 2012).

Team PM Resources	Mean	Median	Mode	Std. Deviation	Skewness	Kurtosis
Casual Conversations and Informal Meetings	4.76	5.00	6.00	1.65	-0.58	-0.55
Brainstorming Sessions	5.06	5.00	6.00	1.36	-0.60	-0.12
Field Visits	5.42	6.00	5.00	1.34	-0.80	0.37
On-the-job Training	5.01	5.00	6.00	1.57	-0.53	-0.57
Job Shadowing & Mentoring	5.22	5.00	6.00	1.29	-0.57	-0.21
Success and Failure Stories	5.53	6.00	6.00	1.24	-0.76	0.25
Team Cohesion and Trust	5.27	5.00	6.00	1.37	-0.60	-0.16
Team PM Values	5.17	5.00	6.00	1.34	-0.61	0.01
Team PM Expertise	4.96	5.00	5.00	1.31	-0.53	-0.23
Best PM Practices	5.19	5.00	5.00	1.32	-0.58	-0.10

Table 5-6: Team PM Resources (N 447)

5.4.2.2. Organisational PM Resources

Table 5-7 reports the descriptive results of the measured items of this construct. The items of organisational PM resources achieved average mean scores ranging from 4.52 (\pm 1.62) to 5.28 (\pm 1.36). The highest mean score item was supportive organisational leadership to PM (mean score 5.28, \pm 1.36). However, three items are comparably achieved lower mean scores, namely, PM information system (mean score 4.52, \pm 1.62), effective project communication system and technology (mean score 4.91, \pm 1.34), PM tools and techniques (mean score 4.95, \pm 1.27). The skewness and kurtosis values of all constructs lie between -1 and +1. Therefore, the organisational PM resource items closely meet univariate normality (Garson, 2012).

Organisational PM resources	Mean	Median	Mode	Std. Deviation	Skewness	Kurtosis
PM Office	5.07	5.00	6.00	1.33	-0.50	-0.45
PM Methodology, Standards and Process	5.08	5.00	6.00	1.29	-0.46	-0.16
PM Tools and Techniques	4.95	5.00	5.00	1.27	-0.52	0.07
PM Information System	4.52	5.00	6.00	1.62	-0.24	-0.93
Monitoring and Evaluation Mechanism	5.13	5.00	6.00	1.36	-0.83	0.50
Staff Capacity-Building Programs	5.03	5.00	6.00	1.42	-0.72	0.10
Formal Meetings for Sharing Knowledge	5.12	5.00	6.00	1.36	-0.72	0.26
Effective Project Communication System and Technology	4.91	5.00	5.00	1.34	-0.48	-0.26
Supportive Organisation Culture to PM	5.05	5.00	5.00	1.30	-0.53	-0.12
Supportive Organisational Leadership to PM	5.28	5.00	6.00	1.36	-0.70	0.17

 Table 5-7: Organisational PM resources (N-447)

5.4.2.3. Collaborative Social PM Resources

Table 5-8 reports the summary of descriptive statistics of this construct. The elements of collaborative social PM resources received middling mean scores ranging between 5.13 (± 1.22) and 3.74 (± 1.63). The highest score item was beneficiary connections in projects (mean score 5.13, ± 1.22). The lowest scored items were official information releases (mean score 3.74, ± 1.63) and community of practice through social networks (mean score 3.83, ± 1.73). The skewness and kurtosis values of all constructs lie between -1 and +1. Therefore, the organisational PM resource items closely meet univariate normality (Garson, 2012).

Collaborative Social PM Resources	Mean	Median	Mode	Std. Deviation	Skewness	Kurtosis
Project Advisory from Government Bodies	4.32	4.00	5.00	1.60	-0.29	-0.70
Project Advisory from Donors	5.05	5.00	6.00	1.45	-0.68	-0.01
NGO Intra and Consortium Meetings	4.67	5.00	6.00	1.47	-0.48	-0.48
Official Information Releases	3.74	4.00	3.00	1.63	0.16	-0.92
Joint Projects Formal Interactions	4.51	5.00	5.00	1.56	-0.50	-0.55
Joint Projects Informal Interactions	4.49	5.00	5.00	1.52	-0.40	-0.55
Networking with Stakeholders	4.80	5.00	5.00	1.39	-0.59	-0.21
Beneficiary Connections in Projects	5.13	5.00	6.00	1.22	-0.68	0.36
Project Marketing Events	5.07	5.00	6.00	1.40	-0.74	0.22
Community of Practice through Social Networks	3.83	4.00	5.00	1.72	-0.07	-0.99

 Table 5-8: Collaborative Social PM Resources (N 447)

5.4.2.4. Project Success

Project success is divided into three levels: PM success, project success and NGO success and four items were used to evaluate each level of project success. Table 5-9 presents the descriptive results of all items.

All items of PM success assessing factors achieved high mean values: meeting scope 5.31 (± 1.19), meeting quality 5.24 (± 1.18), meeting time 5.20 (± 1.31), and meeting budget 5.09 (± 1.30).

Next, in project success, stakeholders' satisfaction (mean score 5.28, ± 1.23) and project sustainability (mean score 5.28, ± 1.30) achieved high mean values, while contribution to development objectives (mean score 4.76, ± 1.54) and project impacts (mean score 4.76, ± 1.41) scored lower mean values.

Finally, in NGO success, contribution to NGOs' vision, mission and objectives (mean score 5.58, ± 1.17) and NGOs reputation (mean score 5.45, ± 1.20) achieved high mean values. Stakeholders' rapport (mean score 4.82, ± 1.60) and NGO sustainability (mean score 4.94, ± 1.41) scored lower mean values. All items of skewness and kurtosis values lie between -1 and +1. Therefore, all levels of project success items closely meet univariate normality (Garson, 2012).

Types of Project Success	Mean	Median	Mode	Std. Deviation	Skewness	Kurtosis
PM Success						
Meeting Scope	5.31	6.00	6.00	1.19	-0.64	0.13
Meeting Quality	5.24	5.00	6.00	1.18	-0.60	0.28
Meeting Time	5.20	5.00	6.00	1.31	-0.58	-0.17
Meeting Budget	5.09	5.00	6.00	1.30	-0.56	-0.08
Project Success						
Stakeholders Satisfaction	5.28	6.00	6.00	1.23	-0.86	0.58
Contribution to Development Objectives	4.76	5.00	6.00	1.54	-0.37	-0.71
Project Impacts	4.76	5.00	6.00	1.41	-0.59	-0.25
Project Sustainability	5.23	5.00	6.00	1.30	-0.76	0.33
NGO Success						
Contribution to NGOs' Vision, Mission & Objectives	5.58	6.00	6.00	1.17	-0.64	-0.06
Stakeholders Rapport	4.82	5.00	6.00	1.60	-0.47	-0.70
NGO Reputation	5.45	6.00	6.00	1.20	-0.64	-0.24
NGO Sustainability	4.94	5.00	6.00	1.41	-0.53	-0.30

Table 5-9: Project Success (N 447)

5.5. Independent Sample t- test of Local and International NGOs.

The independent sample t- test is performed for local and international NGOs to compare whether the population mean values are equal or not (Hinkle et al., 1988). Table 5-10 shows the results of the independent sample t- test of all variables of PM resources. The results explain that all the variables' (excluding two variables) mean values are not significantly different (p values are greater than 0.05) between local and international NGOs. Therefore,

	t-test for Equality of Means					
	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	
Casual Conversations & Informal Meetings	1.408	445	.160	.254	.180	
Brain Storming Sessions	1.073	445	.284	.165	1.073	
Field Visits	3.596	445	.000	.521	3.596	
On-the-Job training	1.096	445	.274	.189	1.096	
Job Shadowing and Mentoring	.900	445	.369	.127	.900	
Success and Failure Stories	.957	445	.339	.130	.957	
Team Cohesion and Trust	.404	445	.686	.060	.404	
Strong PM Discipline	.478	445	.633	.070	.478	
Team PM Expertise	1.338	445	.182	.192	1.338	
Best PM Practices	1.809	445	.071	.262	1.809	
PM Office	.735	445	.463	.107	.735	
PM Methodology, Standards and Process	.059	445	.953	.008	.141	
PM Tools and Techniques	.608	445	.544	.084	.139	
PM Information System	3.329	445	.001	.583	.175	
Monitoring and Evaluation Mechanism	1.283	445	.200	.191	.149	
Staff Capacity Building programs	.984	445	.326	.153	.155	
Formal Meetings for Sharing Knowledge	.393	445	.694	.059	.150	
Effective Project Communication	1.459	445	.145	.214	.146	
Supportive Orgn Culture to PM	129	445	.897	018	.142	
Supportive Leadership to PM	.064	445	.949	.009	.149	
Project Advisory from Government Bodies	.445	445	.657	.078	.175	
Project Advisory from Donors	.204	445	.838	.032	.159	
NGOs Intra and Consortium Meetings	.556	445	.578	.090	.162	
Official Information Releases	1.325	445	.186	.236	.178	
Joint projects formal interactions	1.339	445	.181	.229	.171	
Joint Projects informal interactions	223	445	.823	037	.167	
Networking with stakeholders	.869	445	.385	.137	.158	
Beneficiary connections in Projects	1.248	445	.213	.167	.133	
Project Marketing events	1.365	445	.173	.212	.155	
Community of practice through Social networks	1.185	445	.237	.223	.188	

it is highly appropriate to integrate the data of local and international NGOs for further multivariate analysis.

 Table 5-10: Independent Sample t- test of Local and International NGOs

5.6. Conclusion

This chapter explained the operationalisation of variables, survey instrument development process and descriptive statistics and univariate normality of the survey data. The operational variables table indicated the variables of PM resources and project success. As exploratory case study identified the three variables: team PM resources, organisational PM resources and collaborative social PM resources and project success variables. PM success, project success and NGO success are under examination in the survey study using the explored indicators and developed measures.

The researcher applied a systematic process to develop the survey instrument with the help of validated survey instruments of previous researchers and exploratory case study findings to meet the contexts of NGOs and settings of Sri Lanka. In addition, pretesting and pilot studies led to improve the survey instrument to meet the survey objectives. The descriptive statistics of each PM resource confirmed that each construct was applied in NGOs as revealed from the exploratory case study. Therefore, it ensured the good match of qualitative and quantitative findings of each latent factor. In addition, univariate normality was met for each exogenous and endogenous latent factor and independent sample t- test explains there is not significant difference of mean values between local and international NGOs. Therefore, without elimination of any data, the next step of model specification and testing was performed by using sophisticated statistical techniques, as explained in the next chapter.

CHAPTER SIX QUANTITATIVE DATA ANALYSIS

6.1. Introduction

The previous chapter explained survey study implementation, described the survey data, and explained the descriptive statistics and univariate normality of sample data. Further, it ensured the data met the initial requirements of univariate normality for exogenous and endogenous latent factors and recommended further inferential statistics to reach the conclusions of the survey study by using advanced statistical techniques. As discussed in the research methods chapter, the study is exploratory in nature and the qualitative case study explored PM elements, identified PM resources and proposed the conceptual model for this survey study. Therefore, multivariate analysis techniques were applied to analyse the survey data.

This chapter on quantitative data analysis contains a critical examination of the assembled group data for studying the dimensions of PM resources and project success and tests and refines the conceptual model developed in the exploratory case study. The statistical packages SPSS 16 and AMOS 21 were used to analyse the data. The three key multivariate analysis techniques are used in this study: Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM). These techniques helped to identify the key elements of PM resources and project success and build a validated model to explain the associations between PM resources and project success.

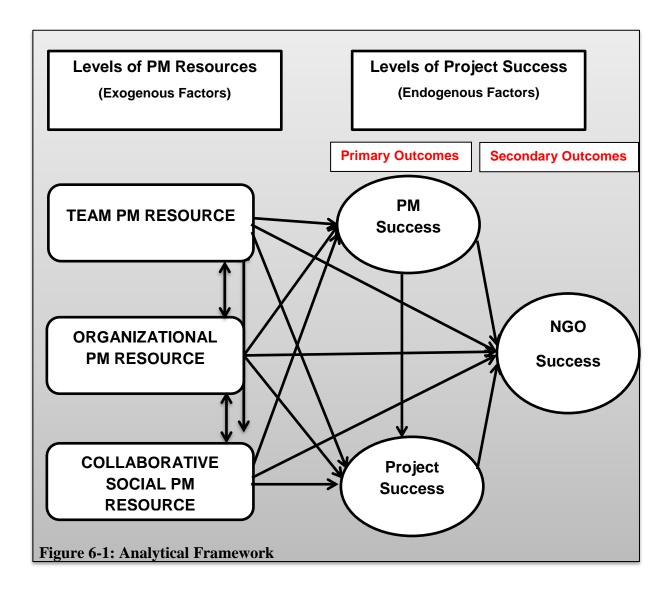
This chapter is organised in seven sections. Section 6.2 presents the analytical framework of the study. Section 6.3 provides the results of the Exploratory Factor Analysis (EFA). Section 6.4 presents the findings of the Confirmatory Factor Analysis (CFA). Section 6.5 presents the findings of the Structural Equation Modelling (SEM) and compares the findings across the different estimation methods; subsequently, section 6.6 explains the results of the hypothesis tested for this study; and finally, section 6.7 summarises the key results of this chapter.

6.2. Analytical Framework

The literature and present exploratory case study findings directed to draw the analytical framework for this study. Before moving on to estimate the models, the analytical framework is illustrated again in figure 6-1. The development and estimation of models follows three step process using EFA, CFA and SEM.

EFA is performed to identify the best items of PM resources identified in the exploratory case study. It tests the initial adequacy of the data to go forward to the estimation models. CFA is employed to confirm the analytical frameworks in three steps. The first step is performed to confirm the three levels of PM resources, which are the exogenous factors: team, organisational and collaborative social PM resources. The second step is performed to confirm the three levels of project success, which are the endogenous factors: PM success, project success and NGO success. Finally, the researcher analyses the fittings of the models by connecting both exogenous and endogenous factors.

During the SEM step, the structural model shows the research hypotheses by linking the PM resources and project success with causal relationships. During the CFA step, the measurement model is specified including all latent factors indicating non-causal relationships. The purpose of CFA is to ensure the latent factors are adequate in examining the derived concepts while SEM is used to investigate the causal relationships between the latent factors. In this stage, generated all 19 hypotheses are tested.



6.3. Exploratory Factor Analysis (EFA)

Factor analysis is a set of techniques for determining the extent to which indicators that are related can be grouped together so that they can be treated as one combined variable or factor rather than as a series of separate indicators (Cramer, 2003). Factor analysis enables researchers to gain a firmer grasp in developing conceptual foundations (Lewis-Beck, 1994). The researcher used exploratory factor analysis to select the best indicators for each factor of PM resource which were identified in the exploratory case study.

Izquierdo et al. (2014) suggest researchers should carry out a preliminary analysis of the metric quality of the items, to subject the most adequate items to EFA. The researcher can decide whether to eliminate each item by analysing the factor loadings, Cronbach's alpha,

and measures of sampling adequacy such as KMO and Bartlett's test of Sphericity (Izquierdo et al., 2014). Factor loadings are the correlations between the original indicators and the factors, and these indicators with factor loadings values greater than 0.55 are typically considered as good items (Comrey and Lee, 1992). Cronbach alpha evaluates the reliability of the underlying construct; a reliability value with the standard value alpha of 0.7 is advocated by Cronbach (1951).

The Kasier–Meyer–Olkin (KMO) measure of sampling adequacy indicates whether the distribution of value is adequate for conducting Factor Analysis (FA). Bartlett's test of Sphericity is a measure of the multivariate normality of the set of distributions. In addition, it tests whether the correlation matrix conducted within the FA is an identity matrix where FA would be meaningless with an identity matrix. A significance value less than 0.05 indicates that the data does not produce an identity matrix and are thus appropriately multivariate normal and acceptable for FA (George and Mallery, 2003). According to Field (2005), a value over 0.8 is considered as "great", and above 0.9 is "superb".

The researcher has identified three dimensions of PM resources from the exploratory case study. Those dimensions are team PM resources, organisational PM resources and collaborative social PM resources. After identification of these dimensions, the survey questionnaire was prepared to evaluate each individual resource separately. Hence, the researcher performed EFA, Principal Axis Factoring (PAF) method for each proposed factor separately in order to identify the best number of items for each factor (Field, 2005). Many social scientists apply PAF as it is focused on shared variance and unique to individual measurements (Warner, 2007). In this study, an unambiguous single-factor solution arose naturally from the Kaiser Constraint default. It confirms the better match of qualitative and quantitative findings.

6.3.1. Item (Indictor) Selection of Team PM Resource

Ten items (Q1-Q10) are included in team PM resource. EFA led to retention of one factor as this confirmed the identified ten items in the exploratory case study is appropriately represented in team PM resource. The eight best items have been selected by performing EFA. Table 6-1 contains the results of EFA.

In the first step, items Q1 and Q4 were eliminated as the factor loadings of Q1 and Q4 are less than 0.55. EFA was performed for a second time. During the second run, the researcher identified eight good items with factor loadings greater than 0.55. The Cronbach's alpha value for these eight items is 0.899, which is greater than the standard value of 0.7. The total variance explained by the factor is 59%. Kaiser–Meyer–Olkin Measure of Sampling Adequacy is 0.917 which indicates sampling adequacy is superb. The data within this factor returned a significance value of less than 0.001, which indicates that the data is acceptable for FA.

Factor Question			ep 1 [tems)		ep 2 tems)
Number	Items	Loadings	Cronbach Alpha if item deleted	Loadings	Cronbach Alpha if item deleted
Q1	Casual conversations and Informal Meetings	0.395	0.892	Item el	iminated
Q2	Brainstorming Sessions	0.688	0.869	0.685	0.890
Q3	Field Visits	0.639	0.871	0.610	0.896
Q4	On-the-job training	0.471	0.885	Item el	iminated
Q5	Job Shadowing and Mentoring	0.629	0.874	0.631	0.894
Q6	Success and Failure Stories	0.759	0.866	0.764	0.884
Q7	Team Cohesion and Trust	0.771	0.865	0.775	0.883
Q8	Team PM Values	0.803	0.863	0.814	0.879
Q9	Team PM Expertise	0.718	0.868	0.721	0.887
Q10	Best PM Practices	0.809	0.862	0.817	0.879
		5.124 51.241 0.920	0.883	4.722 59.024 0.917	0.899

Table 6-1: Factor Matrix: Team PM Resource of NGOs

6.3.2. Best Item (Indictor) Selection of Organisational PM Resource

Ten items, Q11 through Q20, were used to assess organisational PM resource. EFA led to extraction of one factor as identified in the exploratory case study. Table 6-2 shows the results of EFA.

Only one item, Q14, had a factor loading value less than 0.55. Therefore, item Q14 was eliminated. The remaining nine indicators were selected to proceed to the next stage of CFA. The Cronbach's alpha value for these nine items is 0.916. The total variance explained by this factor is 60.5%. The Kaiser–Meyer–Olkin Measure of Sampling Adequacy value of 0.939 shows sampling adequacy is excellent and the significance value of less than 0.001 indicates that the data is acceptable for FA.

Factor Question			ep 1 Items)		ep 2 tems)
Number	Items	Loadings	Cronbach Alpha if item deleted	Loadings	Cronbach Alpha if item deleted
Q11	PM Office	0.731	0.896	0.739	0.907
Q12	PM Methodology, Standards and Process	0.771	0.894	0.774	0.905
Q13	PM Tools and Techniques	0.799	0.892	0.797	0.903
Q14	PM Information System	0.432	0.916	Item El	iminated
Q15	Project Monitoring and Evaluation Mechanism	0.692	0.898	0.687	0.910
Q16	Staff Capacity-Building Programs	0.688	0.898	0.686	0.910
Q17	Formal meetings for Sharing Knowledge	0.722	0.896	0.727	0.907
Q18	Effective Project Communication System and Technology	0.740	0.895	0.741	0.906
Q19	Defined organisational PM culture	0.756	0.895	0.764	0.905
Q20	Supportive Leadership to PM	0.773	0.892	0.760	0.905
		5.605 56.055 0.936	0.907	5.404 60.050 0.939	0.916

 Table 6-2: Factor Matrix: Organisational PM Resource of NGOs

6.3.3. Best Item (Indictor) Selection of Collaborative Social PM Resource

Ten items, Q21 through Q30, were used to assess collaborative social PM resource. EFA led to retention of one factor. The results of EFA are reported in table 6-3.

In the first step of EFA analysis, two indicators, Q24 and Q30, were eliminated as the factor loadings were less than 0.55. The remaining eight items produced values greater than 0.55. Thus, these items were selected as best factors. The factor's Cronbach's alpha value is 0.854. The variance explained by this factor is 50.1%. The Kaiser–Meyer–Olkin Measure of sampling adequacy is 0.862 which shows sampling adequacy is good and the significance value of less than 0.001 indicates that the data is suitable for FA.

Factor Question			ep 1 Items)		ep 2 tems)
Number	Items	Loadings	Cronbach Alpha if item deleted	Loadings	Cronbach Alpha if item deleted
Q21	Project Advisory from Government Bodies	0.561	0.825	0.571	0.845
Q22	Project Advisory from Donors	0.695	0.814	0.699	0.831
Q23	NGOs Intra and Consortium Meetings	0.687	0.812	0.678	0.833
Q24	Q24 Official Information Releases		0.850	Item El	iminated
Q25	Joint Projects Formal Interactions	0.577	0.821	0.567	0.845
Q26	Joint Projects Informal Interactions	0.612	0.820	0.615	0.839
Q27	Networking with Stakeholders	0.725	0.812	0.725	0.829
Q28	Beneficiary Integration in Projects	0.675	0.817	0.676	0.835
Q29	Project Marketing Events	0.706	0.813	0.704	0.832
Q30 Community of practice through online social networks		0.442	0.837	Item El	iminated
		4.310 43.102 0.873	0.837	4.011 50.133 0.862	0.854

Table 6-3: Factor Matrix: Collaborative Social PM Resource of NGOs

6.4. Confirmatory Factor Analysis (CFA)

The step two procedure of CFA was used after identifying the best items for each factor through EFA. CFA is known as the measurement model because it establishes the good set of items that represent the measurement of underlying latent factors (Bryne, 1994). The researcher used CFA to test whether the data fits the proposed hypothesised structure of PM resources and project success (Cramer, 2003). This helps the researcher to ensure the

measures of construct are consistent with his understanding of the nature of construct derived from the exploratory case study.

The goodness- of- fit model is compared by using several measures. The chi-square (X²) test is the first measure for fitting models. Hoelter notes the chi-square is a reasonable fit with about 75 to 200 cases but for models with greater than 200 cases, chi-square is statistically significant as the chi-square is found to be sensitive to an increase in sample size as well as the number of observed indicators (Hair et al., 2006). The ratio of x^2 to its degrees of freedom (x^2 / df), is used, with a maximum of not more than 3.0 being indicative of an acceptable fit between the hypothetical model and the sample data (Carmines and McIver, 1981).

In addition, the chi-square test is affected by the size of the correlations in the model, the larger the correlations, the poorer the fit (Kenny and McCoach, 2003). Therefore, alternative measures of fit indices have been considered to measure the model fitting. The researcher created four alternatives models to identify the best model for to explain well the data of PM capacities and project success. Hair et al. (2006) suggest using fit indices from various categories to test the alternative models which are absolute fit indices, incremental fit indices and parsimonious fit indices.

Absolute fit indices; Goodness- of- Fit Index (GFI), Root Mean Square Error of Approximation (RMSEA), and Standardised Root Mean Square Residual (SRMR) were used to measure how well the proposed model reproduces the observed data (Kline, 2005; Byrne, 2001). GFI estimates the proportion of variance that is accounted for by the estimated population covariance (Tabachnick and Fidell, 2007; Jöreskog and Sörbom, 1996), while RMSEA estimates how well the chosen parameter fits with the covariance matrix (Byrne, 2001; Steiger, 1990; Steiger and Lind, 1980) and SRMR represents the average values across all standardised residuals (Hu et al., 1995; Jöreskog and Sörbom, 1989).

Incremental fit indices – Normed Fit Index (NFI), Tucker Lewis Index (TLI), and Comparative Fit Index (CFI) – were applied to assess how well a specified model fits relative to an alternative baseline model (McDonald and Ho, 2002; Hu and Bentler, 1999). NFI is calculated by dividing the difference between the chi-square of the null model and target

model by chi-square model (Hu and Bentler, 1998). CFI is the revised model of NFI and compares the performance of the target model with the baseline model in which the baseline model assumes zero correlation between all observed variables (Kline, 2005; Bentler, 1990). TLI is similar to NFI but adjust for the degrees of freedom (Hu and Bentler, 1999; Tucker and Lewis, 1973).

Finally, parsimonious fit indices – Adjusted Goodness -of- Fit Index (AGFI), and Parsimonious Normed Fit Index (PNFI) – are accounted which are similar to the absolute fit indices but take into account the model's complexity (Bollen and Long, 1993; Mulaik et al., 1989). AGFI and PNFI indices have been developed for adjusting the degrees of freedom of GFI and NFI, respectively (Mulaik et al., 1989). However, AGFI is not very sensitive to losses in degrees of freedom for models with moderately high degrees of freedom (Mulaik et al., 1989), while PNFI is adjusted with losses of degree of freedom (Mulaik et al., 1989).

Indices	Cut-off value	Authors
Absolute Measures		
Chi-square (x ²)		
Degree of freedom (df)		
Normed Chi-square (χ^2/df)	<3	Wheaton, 1987; Carmines and McIver, 1981
Goodness- of- Fit Index (GFI)	0.9	Byrne, 1994
Root Mean Square Error of Estimation (RMSEA)	<0.08	MacCallum et al. (1996)
P-close	>0.05	MacCallum et al. (1996)
Standardised Root Mean Square Residual (SRMR)	<0.08	Hu and Bentler (1999)
Incremental Measure		
Normed Fit Index (NFI)	0.9	Byrne, 1994; Bentler and Bonnet (1980)
Tucker Lewis Index (TLI)	0.9	Hu and Bentler (1999)
Comparative Fit Index (CFI)	0.9	Hu and Bentler (1999)
Parsimony Measure		
Adjusted Goodness- of- Fit Index (AGFI)	>0.5	Mulaik et al. (1989)
Parsimonious Normed Fit Index (PNFI)	>0.5	Mulaik et al. (1989)

The summary of acceptable threshold levels of goodness -of- fit indices listed in table 6-4.

Table 6-4: Summary of Acceptable Thresholds

6.4.1. Assessment of Construct Validity

Model fit can be done in two steps (Hair et al., 2006). The first is the overall assessment of model fit which is discussed in section 6.4. The second is the construct validity that investigates how well the concepts are designed for measurement. The objective of the measurement model extends beyond examining the relationships between the latent factors to warranting that the individual latent constructs are adequate in investigating the concepts that they are intended to (Hair et al., 2006; Fornell and Larcker, 1981).

Kline (2005) notes convergent validity and discriminant validity are important measures to estimate a construct. In general, the construct validation process participates in deriving the measurement model with the presence of both convergent and discriminant validity (Liao et al., 2007). Convergent validity is the extent to which items of the latent construct share a proportion of variance (Hair et al., 2006; Anderson and Gerbing, 1988). This is measured by considering factor loadings, construct reliability, and average variance extracted (Hair et al., 2006; Fornell and Larcker, 1981).

Individual item factor loading is acceptable if it is greater than 0.5 and it is a very good indicator if it exceeds 0.7 (Peng and Lai, 2012; Hair et al., 2010). The next criterion of construct reliability (CR) is the indicative that all of the indicators consistently represent the same latent factor, and this threshold value is 0.7 (Hair et al., 2010). Finally, the average variance extracted (AVE) estimate is the average amount of variation that a latent construct is able to explain in the observed variables, to which it is theoretically related, and this threshold value is 0.5 (Hair et al., 2010; Taylor and Hunter, 2003). CR and AVE were calculated with Validity Master (Microsoft Office Excel 2010) (Fornell and Larcker, 1981).

Farrell (2010) calls for a review of discriminant validity assessment in organisational studies. According to Bove at al. (2009, p.702), "Discriminant validity is assessed by comparing the shared variance between each pair of constructs against the average of the AVEs for these two constructs". It is the extent to which a latent variable discriminates from other latent variables. Fornell and Larcker (1981) present a method for assessing the discriminant validity of two or more factors. In this model, a researcher compares the AVE of each construct with the shared variance between constructs. If the AVE for each construct is greater than its

shared variance with any other construct, discriminant validity is supported (Hair et al., 2010; Fornell and Larcker, 1981). Kline (2005) explains that if the correlation between latent factors is greater than 0.85 or greater than 0.90, both latent factors are not sufficiently distinct from one another.

6.4.2. Step 1: Measurement Model Specifications for PM Resources.

In this section, the researcher compares the three alternative models of PM resources and finally identifies the best model of PM resources based on measurement results. Three latent factors are drawn, namely, team PM resources (TPR), organisational PM resources (OPR) and collaborative social PM resources (CPR).

6.4.2.1. CFA Model 1: Three Levels of PM Resources

The CFA Model 1 is drawn based on the findings of EFA, which identified the best indicators for each factor. The first factor is team PM resource which consists of eight indicators. The second factor is organisational PM resource which consists of nine indicators. Finally, the third factor, collaborative social PM resource, consists of eight indicators.

CFA was performed with all the identified indicators. The results of absolute fit indices indicate that normed chi-square (x^2 / df) value is 3.140, GFI is 0.859, RMSEA is 0.069, p-close value is less than 0.05, and SRMR is 0.049. Next, incremental indices results are: NFI is 0.869, TLI is 0.896, and CFI is 0.909. At final, the parsimonious fit indices results demonstrate that AGFI is 0.831 and PNFI is 0.791. The results of these three indices demonstrate poor fit of model (Hu and Bentler, 1999; Byrne, 1994; Wheaton, 1987). All the indicators have statistically significant loadings on the factors. AVE values for the latent factors of TPR and OPR are satisfactory and all latent CR values are adequate (Hair et al., 2010).

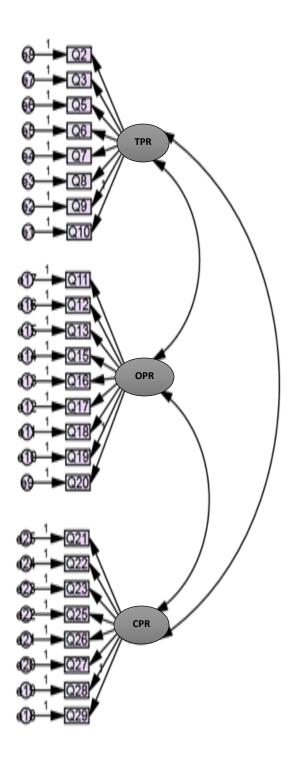


Figure 6-2: CFA Model 1

Construct	Item	Standardised			
		TPR	OPR	CPR	
	Q2	0.67			
	Q3	0.63			
	Q5	0.62			
Team PM	Q6	0.74			
Resource (TPR)	Q7	0.76			
(11K)	Q8	0.81			
	Q9	0.76			
	Q10	0.83			
	Q11		0.73		
	Q12		0.77		
	Q13		0.79		
Organisational	Q15		0.70		
PM Resource	Q16		0.69		
(OPR)	Q17		0.72		
	Q18		0.73		
	Q19		0.77		
	Q20		0.77		
	Q21			0.53	
	Q22			0.70	
Collaborative	Q23			0.65	
Social PM	Q25			0.56	
Resource	Q26			0.60	
(CPR)	Q27			0.72	
	Q28			0.72	
	Q29			0.72	
Average		0.53	0.55	0.43	
Variance					
Extracted (AVE)					
Construct		0.90	0.92	0.86	
Reliability					
(CR)	x2. 05	A 1 JE	- 272 ~2	/ 4f	
Absolute Fit	bsolute Fit $x^2 = 854.1, df = 272, x^2$ 3.140, GFI = 0.859,				
Index			59, P-clo	ose <	
	0.05, SRMR = 0.051				
Incremental			$\Gamma LI = 0.$	899,	
Fit Index Parsimony Fit	CFI =				
Index	AGFI	= 0.831	, PNFI =	= 0.791	

 Table 6-5: Estimates for CFA Model 1

6.4.2.2. Elimination of Items

Hair et al. (2006) indicate the statistical significance of an item alone does not indicate that the item contributes to the model fit adequately. The factor loadings should be greater than 0.7 and at least 0.5 is acceptable for model consideration (Hair et al., 2010; Byrne, 2010). However, the decision to remove items from the model should be made with consideration of the standardised residual covariance (SRC) values reference with theoretical sides (Hair et al., 2010; Schumaker and Lomax; 2004). There are certain ranges proposed to interpret the standardised residual covariance matrix. SRC values greater than 2.58 are considered to be large (Byrne, 2010) and values greater than 1.96 or 2.58 do not explain the model well (Schumaker and Lomax, 2004).

Table 6-6 shows the elimination of items consisting of high SRCs values in CFA Model 1. The indicators with high SRC values, greater than 1.96, were noted for the eliminations. In the first factor, items Q3, and Q5; in the second factor, items Q15, Q16 and Q19; and in the third factor, items Q21 and Q26 had high SRCs. Subsequently, these items were eliminated in order to improve the model fit. Then, the alternative model was drawn after the elimination of the items with high SRCs (Schumaker and Lomax, 2004).

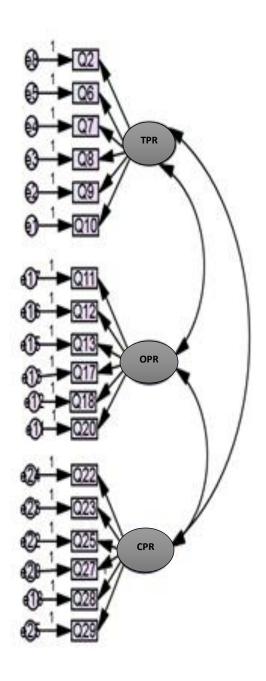
		SR	Cs	Elimination and Justification
Items	Loadings	>1.96	>2.58	
Q3	0.63	3	0	Removed / Moderate loadings + three SRCs > 1.96 (with Q27,
				Q28, and Q29)
Q5	0.61	3	0	Removed / Moderate loadings + three SRCs > 1.96 (with Q21,
				Q26 and Q6)
Q15	0.70	1	0	Removed / Moderate loadings + one SRC > 1.96 (with Q28)
Q16	0.69	2	0	Removed / Moderate loadings + two SRCs > 1.96 (with Q28
				and 29)
Q19	0.77	2	0	Removed / Good loadings + one SRC > 1.96 (with Q25 and
				Q23)
Q21	0.54	2	3	Removed / Moderate loadings + two $SRCs > 1.96$ (with Q5 and
				Q20) + three SRCs > 2.58 (with Q2, Q8 and Q23)
Q26	0.60	1	2	Removed / Moderate loadings + one $SRC > 1.96$ (with Q5) +
				two SRCs > 2.58 (Q25 and Q27)

 Table 6-6: Elimination of Items for CFA Model 1

6.4.2.3. CFA Model 2: Three Levels of PM Resources

CFA Model 2 is comprised of screened indicators after the elimination of high SCR indicators in the first stage. In the first factor, team PM resources, the six indicators that were selected are Q2, Q6, Q7, Q8, Q9 and Q10. In the second factor, organisational PM resources, are the six items Q11, Q12, Q13, Q17, Q18 and Q20. In the third factor, collaborative social PM resources, are the six items Q22, Q23, Q25, Q27, Q28 and Q29.

The results of absolute fit indices show that normed chi-square (x^2 /df) value is 2.742, GFI is 0.911, RMSEA is 0.063, p-close value is less than 0.05, and SRMR is 0.041. Incremental indices results show that NFI is 0.922, TLI is 0.940 and CFI is 0.948. The parsimonious fit indices results indicate that AGFI is 0.884 and PNFI is 0.795. The fit indices show mediocre fit (Hu and Bentler, 1999; Byrne, 1994; Wheaton, 1987). AVE values for the latent factors of TPR and OPR are satisfactory and all latent CR values are good (Hair et al., 2010; Farrell, 2010).



Construct	Item	Standardised		
		TPR	OPR	CPR
	Q2	0.67		
	Q6	0.73		
Team PM	Q7	0.77		
Resource (TPR)	Q8	0.82		
(11 K)	Q9	0.76		
	Q10	0.83		
	Q11		0.75	
	Q12		0.79	
Organisational	Q13		0.80	
PM Resource (OPR)	Q17		0.72	
$(\mathbf{O}\mathbf{I}\mathbf{K})$	Q18		0.72	
	Q20		0.76	
	Q22			0.70
Collaborative	Q23			0.64
Social PM	Q25			0.53
Resource	Q27			0.70
(CPR)	Q28			0.74
	Q29			0.73
Average Variance Extracted (AVE)		0.59	0.57	0.46
Construct Reliability (CR)		0.89	0.89	0.83
Absolute Fit Index	$x^2 = 362.0, df = 132, x^2 / df = 2.742, GFI = 0.911, RMSEA= 0.063, p-close < 0.05, SRMR = 0.041$			
Incremental	NFI = 0.922, TLI = 0.940,			
Fit Index Parsimony Fit Index	CFI = 0.948 AGFI = 0.884, PNFI = 0.795			

Table 6-7: Estimates for CFA Model 2

Figure 6-3: CFA Model 2

6.4.2.4. Elimination of Items for CFA Model 2

CFA Model 2 presents all the indicators which have SRCs less than 1.96. However, the CFA model is not a good fit. Therefore, the modification index (MI) was applied in order to improve the CFA model fit (Whittaker, 2012; MacCallum et al., 1992). Modification indices estimate the extent to which model fit would improve through reducing specification errors (Whittaker, 2012). Specification errors occur due to the inclusion of irrelevant relations or the exclusion of relevant relations (MacCallum, 1986).

Table 6-8 displays the regression weights of the indicators and factors of CFA Model 2. Some items have high cross-loading many times with other factor items. These items were considered for elimination in order to improve the model fit (Whittaker, 2012; Luijben and Boomsma, 1988). Items Q9, Q20 and Q28 respectively from team, organisational and collaborative social PM resource were considered for elimination.

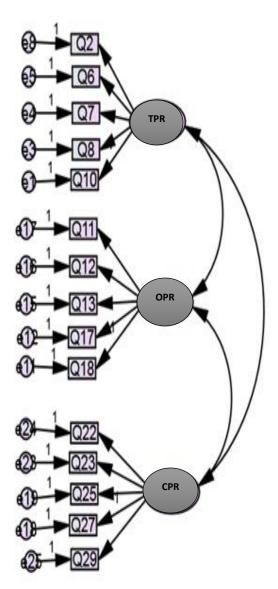
Highly Cross-loaded Items	MI	Action Taken and Justification
Q9 < Q25	6.331	Q9 highly cross-loaded with other factor items.
Q9 < Q11	6.379	
Q9 < Q12	11.326	Removed Item Q9
Q9 < Q13	4.527	
Q9 < Q18	6.121	
Q9 < Q2	9.321	
Q20 < Q29	6.131	Q20 highly cross-loaded with other factor items.
Q20 < Q7	5.902	(
Q20 < Q8	5.836	Removed Item O20
Q20 < Q10	5.972	
Q28 < Q23	6.219	Q28 highly cross-loaded with other factor items.
Q28 < Q13	6.746	
Q28 < Q17	4.366	Removed Item O28
Q28 < Q06	7.878	

 Table 6-8: Modification Index: Regression Weights – CFA Model 2

6.4.2.5. CFA Model 3: Three Levels of PM Resources

Model 3 consists of screened indicators after the eliminations of highly cross-loaded indicators. Team PM resource consists of five items: Q2, Q6, Q7, Q8 and Q10; organisational PM resources consists of five items: Q11, Q12, Q13, Q17; and Q18 and collaborative social PM resource consists of four items: Q22, Q23, Q25, Q27 and Q29.

The results of absolute fit indices produce a normed chi-square ($\times 2$ / df) value of 2.210, GFI is 0.947, RMSEA is 0.052, p-close value is greater than 0.05, and SRMR is 0.037. Incremental indices results show that NFI is 0.945, TLI is 0.963 and CFI is 0.969. Parsimonious fit indices results indicate that AGFI is 0.927 and PNFI is 0.783. The fit indices give average values for the acceptable level of fit (Hu and Bentler, 1999; Byrne, 1994; Wheaton, 1987). AVE values for the latent factors of TPR and OPR are satisfactory and all latent CR values are very good (Hair et al., 2010; Farrell, 2010).



Construct	Item	Standardised Factor		
		TPR	OPR	CPR
	Q2	0.70		
Team PM	Q6	0.75		
Resource	Q7	0.78		
(TPR)	Q8	0.83		
	Q10	0.80		
	Q11		0.77	
Organisational	Q12		0.81	
PM Resource	Q13		0.80	
(OPR)	Q17		0.71	
	Q18		0.72	
	Q22			0.71
Collaborative	Q23			0.67
Social PM Resource	Q25			0.53
(CPR)	Q27			0.72
()	Q29			0.71
Average Variance Extracted (AVE)		0.60	0.58	0.45
Construct Reliability (CR)		0.88	0.87	0.80
Absolute Fit Index	$x^2 = 192.2$, df = 87, x^2 / df = 2.210, GFI = 0.947, RMSEA= 0.52, p- close > 0.05, SRMR = 0.037			
Incremental Fit Index	NFI = 0.945, TLI = 0.963, CFI = 0.969			
Parsimony Fit Index	AGFI = 0.927, PNFI = 0.783			

Figure 6-4: CFA Model 3

Table 6-9: Estimates for CFA Model 3

6.4.2.6. Elimination of Items for CFA Model 3

Table 6-10 contains the regression weights of indicators and factors of CFA Model 3. Model 3 shows the fit is reasonable to accept it. To improve the model further and fix the overestimation of indicators (Hair et al., 2006), three more highly cross-loaded items Q10, Q17 and Q25 respectively from team, organisational and collaborative social PM resources, have been considered for elimination.

Highly Cross-loaded Items	MI	Action Taken and Justification
Q10 < Q27	4.741	Q10 highly cross-loaded with other factor items.
Q10 < Q12	4.513	
Q10 < Q13	8.037	Removed Item Q10
Q10 < Q18	4.495	
Q17 < Q29	5.725	Q17 highly cross-loaded with other factor items.
Q17 < Q12	5.655	Removed Item Q17
Q17 < Q2	4.961	
Q25 < Q18	5.872	Q25 highly cross-loaded with other factor items
Q25 < Q12	5.998	Removed Q25

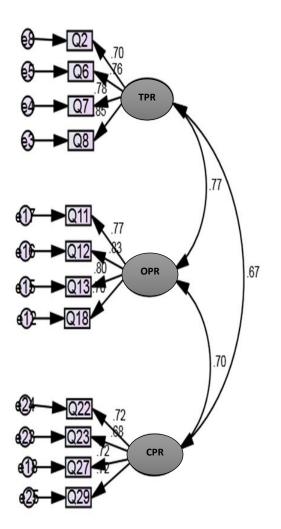
 Table 6-10: Modification Index: Regression Weights – CFA Model 3

6.4.2.7. CFA Model 4: Three Levels of PM Resources

Model 4 was created by fixing the over-estimation and minimising the high cross-loading indicators (MacCallum et al., 1996). Each factor consists of four indicators. Team PM resources consists of items Q2, Q6, Q7 and Q8; organisational PM resources consists of items Q11, Q12, Q13 and Q18; and collaborative social PM resources consists of Q22, Q23, Q27 and Q29.

The results of absolute fit indices show the normed chi-square (χ^2 /df) value of 1.782, GFI is 0.967, RMSEA is 0.042, p-close value is greater than 0.05, and SRMR is 0.031. The incremental indices results reveal a NFI of 0.966, a TLI of 0.980 and a CFI of 0.985. Parsimonious fit indices results indicate that AGFI is 0.950 and PNFI is 0.746. The normed chi-square value is less than two and the other three indices show good values which lead to conclude the model fits well (Hu and Bentler, 1999; Byrne, 1994; Wheaton, 1987).

In addition, the CFA results indicate that each factor loading of the reflective indicators is statistically significant at the 0.001 level. AVE values for the latent factors are all acceptable as greater than or equal to 0.5 (Hair et al., 2010) and all CR values are very satisfactory as greater than 0.80 (Hair et al., 2010; Farrell, 2010). Further, the model was supported with discriminant validity as all latent factors correlations are less than 0.85 (Kline, 2005). Therefore, this model is accepted.



Construct	Item	Stand	ardised H	actor	
		TPR	OPR	CPR	
	Q2	0.70			
Team PM	Q6	0.76			
Resource (TPR)	Q7	0.78			
(11 K)	Q8	0.85			
	Q11		0.77		
Organisational	Q12		0.83		
PM Resource (OPR)	Q13		0.80		
(OT K)	Q18		0.70		
Collaborative	Q22			0.72	
	Q23			0.68	
Social PM Resource	Q27			0.72	
(CPR)	Q29			0.72	
Average Variance Extracted (AVE)		0.60	0.61	0.50	
Construct Reliability (CR)		0.86	0.86	0.80	
Absolute Fit Index	χ^2 =90.82, df = 51, χ^2 / df = 1.782, GFI = 0.967, RMSEA= 0.42, p- close > 0.05, SRMR = 0.031				
Incremental Fit Index	NFI = 0.966, TLI = 0.980, CFI = 0.985				
Parsimony Fit Index	AGFI =	AGFI = 0.950, PNFI = 0.746			

Figure 6-5: CFA Model 4

Table 6-11: Estimates for the CFA Model 4

6.4.2.8. Summary of Comparison (Goodness -of- fit Indices of CFA Models – PM Resources)

Table 6-12 contains a summary of the results of goodness-of-fit indices among the four models of PM resources. The models were gradually improved in absolute, incremental and parsimony indices. Primarily, when the researcher compared three key measures, normed chi-square, RMSEA and CFI, the normed chi-square decreased gradually from Model 1 (3.140), to Model 2 (2.742), to Model 3 (2.210) and to Model 4 (1.782). Next, the RMSEA decreased through the models (Model 1 – 0.069, Model 2 – 0.063, Model 3 – 0.52 and Model 4 – 0.042). Lastly, the CFI increased across the models (Model 1 (0.909), Model 2 (0.948), Model 3 (0.969) and Model 4 (0.985)). These values indicate Model 4 is a better fit than the previous models (MacCallum et al., 1996; Hu and Bentler, 1999; Wheaton, 1987; Carmines and McIver, 1981).

Finally, parsimonious measures of AGFI increased gradually from Model 1 (0.831), to Model 2 (0.884), to Model 3 (0.927) and to Model 4 (0.950). However, the PNFI shows slight variations as this measure was adjusted to losses in degrees of freedom over Models 1 to 4 (Mulaik et al., 1989). Therefore, the researcher used Model 4 in the next step to compare with project success (endogenous factors).

Indices	Model 1	Model 2	Model 3	Model 4
Absolute Measures				
Chi-square	854.1	362.0	192.2	90.82
Degree of freedom	272	132	87	51
Normed Chi-square	3.140	2.742	2.210	1.782
GFI	0.859	0.911	0.947	0.967
RMSEA	0.069	0.063	0.52	0.42
P-Close	< 0.05	< 0.05	>0.05	>0.05
SRMR	0.051	0.041	0.037	0.031
Incremental Measure				
NFI	0.872	0.922	0.945	0.966
NNFI (TLI)	0.899	0.940	0.963	0.980
CFI	0.909	0.948	0.969	0.985
Parsimony Measure				
AGFI	0.831	0.884	0.927	0.950
PNFI	0.791	0.795	0.783	0.746
Fitting Summary	Poor Fit	Mediocre Fit	Good Fit	Excellent Fit

Table 6-12: Summary of Comparison of Goodness-of-fit Indices

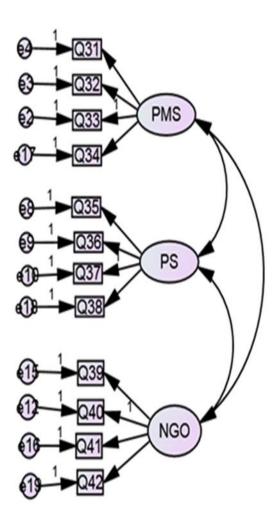
6.4.3. Step 2: Measurement Model Specifications for Project Success

In section 6.4.2, step one of the CFA procedure estimated the measurement model fit for the PM resources (exogenous latent factors). This section compares the alternative models of project success (endogenous latent factors) and, lastly, identifies the best model of project success based on the measurement results. Three latent factors were drawn, namely, PM Success (PMS), Project Success (PS) and NGO Success (NGO).

6.4.3.1. CFA Model 5: Three Levels of Project Success

CFA Model 5 was drawn based on the finding of exploratory case study and literature review. The findings explained the indicators of the latent factors. The first factor PM Success consists of four indicators: Q31, Q32, Q33 and Q34; the second factor Project Success consists of four indicators: Q35, Q36, Q37 and Q38; and the third factor NGO Success consists of four indicators: Q39, Q40, Q41 and Q42.

The results of the absolute fit indices show that normed chi-square (^x2 / df) value is 4.501, GFI is 0.967, RMSEA is 0.089, p-close value is less than 0.05, and SRMR is 0.044. The incremental indices results show that NFI is 0.922, TLI is 0.920 and CFI is 0.938. The parsimonious fit indices results indicate that AGFI is 0.877 and PNFI is 0.712. The results of these three indices demonstrate poor fit of model (Hu and Bentler, 1999; Byrne, 1994; Wheaton, 1987). AVE values for the latent factors of PMS and NGO were satisfactory and all latent CR values were satisfactory (Hair et al., 2010; Farrell, 2010).



Construct	Item	Standardised Factor			
		PMS	PS	NGO	
	Q31	0.85			
PM Success	Q32	0.80			
(PMS)	Q33	0.76			
	Q34	0.71			
	Q35		0.77		
Project	Q36		0.56		
Success (PS)	Q37		0.60		
	Q38		0.76		
NGO Success	Q39			0.83	
	Q40			0.60	
(NGO)	Q41			0.83	
	Q42			0.61	
Average		0.61	0.46	0.53	
Variance					
Extracted (AVE)					
Construct		0.86	0.77	0.82	
Reliability					
(CR)		5 10	51 2 (1		
Absolute Fit	χ^2 =229.5, df = 51, χ^2 / df = 4.501, GFI = 0.919, RMSEA= 0.089, p-close < 0.05, SRMR				
Index					
	= 0.044				
Incremental	NFI = 0.922, TLI = 0.920,				
Fit Index	CFI = 0.938				
Parsimony Fit Index	AGFI = 0.877, PNFI = 0.712				

Figure 6-6: CFA Model 5

Table 6-13: Estimates for CFA Model 5

6.4.3.2. Elimination of Items for CFA Model 5

Table 6-14 shows the regression weights of indicators and factors of CFA Model 5. Model 5 gives poor results and the researcher checked the high SRC items for elimination. The Q36 factor loading is less than 0.6 and its SRC value is greater than 1.96 with item Q34. Therefore, the item has been considered for elimination in order to improve the measurement model fit. (Schumaker and Lomax, 2004).

		SRCs		Elimination and Justification
Items	Loadings	>1.96	>2.58	
Q36	0.56	1	0	Removed / Low loadings + One SRC > 1.96
				(with Q34)

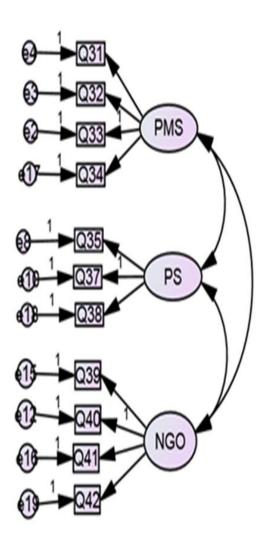
Table 6-14: Elimination of Items for CFA Model 5

6.4.3.3. CFA Model 6: Three Levels of Project Success

Model 6 was drawn after eliminating high SCR item Q36. PM success consists of items Q31, Q32, Q33 and Q34. Project success consists of items Q35, Q37 and Q38. NGO success consists of items Q39, Q40, Q41 and Q42.

The results of the absolute fit indices show a normed chi-square (x^2/df) value of 3.773, the GFI is 0.942, the RMSEA is 0.079, with a p-close value less than 0.05, and the SRMR is 0.035. Incremental indices results show that NFI is 0.943, TLI is 0.943 and CFI is 0.957. The parsimonious fit indices results indicate that AGFI is 0.907 and PNFI is 0.703. The normed chi-square value is greater than 0.3. This indicates the model is a poor fit. However, the other measures give good values, for example, GFI is 0.942 and CFI is 0.957. Therefore, the model is deemed as a tolerable fit.

Furthermore, the CFA results indicate that each factor loading of the reflective indicators is statistically significant at 0.001 level. AVE values for the latent factors are all acceptable with a significance level greater than 0.5 (Hair et al., 2010). In addition, all CR values were satisfactory at greater than 0.70 (Hair et al., 2010; Farrell, 2010). Therefore, the researcher accepted this model and used it to proceed to the next step to compare with PM resources (exogenous latent factors).



Construct	Item	Stand	lardised I	Factor	
		PMS	PS	NGO	
PM Success	Q31	0.85			
	Q32	0.80			
(PMS)	Q33	0.76			
	Q34	0.70			
	Q35		0.78		
Project Success (PS)	Q37		0.61		
(13)	Q38		0.76		
	Q39			0.83	
NGO Success	Q40			0.59	
(NGO)	Q41			0.84	
	Q42			0.61	
Average		0.61	0.52	0.53	
Variance Extracted					
(AVE)					
Construct		0.86	0.76	0.81	
Reliability (CR)					
Absolute Fit	$x^2 = 154.7$, df = 41, x^2 / df = 3.773,				
Index	GFI = 0.942, RMSEA= 0.079, p-				
Incremental Fit	close < 0.05, SRMR = 0.035 NFI = 0.943, TLI = 0.943, CFI =				
Index	0.957				
Parsimony Fit Index	AGFI = 0.907, PNFI = 0.703				

Table 6-15: Estimates for CFA Model 6

Figure 6-7: CFA Model 6

6.4.4. Step 3: Measurement Model Specifications for PM Resources and Project Success Through the CFA step 1 process, the researcher identified the best model for PM resources (exogenous). Subsequently, using the CFA step 2 process the researcher identified the best model for project success (endogenous). Finally, using the CFA step 3 process, the researcher combined these three levels of PM resources with the three levels of projects success. In the initial stage, the researcher used CFA to confirm the three levels of PM resources and project success and in the next step of CFA was performed to confirm all factors of PM resources and project success. A review of the measurement model indicates that there are no offending estimates. Additionally, the results of the fit indices also support the proposed model with a normed chi-square vale of 2.253, which is within threshold value of 3.0, the measurement model is attested to be fit. Moreover, the baseline fit indices are also greater than the cut-off points of 0.90. For example, the CFI equals 0.956 and the GFI equals 0.917, which indicates a good fit of the measurement model. Finally, the RMSEA value of 0.052 is clearly below the cut-off value of 0.08, which also indicates a good fit of the measurement model. Furthermore, AVE values for the latent factors are all acceptable greater than 0.5 (Hair et al., 2010). All CR values are satisfactory at greater than 0.70 (Hair et al., 2010; Farrell, 2010). Therefore, this model is accepted to proceed to the next stage of structural equation model estimations.

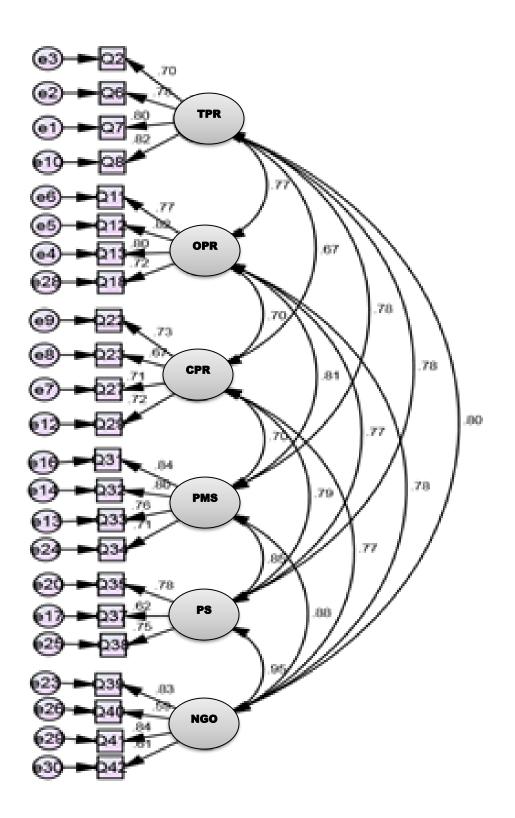


Figure 6-8: CFA Model 7

Construct	Item	n Standardised Factor Loading Estimates						
Construct		TPR	OPR	CPR	PMS	PS	NGO	
	Q2	0.70						
Team PM Resource	Q6	0.78						
(TPR)	Q7	0.80						
	Q8	0.82						
	Q11		0.77					
Organisational PM	Q12		0.82					
Resource (OPR)	Q13		0.80					
	Q18		0.72					
	Q22			0.73				
Collaborative Social	Q23			0.67				
PM Resource (CPR)	Q27			0.71				
	Q29			0.72				
	Q31				0.84			
PM Success (PMS)	Q32				0.80			
PM Success (PMS)	Q33				0.76			
	Q34				0.71			
	Q35					0.78		
Project Success (PS)	Q37					0.62		
	Q38					0.75		
	Q39						0.83	
NGO Success (NGO)	Q40						0.59	
NGO Success (NGO)	Q41						0.84	
	Q42						0.61	
Average Variance		0.60	0.61	0.50	0.61	0.52	0.53	
Extracted (AVE)								
Construct Reliability		0.86	0.86	0.80	0.86	0.76	0.81	
(CR)								
A haaluta Eit Indan	$x^2 = 474.7$	$x^2 = 474.7$, df = 215, x^2 / df = 2.208, GFI = 0.917, RMSEA= 0.052, p-close >						
Absolute Fit Index	0.05, SRMR = 0.034							
Incremental Fit Index	NFI = 0.9	NFI = 0.923, TLI = 0.948, CFI = 0.956						
Parsimony Fit Index	AGFI = 0	.894, PNFI	= 0.784					

 Table 6-16: Estimates for CFA Model 7

6.5. Structural Equation Modelling (SEM)

After achieving the good fit of the measurement model, the next step is to test the hypothesised causal relationships among the construct of the model. SEM is used to test the hypothesised causal relationships. SEM provides a more appropriate inference framework for mediation analyses and for other types of causal analyses and helps to develop sound theoretical frameworks through rigorous testing (Hoe, 2008).

The SEM process consists of two steps. First, validating the measurement model and fitting the structural model. The former is accomplished primarily through CFA, while the latter is accomplished primarily through path analysis with latent indicators. Three levels of PM resources were identified in the exploratory case study, then best factors were selected from EFA and the best model for PM resources and project success was confirmed by using CFA. Then the model creation by SEM is started on the basis of theory. The researcher produced three alternative models and finally identified a good fit model which explains well the association between PM resources and project success.

6.5.1. SEM Model 1

This model was drawn based on previous findings in the literature which indicate there is a positive relationship between PM resources and project success. Further, the literature and exploratory case study indicate PM success and project success lead to the business success of the organisations. The SEM shows the three levels of PM resources as Team (TPR), Organisational (OPR) and Collaborative Social (CPR) PM resources and the three levels of project success as PM Success (PMS), Project Success (PS) and NGO Success (NGO).

SEM Model 1 results are as follows: asbsolute fit indices; $x^2 = 474.7$, df = 215, normed chisquare value (x^2/df) = 2.208, GFI = 0.917, RMSEA = 0.052, p-close is greater than 0.05, and SRMR = 0.034; incremental fit indices; NFI = 0.923, TLI = 0.948, and CFI = 0.956; parsimonious fit indices: AGFI = 0.894 and PNFI = 0.784. This indicates a good fit model as this normed chi-square value less than 3.0 (Wheaton, 1987; Carmines and McIver, 1981), RMSEA is less than 0.08 and p-close is greater than 0.05 (MacCallum et al., 1996). In addition, CFI is greater than the cut-off value 0.90 and SRMR is less than the cut-off value 0.08 (Hu and Bentler, 1999). However, many hypothetical paths (table 6-17) namely H3, H5, H6 and H9 suggest insignificant relationships between the factors. Therefore, the researcher considered an alternative model through first eliminating the H3, H6 and H9 insignificant paths.

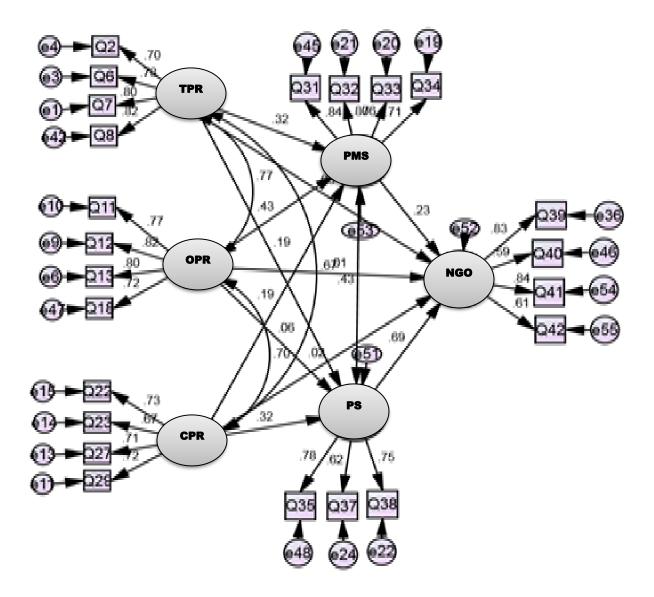


Figure 6-9: SEM Model 1

Relationships			ypot Standardised sis Regression		Sig
			Estir	nates	(at 0.05)
			\mathbf{R}^2	P value	
Team PM Resource	PM Success	H1	0.32	< 0.001	Sig
Team PM Resource	Project Success	H2	0.19	0.015	Sig
Team PM Resource	NGO Success	H3	0.08	0.273	Not Sig
Organisational PM Resource	PM Success	H4	0.43	< 0.001	Sig
Organisational PM Resource	Project Success	H5	0.06	0.519	Not Sig
Organisational PM Resource	NGO Success	H6	0.01	0.823	Not Sig
Collaborative Social PM Resource	PM Success	H7	0.19	0.002	Sig
Collaborative Social PM Resource	Project Success	H8	0.32	< 0.001	Sig
Collaborative Social PM Resource	NGO Success	H9	0.02	0.934	Not Sig
PM Success	Project Success	H10	0.43	< 0.001	Sig
PM Success	NGO Success	H11	0.23	0.020	Sig
Project Success	NGO Success	H12	0.69	< 0.001	Sig
		$\chi^2 = 474.$	7, df = 215 ,	$x^2 / df = 2.20$	8, GFI =
Absolute Fit Index		0.917, R	MSEA = 0.0)52, p-close >	> 0.05,
		SRMR =	= 0.034		
Incremental Fit Index			NFI = 0.923, TLI = 0.948, CFI = 0.956		
Parsimony Fit Index		AGFI = 0.894, PNFI = 0.784			

 Table 6-17: Estimates for SEM Model 1

6.5.2. SEM Model 2

Model 1 was identified as the proposed model and Model 2 as the reduced model. It restricts the influences of PM resources on NGO success. A chi-square difference test was performed to compare these models with the aim to select the best model. Table 6-19 summarises the results of the chi-square test.

This model has been modified by eliminating the paths H3, H6 and H9 which produced insignificant causal relationships. Results of the modified model are as follows: absolute fit indices: $\chi^2 = 475.8$, df = 218, $\chi^2/$ df = 2.183, GFI = 0.917, RMSEA =0.051, p-close is greater than 0.05, and SRMR = 0.034; incremental fit indices: NFI = 0.923, TLI = 0.949 and CFI = 0.956; parsimonious fit indices: AGFI = 0.895 and PNFI = 0.795. The model shows a good fit. However, one hypothetical path (table 6-18) namely H5 shows an insignificant path. Therefore, the researcher considered an alternative model in order to derive a good model with all significant paths.

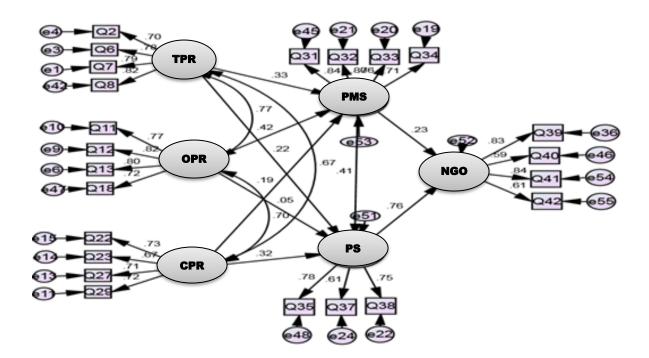


Figure 6-10: SEM Model 2

Relationships			10 111-11	ardised n Estimates	Sig	
			\mathbb{R}^2	P value	(at 0.05)	
Team PM Resource	→ PM Success	H1	0.33	< 0.001	Sig	
Team PM Resource	Project Success	H2	0.22	< 0.001	Sig	
Team PM Resource	NGO Success	H3		Constrained		
Organisational PM Resource	PM Success	H4	0.42	< 0.001	Sig	
Organisational PM Resource	Project Success	H5	0.05	0.501	Not Sig	
Organisational PM Resource	NGO Success	H6		Constrained		
Collaborative Social PM Resource	PM Success	H7	0.19	0.002	Sig	
Collaborative Social PM Resource	Project Success	H8	0.32	< 0.001	Sig	
Collaborative Social PM Resource	NGO Success	H9		Constrained		
PM Success	Project Success	H10	0.41	< 0.001	Sig	
PM Success	NGO Success	H11	0.23	0.012	Sig	
Project Success	NGO Success	H12	0.76	< 0.001	Sig	
Absolute Fit Index			$x^2 = 475.8$, df = 218, $x^2 / df = 2.183$, GFI = 0.917, RMSEA= 0.051, p-close > 0.05, SRMR = 0.034			
Incremental Fit Index			NFI = 0.923, TLI = 0.949, CFI = 0.956			
Parsimony Fit Index			AGFI = 0.895, PNFI = 0.795			

 Table 6-18: Estimates for SEM Model 2

6.5.3. Comparison of SEM Models 1 and 2

Chi-square difference test (CSDT) technique was applied to examine the significance difference in the nested structural models (Kline, 2005). The CSDT technique works by calculating the difference between the chi-square values and degrees of freedom of two models and it compares a set of critical values based on changes in degrees of freedom (Kline, 2005). The result of the chi-square difference test is shown in table 7-19. Comparing full Model 1 and reduced Model 2, the results of CSDT showed $\Delta x^2 = 1.170$, $\Delta df = 3$, and *p* is greater than 0.05. Since the difference of the chi-square test was insignificant, both models are equivalent.

However, when we compare the significance of standard regression estimates, Model 1 has many insignificant paths. Moreover, parsimonious measures slightly improved from Model 1 (AGFI = 0.894, PNFI = 0.784) to Model 2 (AGFI = 0.895, PNFI = 0.795). Therefore, Model 2 is comparably better than the Model 1 (Kline, 2005; Mulaik et al., 1989).

	χ ²	df	$\Delta \chi^2$	Δdf	Significance
Model 1	474.662	215			
Model 2	475.832	218	1.170	3	<i>p</i> >0.05

 Table 6-19: Chi-square Difference Test

6.5.4. SEM Model 3

SEM Model 3 was modified from Model 2 by eliminating the path which showed insignificant relationship between organisational PM resources and project success. The results of the model are as follows: absolute fit indices: $\chi^2 = 476.3$, df = 219, $\chi^2 /$ df = 2.175, GFI = 0.917, RMSEA =0.051, p-close is greater than 0.05, and SRMR = 0.034; incremental fit indices: NFI = 0.923, TLI = 0.950 and CFI = 0.956; parsimonious fit indices; AGFI = 0.896 and PNFI = 0.799. The model shows good fit.

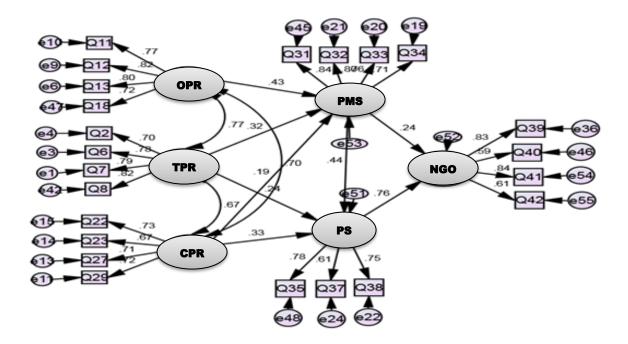


Figure 6-11: SEM Model 3

Relationships			Standardise Estin	Sig		
			R ²	P value	(at 0.05)	
Team PM Resource	PM Success	H1	0.32	< 0.001	Sig	
Team PM Resource	Project Success	H2	0.24	< 0.001	Sig	
Team PM Resource	NGO Success	H3	(Constrained		
Organisational PM Resource	PM Success	H4	0.43	< 0.001	Sig	
Organisational PM Resource	Project Success	H5	(Constrained		
Organisational PM Resource	NGO Success	H6	(Constrained		
Collaborative Social PM Resource	PM Success	H7	0.19	0.003	Sig	
Collaborative Social PM Resource	Project Success	H8	0.33	< 0.001	Sig	
Collaborative Social PM Resource	NGO Success	H9	Constrained			
PM Success	Project Success	H10	0.44	< 0.001	Sig	
PM Success	NGO Success	H11	0.24	0.012	Sig	
Project Success	NGO Success	H12	0.76	< 0.001	Sig	
Absolute Fit Index		$x^2 = 476.3$, df = 219, $x^2 / df = 2.175$, GFI = 0.917, RMSEA= 0.051, p-close > 0.05,				
		SRMR =	= 0.034			
Incremental Fit Index			NFI = 0.923, LI = 0.950, CFI = 0.956			
Parsimony Fit Index			0.896, PNFI =	0.799		

 Table 6-20: Estimates for SEM Model 3

6.5.5. Comparison of Models 2 and 3

Table 6-21 illustrates the chi-square difference test. Comparing the improved Models 2 and 3, the results of CSDT indicate $\Delta x^2 = 0.438$, $\Delta df = 1$, and *p* is greater than 0.05. The p value is insignificant. This indicates there are no significant differences between Models 2 and 3. However, Model 2 has one insignificant path (H5). Moreover, parsimonious measures slightly improved from Model 2 (AGFI = 0.895, PNFI = 0.795) to Model 3 (AGFI = 0.896, PNFI = 0.799). Therefore, the researcher accepts Model 3, for which the fit indices give good values including improved parsimony (Mulaik et al., 1989) and all hypothetical paths are significant (Kline, 2005). Hence, modified SEM Model 3 was selected as the final model.

	χ2	df	Δ X ²	Δdf	Significance
Model 2	475.832	218			
Model 3	476.270	219	0.438	1	<i>p</i> >0.05

 Table 6-21: Chi-square Difference Test

6.5.6. Comparison of Standardised Regression Estimates across different Estimation Methods

The final modified SEM model for this study was identified by using the maximum likelihood (ML) estimation method. The ML method relies predominantly on three assumptions: large sample of population, univariate normality, and multivariate normality (Lee and Song, 2004; Kline, 2005). The empirical data of the present study closely met the first two important assumptions. The first assumption, the sample size 447 (>400) of this study was remarkably good to perform the ML estimation method (Engel et al., 2003; Boomsma and Hoogland, 2001; Chin and Newsted, 1999). Next, as presented in the previous chapter (Data Presentation) all variables were close to normal fit because all variables' values of skewness and kurtosis lie between -1.0 and +1.0 (Garson, 2012).

However, the multivariate normality assumption was not met by the empirical data. The development of asymptotic robustness of normal theory methods is convincing for the appropriateness of using ML methods under violation of normality assumption in certain conditions, namely, latent variables are mutually independent and sample size is large (Hu and Bentler, 1998; Bentler, 1992; Amemiya and Anderson, 1990; Browne and Shapiro,

1988). Further, Hu and Bentler's (1998, p.450) study reveals violation of multivariate normality alone seems to exert less impact on the performance of fit indices and, they added, ML performs much better than other estimation methods (e.g. Generalised Least Square and Asymptotically Distribution Free) for model selection and evaluation. It has been validated by other researchers that ML performs well with or without the correction of non-normality (Boomsma and Hoogland, 2001; Olsson et al., 2000). Therefore, the selection of the ML method was more appropriate for this study as the empirical data met to a great extent the ML assumptions (Hu and Bentler, 1998).

However, an appropriately specified model gives moderate variations of non-normality on parameter estimates across different estimation methods (Olsson et al., 2000; Finch et al., 1997; Bollen, 1989; Jöreskog and Sörbom; 1988; Browne, 1987). Hence, the researcher compares the findings of the ML method with other existing conventional and non-conventional estimation methods for warranting the accuracy of the SEM findings (Olsson et al., 2000; Chou et al., 1991). The identified final model was compared by using Generalised Least Square (GLS), Asymptotically Distribution Free (ADF) and Bayesian estimation methods. ML and GLS work well for multivariate normality and asymptotic theory assumptions (Hu and Bentler, 1998; Bollen, 1989). However, ADF and Bayesian estimation method make flexible of asymptotically free nature of estimation (Chumney, 2012; Browne, 1984; Bentler, 1983).

Standardised regression parameter estimates were used to compare the results across estimation methods (Chumney, 2012; Olsson et al., 2000; Hu and Bentler, 1998; McDonald, 1989; Bollen, 1989; Bentler and Bonett, 1980). The results of standardised regression estimates are shown in table 6-22. The standardised regression estimates of all hypothetical paths in ML, GLS and Bayesian methods are significant at the 95% confidence level. In the ADF method, except for one path (H2), all paths show significant (H2) at the 95% confidence level. In the ADF method, except for one path (H2), all paths show significant (H2) at the 95% confidence level. In addition, the variations of standardised regression estimates across estimation methods are unexceptional. Therefore, in conclusion it can be justified that the results of the final ML SEM model is well accepted across different estimation methods (Olsson et al., 2000). Therefore, the ML results are highly convincing to explain the associations between PM resource and project success.

	Μ	ML		GLS		DF	Bayesian	
Hypothesis	R ²	P value	R ²	P value	R ²	P value	(R ²) (Sig at 0.05)	
H1	0.32	< 0.001	0.26	0.003	0.27	< 0.001	0.33	
H2	0.24	<0.001	0.21	0.007	0.06	0.30	0.24	
H4	0.43	<0.001	0.51	<0.001	0.56	< 0.001	0.42	
H7	0.19	0.003	0.14	0.041	0.11	0.05	0.18	
H8	0.33	< 0.001	0.35	< 0.001	0.39	< 0.001	0.32	
H10	0.44	< 0.001	0.45	< 0.001	0.36	< 0.001	0.44	
H11	0.24	0.012	0.21	0.031	0.32	< 0.001	0.23	
H12	0.76	< 0.001	0.77	<0.001	0.68	< 0.001	0.75	

Confidence level = 95%

N = 2000 (Bootstrapping) N = 20000(Bayesian)

 Table 6-22: Comparisons of Standardised Regression Estimates across Different

 Estimation Methods

6.5.7. Direct, Indirect and Total Effects on SEM Model 3

Modified SEM Model 3 is accepted as the final model for the study as it meets the overall goodness of fit and all the hypothetical paths are significant. Finally, the direct, indirect and total effects are evaluated between the exogenous and endogenous latent factors. Direct effects mean that part of the causal effect between independent and dependent factors is not mediated by any intervening factors and indirect effects mean that part of the causal effect is mediated by one or more intervening factors (Baron and Kenny, 1986). Hence, total effects add both direct and indirect effects between independent and dependent factors. The previous SEM sections show the 12 hypothetical paths with direct effects only. Hence, table 7-23 contains 19 hypothetical paths with direct and indirect effects.

The model includes three latent exogenous factors: team PM resources, organisational PM resources and collaborative social PM resources and three endogenous latent factors, namely, PM success, project success and NGO success, where the first two are mediators. The table shows the standardised direct, indirect and total effects of final SEM Model 3. All the paths of direct effects, indirect effects and totals effects are significant at the 95% confidence level. In addition, the established hypothetical paths indicate there are positive relationships between PM resources and project success. Section 6.6 tests the predetermined hypothetical correlations based on results of direct and indirect effects.

		Team PM	Organisational	Collaborative	PM	Project
		Resource	PM Resource	Social PM	Success	Success
		(TPR)	(OPR)	Resource	(PMS)	(PS)
				(CPR)		
PM Success	Direct Effects	0.322*	0.431*	0.186*		
(PMS)	Indirect Effects	-	-	-		
(1113)	Total Effects	0.322*	0.431*	0.186*		
Project	Direct Effects	0.236*	-	0.328*	0.440*	
Success	Indirect Effects	0.142*	0.190*	0.082*	-	
(PS)	Total Effects	0.378*	0.190*	0.410*	0.440*	
NGO	Direct Effects	-	-	-	0.235*	0.756*
Success	Indirect Effects	0.361*	0.245*	0.354*	0.333*	-
(NGO)	Total Effects	0.361*	0.245*	0.354*	0.568*	0.756*

P<0.05, *Significance

Table 6-23: Standardised Direct, Indirect and Total Effects (Modified SEM Model 3)

6.6. Hypothesis Testing

This section explains the hypothetical relationships between PM resources and project success based on the findings of the exploratory case study and quantitative survey study. Initially, hypotheses were proposed based on extensive review of the literature followed by findings of the exploratory case study. These hypotheses were tested with the help of standardised coefficients between all the constructs through SEM analysis. A total of 19 hypotheses were proposed and SEM findings supported 15 hypotheses. Finally, the proposed conceptual model was modified. A summary of hypotheses, associated paths and results is presented in table 6-24.

Hypo theses	Exploratory Case Study	Standardised Regressions	<i>p</i> Value	Supported
H1	Team PM Resource has a direct and positive effect on PM Success	0.322	0.001	Supported
H2	Team PM Resource has a direct and positive effect on Project Success	0.236	0.001	Supported
H2a	Team PM Resource has an indirect and positive effect on Project Success through the mediating effect of PM Success	0.142	0.001	Supported
Н3	Team PM Resource has a direct and positive effect on NGO Success	0.080	0.273	Not Supported
НЗа	Team PM Resource has an indirect and positive effect on NGO Success through the mediating effects of PM Success and Project Success	0.361	0.001	Supported
H4	Organisational PM Resource has a direct and positive effect on PM Success	0.431	0.001	Supported
H5	Organisational PM Resource has a direct and positive effect on Project Success	0.060	0.519	Not Supported
H5a	Organisational PM Resource has an indirect and positive effect on Project Success through the mediating effect of PM Success	0.190	0.001	Supported
H6	Organisational PM Resource has a direct and positive effect on NGO Success	0.010	0.823	Not Supported
Нба	Organisational PM Resource has an indirect and positive effect on NGO Success through the mediating effects of PM Success and Project Success	0.245	0.001	Supported

H7	Collaborative Social PM Resource has a direct and positive effect on PM Success	0.186	0.004	Supported
H8	Collaborative Social PM Resource has a direct and positive effect on Project Success	0.328	0.001	Supported
H8a	Collaborative Social PM Resource has an indirect and positive effect on Project Success through the mediating effect of PM Success	0.082	0.003	Supported
H9	Collaborative Social PM Resource has a direct and positive effect on NGO Success	0.020	0.924	Not Supported
H9a	Collaborative Social PM Resource has an indirect and positive effect on NGO Success through the mediating effects of PM Success and Project Success	0.354	0.001	Supported
H10	PM Success has a direct and positive effect on Project Success	0.440	0.002	Supported
H11	PM Success has a direct and positive effect on NGO Success	0.235	0.043	Supported
H11a	PM Success has an indirect and positive effect on NGO Success through the mediating effect of Project Success	0.333	0.001	Supported
H12	Project Success has a direct and positive effect on NGO Success	0.756	0.001	Supported

 Table 6-24: Hypotheses, Associated Paths and Results

6.7. Summary

The chapter presented the multivariate (EFA, CFA and SEM) analysis results and validated a best model to explain the associations between PM resources and project success. EFA helped to identify the best indicators for each PM resource and subsequently CFA identified the factor structure with the support of goodness- of- fit indices. Finally, SEM evaluated the model and identified a model which explains the associations between PM resources and project success. Further, construct validity tests warranted the concepts measurements are valid.

Additionally, the standardised regression estimates of final validated model compared with other different GLS and ADF methods and concluded ML results are convincing to explain the associations between PM resources and project success. Finally, hypotheses were tested by using direct and indirect results of standardised regression estimates. The next chapter compares and discusses the findings of the exploratory case study and the survey study and provides a holistic understanding of PM resource and its relationships with project success.

CHAPTER SEVEN FINDINGS AND DISCUSSION

7.1. Introduction

The study employed a mixed methods approach using exploratory case study and survey study. The previous chapters explained the exploratory case study results (chapter 4) and the survey study results (chapters 5 and 6). In the survey study, the findings of the exploratory case study empirically tested a hypothesised model for understanding PM resources and their contribution to project success in NGOs. The exploratory case study and survey study results concluded that there exist three levels of PM resources in NGOs and these resources have positive significant associations with project success.

This chapter explains how the phase-one exploratory case study and phase-two survey study assisted to achieve the research aim and objectives of the study. This compares the case study and survey study findings which explain the nature of PM resources and subsequently illustrates the critical elements of each level of PM resource which are crucial in achieving project success in NGOs. Further, the chapter compares and contrasts the hypothetical relationships of the study's latent constructs, which were constructed from the exploratory case study and tested with the support of the survey study. Finally, it briefly discusses the valid model which best explains the associations between PM resources and project success.

The chapter is organised into nine sections. Section 7.2 presents the overview of the aim and objectives of the study and explains how these have been achieved. Next, section 7.3 compares and discusses development of PM resource from the case study and survey study findings. Section 7.4 compares and discusses evaluation factors of project success. Section 7.5 compares and discusses associations between PM resources and project success. Section 7.6 discusses hypotheses proposed in the case study and tested results from the survey study, and subsequently section 7.7 compares the developed and finally accepted valid conceptual models of the study. Section 7.8 highlights the role of RBV in generating the model. Finally, section 7.9 summarises the key findings of the study.

7.2. Overview of Aim and Objectives of Research

Figure 7.1 presents the overview of research aim and objectives. This section discusses how the research aim and objectives are achieved by mixed case and survey study.

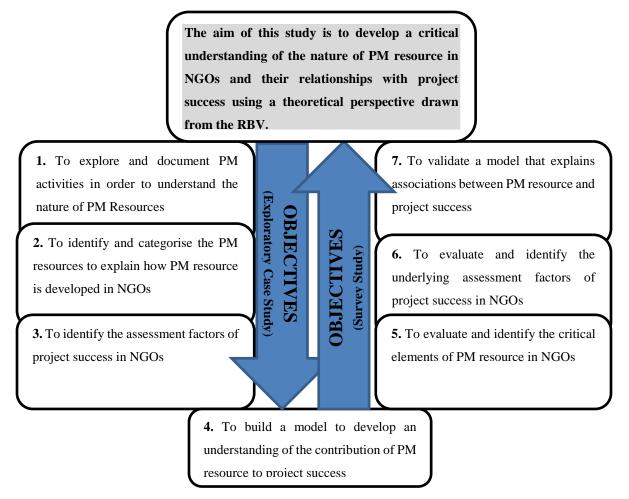


Figure 7.1: Overview of Research Aim and Objectives

The phase -one exploratory study was initiated with pretesting interviews and subsequently, in-depth interviews were conducted based on the thematic framework developed from the previous research findings, which identified PM resources in two levels: team and organisational levels in the public and private sector organisations. In-depth interviews assisted to achieve the first research objective in exploring and documenting PM activities and to identify and understand how PM resources in RBV perspectives apply in NGOs.

Next, confirming semi-structured interviews proceeded after PM elements were explored from the in-depth interviews. This assisted to confirm the PM elements and finally, the whole

exploratory case study implementation (pretesting, in-depth interviews, semi-structured interviews and archival data analysis) helped to achieve the second research objective of identifying and categorising the PM elements and developing the PM resources in NGOs. Three levels of PM resources were identified in NGOs: team PM resource, organisational PM resource and collaborative social PM resource, which was identified as a new resource for existing literature.

Afterwards, the whole exploratory case study process assisted to identify the evaluation factors of project success in NGOs. The literature review stated the common assessment factors of project success mainly in private and public sector organisations. However, the present study identified more significant elements which are used in NGOs to evaluate project success. Therefore, this achieves the third project objective of identifying evaluation factors of project success.

After that, confirming semi-structured interviews identified the association between PM resources and project success in NGOs and subsequently assisted to achieve the fourth research objective of building a model to develop an understanding of the contribution of PM resource to project success.

The survey study was initiated after the conceptual framework was developed from the exploratory case study. The findings of the exploratory case study were empirically tested in survey study. A structured questionnaire was employed to collect the data from the NGO managers. The structured questionnaire was developed from published findings by adapting existing measurement scales reported by previous studies and the exploratory case study. Prior to using the structured questionnaire to the main survey, pre-tests and a pilot study were conducted to avoid errors, ambiguities and misinterpretations in the measurement instrument.

The multivariate statistical techniques (EFA and CFA) assisted evaluation of the explored elements of PM resource and identification of the best elements which highly explain the PM resources in NGOs. This helped to achieve the fifth objective of evaluating and identifying the key elements of PM resource in NGOs. Subsequently, this assisted to achieve the sixth

objective of evaluating and identifying the underlying evaluation factors of project success in NGOs.

Next, the multivariate techniques (CFA and SEM) assisted to test the measurement models and subsequently identify the best model which explains the associations between PM resources and project success. This achieves the seventh objective of validating a model that best explains associations between PM resources and project success.

Finally, accomplishment of all objectives led to achieving the research aim of this study, which is to develop a critical understanding of the nature of PM resource in NGOs and its relationship with project success. The exploratory study results assisted to develop an understanding of PM resource in NGOs and their contribution to project success and the survey study largely supported the critical understanding of PM resource and the hypothetical relationships proposed in the model. In particular, the results suggested three levels of PM resources jointly influence project success in NGOs.

The discussion of findings over the results from the mixed methods study is presented in the forthcoming sections. The discussion is organised around the exploratory case study findings, survey study findings, hypothesis testing results and findings in respect to the hypothesised conceptual model.

7.3. Discussion on PM Resource Development

The research was started by discovering PM resource elements from previous research findings and then developing the initial conceptual model and thematic framework for the study. Then the exploratory case study modified the conceptual model and hypotheses for the study. EFA then helped to underline the nature of PM resources and identified the best elements of the latent constructs for the study. Later on, CFA tested and confirmed the model for the study. Finally, SEM tested the derived theory and concluded the three levels of PM resources: team, organisational and collaborative social PM resources, and their influence over project success of NGOs. The findings of individual levels of PM resources from the case and survey studies are illustrated below.

7.3.1. Team PM Resource

As discussed in the exploratory case study and conceptual model development chapter (section 4.6.3.1), PM elements assessed at the team level are known as team PM resource. The PM resource at the team level is very fundamental for increasing project delivery as knowledge and skills are embedded in members of a team. Figure 7-2 shows the development process of team PM resource in the present study.

Previous research from private organisations identified specific team resources: informal meetings, peer learning, brainstorming sessions, on-the-job training, personal coaching, mentoring, case studies, success stories, PM expertise and PM practices (Mathur et al., 2012; Mathur et al., 2007; Jugdev and Mathur, 2006a).

The stage-one exploratory case interview originated based on this literature findings and discovered more new elements of team PM resources, such as field visits, team cohesion and trust, and team values. Subsequently, the stage-two confirming case interview organised team PM resource under ten headings: casual conversations and informal meetings, brainstorming sessions, field visits, on-the-job training, job shadowing and mentoring, success and failure stories, team cohesion and trust, team PM values, team PM expertise and team best PM practices. As discussed (section 4.6.3.1), all elements of team PM resource have significantly tacit resource characteristics.

Next, the phase-two quantitative study is grounded in the exploratory case study findings. Initially, pretesting interviews and the pilot study were conducted to improve the measurement properties of the survey instrument. Then, the structured survey was undertaken and best items extracted by using EFA. Two elements, namely, casual conversations and informal meetings and on-the-job training have been eliminated as these had low factor loadings (less than 0.55), therefore these two resources were not well explained in team PM resource (see section 6.3.1). Finally, CFA confirmed four items as the most important team PM elements with high standardised regression estimates (r^2); those identified resources are brainstorming sessions, success and failure stories, team cohesion and trust, and team values. The next section explains these resources in detail.

Literature Review

Informal meetings, Peer learning, Brainstorming sessions, On-the-job training, Personal coaching, Mentoring, Case studies and success stories, Project management expertise and Project management practices

Case Study: Exploring Interviews

Informal meetings, Casual conversations, Brainstorming sessions, Field level discussions and review visits, On-the job training, Personal coaching, Job shadowing and mentoring, Case studies and success stories, Team cohesion and trust, Team values, PM expertise, Deeper understanding of project lifecycle and operations, Best PM practices and Synthesise new knowledge in PM

Confirming Interviews

Casual conversations and informal meetings, Brainstorming sessions, Field visits, On-the job training, Job shadowing and mentoring, Success and failure stories, Team cohesion and trust, Team PM values, Team PM expertise and Team best PM practices

Survey Study: EFA

Brainstorming sessions, Field visits, Job shadowing and mentoring, Success and failure stories, Team cohesion and trust, Team PM values, Team PM expertise and Team best PM practices

CFA and SEM

Brainstorming sessions, Success and failure stories, Team cohesion and trust and Team PM values

Understand the Nature of Team PM Resource in NGOs

Test and Identify Critical Elements of Team PM Resource in NGOs

Figure 7-2: Team PM Resource Development

7.3.1.1. Summary of Findings: Key Elements of Team PM Resource

Survey study findings revealed the importance of PM resources in order to achieve project success in NGOs. Four critical items – Brainstorming sessions, Success and failure stories, Team cohesion and trust and Team PM values – have been identified in team PM resource. Table 7-1 shows the standardised factor loading of each item as explained in team PM resource.

First, the brainstorming session is considered as a resource in team PM resource as it improves the PM knowledge and skills of team members. As explained (section 4.6.3.1.2), this resource was identified as tacit asset since the knowledge gathered in the brainstorming sessions cannot be fully documented or articulated. Further, exploratory case study findings emphasised that brainstorming sessions which are used in NGOs to discuss project-related issues helped them to resolve many practical problems. Therefore, brainstorming activities in NGOs help to investigate the project issues at team level and assist the team to generate creative ideas and alternative solutions to project issues. In addition, sharing ideas in a team setting makes a creative environment in which using each other's ideas generates resourceful solutions for a specific project problem. Brainstorming sessions were discussed in the literature as an important resource (Jugdev and Mathur, 2006b; Egbu, 2004; Leonard-Barton, 1992). Further, it was examined under the sharing know-how factor and revealed that it contributes to the competitive advantage of private organisations (Jugdev and Mathur, 2006b; Jugdev et al., 2009; Mathur et al., 2007). However, the present study in NGOs considered this resource under team PM resource and the findings (standardised factor loading (r^2) = 0.70, p<0.001) recommend it as a critical element in team PM resource in NGOs.

Second, success and failure story is identified as a resource in team PM resource. Presenting success and failure stories to the team members helps them to organise their project work effectively and improve their PM practices. As discussed (section 4.6.3.1.6), this resource also can be considered as a tacit asset as discussions held in the events cannot be fully documented. Previous research emphasised this is the knowledge resource for the organisations for effectively sharing knowledge (Ritchie, 2011; Cameron, 2007). Team members who are involved in the discussions gain more knowledge, more even than those things discussed in the session documentation. The exploratory case study highlighted that

success stories are very helpful for team members to know the best PM practices, and failure stories make them aware of inappropriate PM practices in NGOs. NGOs implement projects in different areas and in different contexts. Therefore, sharing this kind of success and failure stories assists the team to understand how to practice PM in different contexts across regions and countries. This is also discussed as a crucial PM resource under the sharing know-how factor in the literature (Jugdev and Mathur, 2006b; Jugdev et al., 2009; Mathur et al., 2007). The present study shows that success and failure story scored high standardised factor loading ($r^2 = 0.78$, p<0.001) in team PM resource. Therefore, the findings recommend it as another crucial element in team PM resource in NGOs.

Third, team cohesion and trust is revealed as an important resource in team PM resource. Team unity and faith among the members within a team improve team learning and their performance. Existing research highlighted cohesion and trust is a key resource for the organisations for productive and successful team work (Mach et al., 2010; Hempel et al., 2009). As discussed (section 4.6.3.1.7), this is tacit knowledge and subjective. Further, the exploratory case study stressed that cohesive and trusted team members are a strength in projects and lead to successful project operations. Therefore, highly cohesive teams in an organisation will be more effective in achieving set project objectives. Daft and Marcic (2009) says increasing team members' communication, creating a friendly team atmosphere and providing good motivation to team members will increase team cohesiveness and trust which leads team members to work together to pursue common project goals. This is rarely discussed in the literature as a crucial PM resource. However, this study has recognised this as very critical element (standardised factor loading (r^2) = 0.79, p<0.001) in team resource for successful project operations.

Finally, team value is identified as an important element in team PM resource. Strong PM discipline will help the team to apply effectively PM knowledge, skills, tool and techniques in every project activity. Therefore, it is very important for NGO managers to cultivate strong shared PM values among the team members. As discussed (section 4.6.3.1.8), this is tacit knowledge and subjective. Further, the exploratory case study highlighted that team members strong believe on PM applications will lead to successful project operations. Shared PM values in an organisation guide the PM practices to the team members. Therefore, it is very

important to ensure the team members choose the appropriate PM values within an organisation. This is a PM element rarely discussed in the PM literature. However, this study has recognised this as very crucial resource for effective project operations and success of projects. The study shows that this is the element (standardised factor loading $(r^2) = 0.82$, p<0.001) most explained compared with other elements in team PM resource.

Items	Standardised Factor Loadings (r ²)
Brainstorming Sessions	0.70
Success and Failure stories	0.78
Team Cohesion and Trust	0.79
Team PM Values	0.82

* Significance at 0.001 level

Table 7-1: Standardised Factor Loadings – Items of Team PM Resource

As discussed above, the survey study results identified four critical items out of ten tested items. The first two elements - brainstorming sessions and success and failure stories - are considered as knowledge-sharing activities through team interactions. These two activities enable stronger sharing of PM knowledge and skills within teams compared with other team knowledge-sharing activities in NGOs. These activities support improved generation of team creative ideas for solving project problems and assist teams understand how to organise successful projects, respectively. Finally, the last two identified elements of team cohesion and trust and team PM values were considered as team cultural characteristics. The results revealed that team cultural elements are highly important for NGOs because team cohesion, trust and values make teams work together with common interest and mutual understanding towards project objectives. Further, the results failed to reveal that team PM competencies are a critical element in team PM resource, even though it was identified in the literature as an important element in private sector organisations (see section 4.6.3.1.9). This is because most NGO managers in Sri Lanka may not have been adequately trained in a common PM body of knowledge, therefore, their PM expertise and best practices were lower compared with the private sector. RBV perspective, this is the weak state for NGOs having lesser PM competencies for implementing complex NGO projects. However, brainstorming sessions and successful and failure stories substantially compensate for the lack of this particular resource.

7.3.2. Organisational PM Resource

PM elements evaluated at the organisational level are termed as organisational PM resource. In team PM resource, highly tacit resources are seen which are personified within the heads of team members in organisations. However, organisational PM resource highly explains the codified resources which can be stored in organisational repositories. Subsequently, as discussed (section 4.6.3.2), organisational PM resource helps to enhance team PM resource and vice versa. This capacity is very central to planning and implementing projects. Figure 7-3 shows the development process of organisational PM resource.

Literature on private sector organisations discussed a significant number of PM resources which are identified as important explicit PM resources for organisations. Those are: PM office, PM methodology and tools, staff capacity-building programs, shared project vision, objectives and policy, process for sharing knowledge, and effective project communication (Kaleshovska, 2014, Richman, 2011, Ika and Lytvynov, 2011). The exploratory case study (stage one) of NGOs centred on this finding and revealed more elements: PM information system, monitoring and evaluation mechanism, defined organisational PM culture and supportive organisational leadership to PM. Consequently, confirming interviews (stage two) organised the elements of organisational PM resources under ten headings: effective PM office, PM methodology, standards and process, PM tools and techniques, PM information system, project M and E mechanism, staff capacity-building programs, formal meetings for sharing knowledge, effective project communication systems and technology, defined organisational PM culture and supportive leadership to PM.

Next, EFA extracted the best items of organisational PM resources. The item PM information system was accounted low factor loading (less than 0.55), therefore this item was eliminated in the initial EFA extraction (see section 6.3.2). The other nine items were considered as good items to further process with CFA. Finally, CFA confirmed four elements are critical for organisational PM resource with high standardised regression estimates (r^2) and identified these resources, namely, effective PM office, PM methodology, standards and process, PM

tools and techniques, and effective project communication systems and technology. These identified key elements of organisational PM resource are elaborated in the next section.

Literature Review

Project office, PM methodology and tools, Staff capacity building programs, Shared project vision, objectives and policy, Process for sharing knowledge and Effective project communication

Case Study: Exploring Interviews

PM office and structure, PM methodology, standards and process, PM tools and techniques, PM information system, Project M & E mechanism, Staff capacity building programs, Shared project vision, objectives and policy, Formal meetings for sharing knowledge, Effective project communication, Right team selection, team motivation and career path and Supportive organizational culture to PM

Confirming Interviews

Effective PM office, PM methodology, standards and process, PM tools and techniques, PM information system, Project M and E mechanism, Staff capacity building programs, Formal meetings for sharing knowledge, Project communication systems and technology, Defined organisational PM culture and Supportive organisational leadership to PM

Survey Study: EFA

office, PM Effective PM methodology, standards and process, PM tools and techniques, Project M & E mechanism, Staff capacity building programs, Formal meetings for sharing knowledge, Project communication systems and technology, Defined organisational PM culture and Supportive organisational leadership to PM

> CFA and SEM Effective PM office, PM methodology, standards and process, PM tools and techniques, Project communication system and technology

Understand the Nature of Organisational PM Resource in NGOs

Test and Identify Critical Elements of Organisational PM Resource in NGOs

Figure 7-3: Organisational PM Resource Development

7.3.2.1. Summary of Findings: Organisational PM Resource

The survey study identified the four crucial elements of organisational PM resource. These are effective PM office, PM methodology, standards and process, PM tools and techniques, and effective project communication systems and technology. Table 7-2 shows the standardised factor loading of each item explained in organisational PM resource.

First, an effective PM office is considered as a critical explicit resource in organisational PM resource. As discussed (section 4.6.3.2.1), A PMO is established within an organisation to manage the projects of organisation. A PM office formally supports the project team members to carry out their project activities. Therefore, this kind of knowledge-sharing activity could be considered as an explicit resource. Further, the exploratory case study highlighted PM office in NGOs support in providing necessary advice and guidance to project team members to appropriately carry out their scheduled work. PM office provides planning support, technical support, monitoring and evaluation support, organising project meetings, and recruiting and motivating project staff members in a project entity. This is a resource highly discussed as an important explicit resource in the PM literature (Mathur et al., 2013; Martin et al., 2007; Jugdev and Mathur, 2006a; Aubry et al., 2008; Hobbs and Aubry, 2007; Hill, 2004). Further studies revealed the PM office supports successful project execution and high project performance (Kaleshovska, 2014; Dai and Wells, 2004). The present NGO study shows that effective PM office scored high standardised factor loading ($r^2 = 0.77$, p<0.001) in organisational PM resource in NGOs.

Second, PM methodology, standards and process are identified as a key resource in organisational PM resource. NGOs maintaining effective PM methodologies and standards tailor-made to their objectives and nature of projects which assist team members to know how to plan and execute the projects in a proper way. As discussed (section 4.6.3.2.2), this is a very formal and explicit resource, which is widely available to anyone to learn and practise project activities. Further, the exploratory case study underlined most NGOs keep a program handbook which includes PM methodology, standards and processes and this helps all team members to undertake a project in a correct way. This is a resource extensively discussed in the PM literature (Golini and Landoni, 2014; Mathur et al., 2013; Fortune et al., 2011; Mathur et al., 2007; White and Fortune, 2002; Gunnarson et al., 2000). Further, it

supports managing quality projects (Milunovic and Filipovic, 2013) and PM success of the organisation (Labuschagne and Steyn, 2010). However, this does not contribute to the project success of an organisation (Wells, 2012). The present study shows that this is the resource (standardised factor loading (r^2) = 0.82, p<0.001) most explained compared with other resources in organisational PM resource in NGOs.

Third, PM tools and techniques are revealed as a key resource in organisational PM resource. As discussed (section 4.6.3.2.3), these are very formal explicit resources which help team members efficiently plan and implement projects. Further, the exploratory case study pointed out that NGOs use PM tools, for example, Logical Framework Matrix, Gantt chart and Problem Tree Analysis, and PM techniques, for example, Participatory Rural Appraisal, Results Based Reporting and Participatory Network Analysis. These tools and techniques are highly helpful to plan and implement their projects very effectively. These resources have been identified as common for all NGOs since even though they have different objectives, their operations focus significantly on humanitarian directions. The PM literature extensively identified this is a very important resource for organisations for effective project operations (Mathur et al., 2013; Fortune et al., 2011; Mathur et al., 2007; Jugdev and Mathur, 2006b; Benser and Hobbs, 2008; Kloppenborg and Opfer, 2002; Thamhain, 1999; Fox and Spence, 1998). Previous studies revealed PM tools and techniques contribute highly to successful project operations (Fortune et al., 2011; Patanakulet et al., 2010; White and Fortune, 2002). The present study shows that PM tools and techniques scored high standardised factor loading ($r^2 = 0.80$, p<0.001) in the organisational PM resource of NGOs.

Finally, effective project communication systems and technology is identified as an important resource in organisational PM resource. As discussed (section 4.6.3.2.8), effective project communication systems and technology helps project members to communicate PM experiences among the team members and this is an explicit resource; communication takes place through telephone, email, Skype, video conferences and network-sharing system. Further, the exploratory case study revealed that communications among staff members commonly take place via email, Skype and mobile in NGOs. These are very helpful to share their work related things. This is a resource discussed in the literature as an important resource for effective communication among the staff members (Cervone, 2014; Mathur et

al., 2013; Relich and Banaszak, 2011; Mathur et al., 2007; Jugdev et al., 2006; Verma, 1995). Further, project communication systems contribute to the quality and productivity of project team and project success of organisations (Cervone, 2014; Relich and Banaszak, 2011). This study has recognised this as a very crucial resource for improving effective communication for among team members. The study has recognised this as very important resource (standardised factor loading (r^2)=0.72, p<0.001) in organisational PM resource and it highly contributes to PM success of NGOs.

Items	Standardised Factor Loadings (r ²)
Effective PM Office	0.77
PM Methodology, Standards and Process	0.82
PM Tools and Techniques	0.80
Effective Project Communication Systems and Technology	0.72

* Significance at 0.001 level

Table 7-2: Standardised Factor Loadings – Items of Organisational PM Resource

As explained above, the survey study identified four critical elements of organisational PM resource: effective PM office, PM methodology, standards and process, PM tools and techniques, and effective project communication systems and technology. The first three items assist to improve the effective project operations through providing necessary advice, appropriate methods and means, respectively. Finally, the last item enables effective knowledge sharing in NGOs. The results are similar to the findings on private sector organisations. Further, except for PM information system, the other items received adequate variance (>0.6); however, those items were eliminated because of high cross loadings. The PM information received very low variance because the operating NGOs in Sri Lanka have fewer applications in sophisticated project management software; therefore they failed to effectively communicate full information of project progress to other team members.

7.3.3. Collaborative Social PM Resource

The literature discussed only the team and organisational PM resources. This is the resource newly developed in the exploratory case study. As discussed (section 4.6.3.3), this resource is comprised of a mixture of explicit and tacit resources and support to boost team and organisational PM resources. At the same time, team and organisational PM resources are inevitable for effective PM knowledge exchange between organisations and external bodies. Figure 7-4 shows the development process of collaborative social PM resource.

The exploratory case study revealed the following PM elements: project advisory from government bodies, project advisory from donors, intra and consortium meetings, official information releases, joint project interactions, networking with stakeholders, beneficiary integration in projects, social marketing, and community of practice. Afterwards, confirming interviews organised the collaborative social PM resources into ten headings: project advisory from government bodies, project advisory from donors, NGOs intra and consortium meetings, official information releases, joint projects formal meetings, joint projects informal interactions, networking with stakeholders, beneficiary integration in projects, project advisory form and consortium meetings, official information releases, joint projects formal meetings, joint projects informal interactions, networking with stakeholders, beneficiary integration in projects, project marketing and community of practice through online social networks.

Next, EFA extracted the best items of collaborative social PM resources. Two elements, namely, official information releases and community of practice through online social networks, were accounted low factor loadings (less than 0.55); therefore, these two items were eliminated in the EFA stage (see section 6.3.3). Finally, four items, namely, project advisory from donors, NGOs intra and consortium meetings, networking with stakeholders and project marketing, were selected with high standardised regression estimates (r^2) as dominant elements of collaborative social PM resource. These identified dominant elements are explained in the next section.

Literature Review

This is the resource newly identified as a new resource to the existing literature.

Case Study: Exploring Interviews

Project advisory from government bodies, Project advisory from donors, Intra and consortium meetings, Official information releases, Joint project interactions, Networking with stakeholders, Beneficiary integration in projects, Social marketing and Community of practice

Confirming Interviews

Project advisory from government bodies, Project advisory from donors, NGOs intra and consortium meetings, Official information releases, Joint projects formal meetings, Joint projects informal interactions, Networking with stakeholders, Beneficiary integration in projects, Project marketing and Community of practice through online social networks

Survey Study: EFA

Project advisory from government bodies, Project advisory from donors, NGOs intra and consortium meetings, Joint projects formal meetings, Joint projects informal interactions

CFA and SEM Project advisory from

donors, NGOs intra and consortium meetings, Networking with stakeholders and Project marketing

Understand the Nature of Collaborative Social PM Resource in NGOs

Test and Identify Critical Elements of Collaborative Social PM Resource in NGOs

Figure 7-4: Collaborative Social PM Resource Development

7.3.3.1. Summary of Findings: Collaborative Social PM Resource

The study identified four crucial elements of collaborative social PM resource: namely, project advisory from donors, NGOs intra and consortium meetings, networking with stakeholders and project marketing. These resources are unique to NGOs' characteristics and help to the effective projects. Table 7-3 shows the standardised factor loading of each item that explained collaborative social PM resource.

First, project advisory from donors is considered as an important resource in collaborative social PM resource. As discussed (section 4.6.3.3.2), this is an explicit resource since commonly the advisory takes place from the donors formally through meetings or written manuals. This supports the project teams to acquire donors' expert advice and requirements to execute projects. Further, the exploratory case study emphasised that donors advisory is very helpful for team members of NGOs to organise their projects effectively. Donors share their experience and expertise with the project teams to plan well and implement projects. In addition, they provide much monitoring and evaluation support to project teams. These highly support project success in NGOs. This is a resource not revealed in the PM literature. However, the present study shows that the project advisory from donors scored high standardised factor loading ($r^2 = 0.73$, p<0.001) in collaborative social PM resource in NGOs.

Second, NGOs intra and consortium meetings are considered as a key resource in collaborative social PM resource. As discussed (section 4.6.3.3.3), this is an explicit resource since usually these meetings are formal and recorded as documents. The exploratory case study highlighted that intra and consortium meetings are highly helpful for team members to know the PM practices among the NGOs and set common standards for implementing community development projects. Further, it pointed out that NGO staff commonly attend consortium and cluster meetings and these meetings help them to share their project experiences among the NGOs staff members and to learn each and every NGO project in their region. Therefore, it is much easier for NGOs to organise their projects among the NGOs. In addition, sharing the knowledge and skills of project practices helps to improve the staff capacities of NGOs. This is a resource not revealed in the PM literature. The present study shows that the standardised factor loading of NGOs' intra and consortium meetings is $r^2 = 0.67$ (p<0.001) in collaborative social PM resource.

Third, networking relations with stakeholders is revealed as an important resource in collaborative social PM resource. As discussed (section 4.6.3.3.7), networking with stakeholders means that project staff members have informal interactions discussing project activities with project stakeholders. This takes place through informal meetings, telephone conversations or other informal events. Therefore, this resource can be considered as a tacit resource. The exploratory case study revealed that NGO project staff members have informal networking relationships with grassroots level organisations, relevant government departments and beneficiaries. These help them to know more about the project stakeholders' interests and suggestions for their projects. This is not identified as a crucial resource in the literature. However, this study has recognised this as a very critical resource for effective knowledge sharing of project activities. The study shows that networking with stakeholders scored high standardised factor loading ($r^2 = 0.71$, p<0.001) in collaborative social PM resource.

Finally, project marketing is identified as an important resource in collaborative social PM resource. The case study stated that project marketing events take place through inauguration meetings, awareness programs, home visits, exhibitions, theatre programs and community meetings in NGOs. Mostly, these kinds of event take place formally and stakeholders' views are recorded as documents for project management team discussions. However, whole discussions and subjective feelings of the stakeholders cannot be effectively presented as documents in all cases. Therefore, as discussed (section 4.6.3.3.9), this resource has highly tacit characteristics. This is a resource not identified in the PM literature. However, this study has recognised this as a very crucial resource to effectively reorganise projects very successfully. The study shows that project marketing events scored high standardised factor loading ($r^2 = 0.72$, p<0.001) in collaborative social PM resource.

Items	Standardised Factor Loadings (r ²)
Project advisory from donors	0.73
NGOs intra and consortium meetings	0.67
Networking with stakeholders	0.71
Project marketing events	0.72

* Significance at 0.001 level

Table 7-3 Standardised Factor Loadings – Items of Collaborative Social PM Resource

The study identified collaborative social PM resource as a new resource to the existing literature. Team PM resource has more informal and tacit characteristics while organisational PM resource has more formal and explicit characteristics. However, collaborative social PM resource has a mixture of formal and informal knowledge-sharing activities with external bodies. Further, this study identified four critical elements of collaborative social PM resource: project advisory from donors, NGOs intra and consortium meetings, networking with stakeholders and project marketing. The first two items are more formal and explicit characteristics. When looking at NGOs' contexts, the donors take an important role to advise the implementing NGOs to carry out their funded projects very successfully and NGOs intra and consortium meetings support effective knowledge sharing among the NGOs. Therefore, these two explicit elements received high importance in formal PM resource. Finally, the last two items of networking with stakeholders and project marketing highly support sharing information among the stakeholders, mainly with beneficiaries, community leaders, government officials and other NGOs who operate in the community. Therefore, for NGOs the collaborative social PM resource is a very significant resource to get new knowledge across the stakeholder networks to execute well their own projects to meet stakeholder requirements and to solve complex social problems.

7.4. Discussion on Developing Evaluating Measures of Project Success

The research on projects success has been extensively conducted in private organisations. However, research on non-profit organisations has very rarely been conducted. The literature suggested looking at project success in different levels (Sutton, 2005; Pinkerton, 2003; Shenhar et al., 1997). As discussed (see section 4.6.4), the study examined the project success into three levels: PM success, project success and business success. The first level is PM success which examines meeting parameters of scope, quality, time and cost. The second level is project success which examines the stakeholders' satisfaction and project impacts and the third level is NGO success which examine how the projects support to achieve the objectives of NGOs and further to contribute to the NGOs to sustain long time in the community. The next section compares and discusses the present case and survey study findings with previous research findings.

7.4.1. Item Development for Measuring PM Success

The findings of the exploratory case study and survey study have confirmed the four elements which evaluate the PM success of projects as identified in the literature. Those are: meeting scope, meeting quality, meeting time and meeting budget. The PM literature extensively discussed these four elements, which are used to evaluate project success in private, public and international projects (Ika et al., 2012; Shenhar et al., 2002; Belassi and Tukel, 1996; Pinto and Slevin, 1988; De Wit, 1988). However, this study especially for NGOs which reconfirmed the literature that these measures could be applicable to NGO projects to evaluate the PM success. Figure 7-5 shows the items development for measuring PM success.

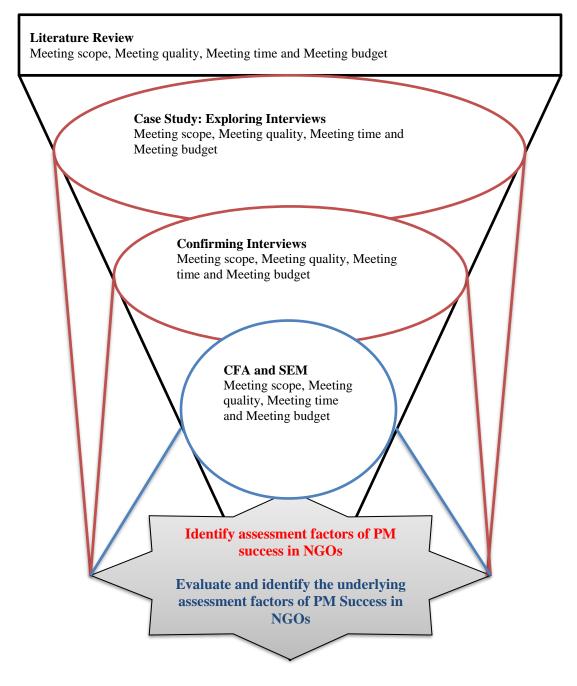


Figure 7-5: Item Development for Measuring PM Success

7.4.1.1. Summary of Findings: PM Success

The survey findings confirmed the literature for measuring PM success with the support of four factors, namely, scope, quality, time and budget. Table 7-4 shows the standardised factor loading of each item that explained PM success.

Meeting scope is a measure to evaluate PM success (Baccarini, 1999; Shenhar et al., 2001; Atkinson, 1999; Maloney, 1990). NGOs are mission-driven organisations, therefore to meet the community and stakeholders' requirements are very important. NGOs normally do their planning by using LFM and indicate their overall goal, project objectives and relevant activities in the LFM. Finally, they evaluate how far their projects achieve these planned objectives. The exploratory case study emphasised that meeting the scope and objectives of the project has considered the most important indicator to evaluate PM success in NGOs. The study shows that the standardised factor loading of meeting scope is $r^2 = 0.84$ (p<0.001) in PM success.

Meeting quality is the next factor to evaluate PM success (Shenhar et al., 2001; Tukel and Rom, 2001; Kometa et al., 1995). As explained in the previous paragraph, the NGO determines the quality parameters for the project in the LFM planning stage and evaluates how far the project fulfilled these planned quality parameters. The exploratory case study highlighted that NGOs use the quality bounds of the project to evaluate PM success. The study shows that the standardised factor loading of meeting quality is $r^2 = 0.804$ (p<0.001) in PM success.

Meeting time is the next factor to evaluate PM success (Baccarini, 1999; Shenhar et al., 2001; Atkinson, 1999; Maloney, 1990). NGOs schedule the time frame for the project activities and completion of the project. The case study stressed that the timely completion of projects is very important for PM success. However, some of participants indicated that a significant number of their projects become delayed due to unexpected circumstances, such as natural disasters, bad weather, conflict and restrictions imposed on access to project areas. The study shows that the standardised factor loading of meeting time is $r^2 = 0.76$ (p<0.001) in PM success.

Finally, meeting budget is used to evaluate PM success (Cooke-Davies, 2002; Hartman, 2000; Baccarini, 1999; De Wit 1988). NGOs budget for their projects in planning stage. However, NGOs make changes in budgets over the project period, as circumstances change in community needs and requirements. The exploratory case study highlighted that meeting the budget is a good indicator for evaluating project success. However, participants indicated

they fail in most of cases due to poor planning and changes occurring in the community needs. The study shows that the standardised factor loading of meeting budget is $r^2 = 0.71$ (p<0.001) in PM success.

Items	Standardised Factor Loadings (r ²)
Meeting Scope	0.84
Meeting Quality	0.80
Meeting Time	0.76
Meeting Budget	0.71

* Significance at 0.001 level

 Table 7-4: Standardised Factor Loadings – Items of PM Success

The study emphasised the four evaluating items of meeting scope, quality, time and budget are more appropriate to assess PM success in NGOs, as explored by previous researchers in private and public sector organisations. Therefore, this explains the four identified elements are common for assessing PM success for all types of private and non-profit organisations. This supports the adoption of a business approach to the non-profit organisations. However, assessment of these items might differ from private sector to NGOs since the purpose of assessment, accountability and stakeholders' expectations may different between these two types of organisations.

7.4.2. Item Development for Measuring Project Success

Initially, the thematic framework was developed from the literature to assess project success, which consists of the items stakeholders' satisfaction and project impacts (Serra and Kunc, 2015; Ika et al., 2012; Sutton, 2005; Schwalbe, 2004). However, as discussed (section 4.6.4.2), the exploratory case study revealed two more items, namely, contribution to development objectives and project sustainability. Finally, the survey study dropped out one item called contribution to development objectives, as this factor's loading was low and it

had high cross loadings (see section 6.4.3.2). Figure 7-6 shows the development of measures to evaluate project success in NGOs.

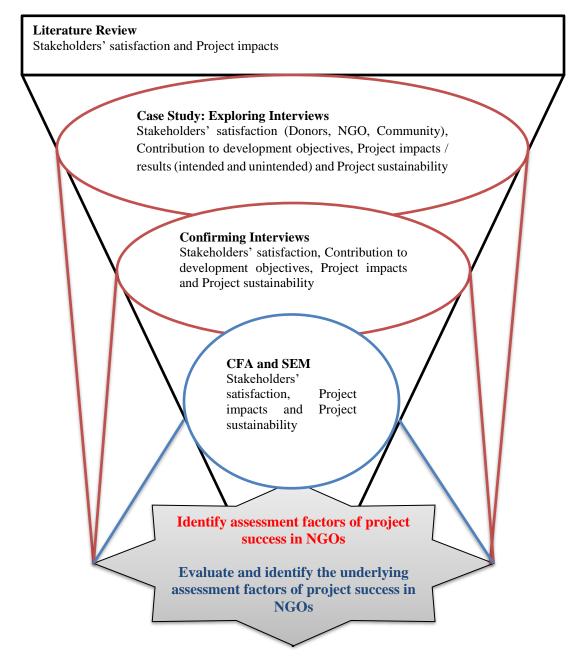


Figure 7-6: Item Development for Measuring Project Success

7.4.2.1. Summary of Findings: Project Success

The study identified three underlying elements to evaluate project success of NGOs. Those are meeting stakeholders' satisfaction, project impacts and project sustainability in the

community. Table 7-5 shows the standardised factor loading of each item which explained project success.

Meeting stakeholders' satisfaction is the first important factor to use to evaluate project success. In the PM literature it is widely acknowledged that customers' satisfaction is an important element to evaluate project success in private sector organisations (Cooke-Davies, 2002; Torbica and Stroh, 2001; Liu and Walker, 1998). The NGO objective is not only fulfilling the community needs, but also they are accountable to other stakeholders, such as government bodies, donors, and other NGOs who work with them in similar projects. Therefore, they need to try to fulfil the requirements of all stakeholders. The case study highlighted that NGOs try to meet the stakeholders' satisfaction in every project and this will be the real cause for project success. The study shows that the standardised factor loading of stakeholders' satisfaction is $r^2 = 0.76$ (p<0.001) in project success.

Second, the study revealed that evaluating the intended and unintended impacts of projects is an important measure to evaluate project success. Previous studies emphasised the impact of projects is an important measure for project success (Diallo and Thuillier, 2005, 2004; Shenhar et al., 2001). The case study highlighted that NGOs' projects in the long run should provide favourable changes in community development. This promotes community resilience which assists the community to lead themselves to live a better life. For example, if an NGO undertakes capacity development projects in the community, in the first instance, the NGO would see PM success as a way for evaluating successful completion of projects. However, it is highly important to assess the impacts of favourable behavioural changes which have happened in the community, in addition to that. The study shows that the standardised factor loading of project impacts is $r^2 = 0.61$ (p<0.001) in project success.

Finally, project sustainability is identified to evaluate project success in NGOs. This is a measure is not revealed in the literature to evaluate project success. However, this is a very important measure for NGO projects. The NGO context is different from that of private organisations and they have been involved in remarkable number of different types of project for community development. Their project implementations have a wider range of locations,

within the country or internationally. NGOs undertake projects in the communities and leave once the project is completed. But, after completion of these projects, work should continue in the community until the community becomes full resilient. Therefore, they need to look into the sustainability of the project in the specific community. For example, if it is an income generation project, they would see how long the business would be stable for and how much income it would generate for a longer period in community. The study shows that the standardised factor loading of project sustainability is $r^2 = 0.75$ (p<0.001) in project success.

Items	Standardised Factor Loadings (r ²)	
Meeting stakeholders' satisfaction	0.78	
Project impacts (Both intended and unintended)	0.61	
Project Sustainability	0.75	

* Significance at 0.001 level

Table 7-5: Standardised Factor Loadings – Items of Project Success

The survey identified three critical elements: stakeholders' satisfaction, project impacts and project sustainability for assessing project success in NGOs. The first two elements were informed in the PM literature to evaluate project success in private sector organisations. However, the third item of project sustainability is highly important to NGOs because the project should be sustainable to provide continuous support to the communities until the community gains resilience.

7.4.3. Item Development for Measuring NGO Success

Initially, the thematic framework was developed from the literature to assess NGO success, which consists of three items: contribution to NGOs' vision, mission and objectives, and NGOs sustainability (Diallo and Thuillier, 2005, 2004; Cooke-Davies, 2002; Shenhar et al., 2001). However, as discussed (section 4.6.4.3), the exploratory case study identified two more measures, namely, stakeholders' rapport and NGOs reputation. Finally, the survey

study confirmed these four elements explain evaluation of NGO success. Figure 7-7 shows the item development for evaluating NGO success.

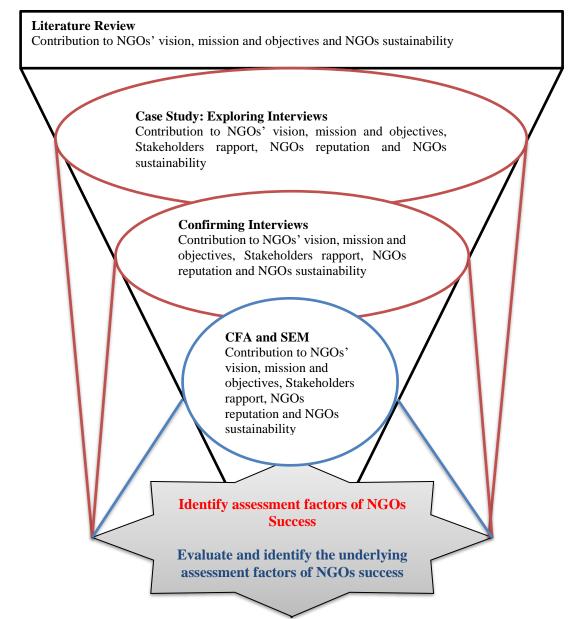


Figure 7-7: Item Development for Measuring NGO Success

7.4.3.1. Summary of Findings: NGO Success

The study identified four elements to evaluate NGO success. These are contribution to NGOs' vision, mission and objectives, stakeholders' rapport, NGOs reputation and NGOs

sustainability. Table 7-6 shows the standardised factor loadings of each items which explained NGO success.

Contribution to NGOs' vision, mission and objectives is identified as the first factor to evaluate NGO success. Previous researchers emphasised that the projects should help to attain of the organisational objectives (Shenhar et al., 2001; Maloney, 1990). The case study highlighted that every project undertaken by NGOs should lead to accomplish the NGO's vision, mission and objectives. The survey study shows that the standardised factor loading of this resource is $r^2 = 0.83$ (p<0.001) in NGO success.

Stakeholders' rapport is considered as the next factor to evaluate NGO success in NGOs. Execution of projects should lead to increase strong connections with stakeholders. Then, in the future, NGOs would able to carry out their projects with strong support and advice of their stakeholders. The exploratory case study further emphasised every NGO project should strengthen the relationships with their stakeholders for successful continuity of their operations. The study shows that the standardised factor loading of stakeholders' rapport is $r^2 = 0.59$ (p<0.001) in NGO success.

NGOs reputation is identified as the next measure to evaluate NGO success. While increasing NGOs reputation, the NGOs' abilities to raise funds from donors, government and the general public will be increased. The exploratory case study indicated that NGOs reputation increasing from the government and public while they succeed in projects. The study shows that the standardised factor loading of NGOs reputation is $r^2 = 0.84$ (p<0.001) in NGO success.

Finally, NGOs sustainability is identified as a very important measure for NGO success. This was recognised as an important measure for international projects (Diallo and Thuillier, 2005, 2004). NGOs are not doing one-time support for the community; instead they need to continue their fullest support to the community for a long period. Therefore, NGO projects should contribute to their long-term sustainability. Further, the exploratory case study pointed out that NGO success in their projects leads to increasing their fundraising ability and their stakeholders' support also goes up. Therefore, this assists NGOs' long-term

survival. The study shows that the standardised factor loading of NGOs sustainability is $r^2 = 0.61$ (p<0.001) in NGO success.

Items	Standardised Factor Loadings (r ²)
Contribution to NGOs' vision, mission and objectives	0.83
Stakeholders' Rapport	0.59
NGOs Reputation	0.84
NGOs Sustainability	0.61

* Significance at 0.001 level

Table 7-6: Standardised Factor Loadings – Items of NGO Success

The study identified four critical factors – contribution to NGOs' vision, mission and objectives, stakeholders' rapport, NGOs reputation and NGOs sustainability – to evaluate NGO success. This is the third level of NGO success explored as an important level to evaluate overall project success of organisations. However, this was not empirically tested in the third, individual level by previous researchers. Therefore, as this study has highlighted, this is a level important to evaluate overall project success of NGOs.

7.5. Associations between PM Resource and Project Success

The present study focuses on formulating a model to show the associations between PM resources and project success. As this model is being built newly, the study is highly reliant on the findings of the exploratory case study, which identified initial relationships between PM resources and project success and the survey study which supported to building and testing a valid model. Previous sections (7.3 and 7.4) elaborated the findings of the exploratory case study and survey study by formulating three levels of PM resources and three levels of project success. The identified three levels of PM resources are: team, organisational and collaborative social PM resources and the acknowledged three levels of project success. This section explains the associations (direct, indirect and total) between each level of PM

resource and project success of NGOs using the standardised regression results of the SEM final valid model (see section 6.5.7).

7.5.1. Associations between Team PM Resource and Project Success

Exploratory case study findings indicated that there is a positive direct and indirect association between team PM resource and the three levels of project success. The survey study results confirmed that team PM resource has a direct association with PM success, direct and indirect associations with project success and indirect associations with NGO success. However, the survey study did not indicate that there is a direct positive association between team PM resource and NGO success.

The standardised regression (r^2) of direct effects on PM success and project success is 0.322 and 0.236, respectively, and indirect effects on project success and NGO success is 0.142 and 0.361, respectively. It shows that team PM resource has a significant effect on the three levels of project success in NGOs. However, it is pointed out that team PM resource does not directly contribute to NGO success; instead, it indirectly contributes to NGO success either through PM success or/and project success. Team PM resource greatly improves the team's project operations, either improving team PM knowledge and skills or improving team members' mutual understandings and values. Therefore, the results emphasised that PM resource is highly important for NGOs to succeed at the three levels of project success. However, the third level of NGO success may not be achieved directly by team PM resource since NGO success could be comprehended while PM and project success are accomplished. The NGOs nature, prime mission is to serve vulnerability people or to develop communities which seek support from the NGOs. Therefore, the team resources directly contribute to the PM success and project success as these resources highly support for improving team competences and building effective team culture which are vital for completing projects within established parameters and achieving community objectives. Further, these resources have made good indirect contribution to the NGOs success because more than NGOs resource profile, how these resources supported to achieve the PM success and project success leads to the NGOs success. Table 7-7 presents the association between team PM resource and the three levels of project success.

Team PM Resource	Standardised Regression Estimates (r ²)		
Team I W Resource	PM Success	Project Success	NGO Success
Direct Effects	0.322	0.236	-
Indirect Effects	-	0.142	0.361
Total Effects	0.322	0.378	0.361

* Significance at 0.001 level

 Table 7-7: Associations between Team PM Resource and Project Success

7.5.2. Associations between Organisational PM Resource and Project Success

Exploratory case study findings indicated that organisational PM resource has direct and indirect associations with the three levels of project success in NGOs. However, the survey study results pointed out that organisational PM resource has only significant direct association with PM success and it does not make a direct contribution to project success and NGO success. However, the results did indicate organisational PM resource has indirect associations with project success and NGO success.

The standardised regression (r²) of direct effects on PM success is 0.431 and indirect effect on project success and NGO success is 0.190 and 0.245, respectively. It shows that organisational PM resource makes a very strong contribution to PM success and makes a medium indirect contribution to project success and NGO success. Organisational PM resource consists of formal forms of items which greatly support planning, organising and executing projects. Therefore, PM success is achieved where projects are completed through meeting scope, quality, budget and time requirements. This success contributes to project success and NGO success. However, organisational PM resource does not contribute directly to achieve either project success or NGO success because these formal forms of organisational resources are limited to immediate project outcomes. Table 7-8 presents the association between organisational PM resource and the three levels of project success.

Organisational PM Resource	Standardi	sed Regression Est	sion Estimates (r ²)	
Organisational I W Resource	PM Success	Project Success	NGO Success	
Direct Effects	0.431	-	-	
Indirect Effects	-	0.190	0.245	
Total Effects	0.431	0.190	0.245	

* Significance at 0.001 level

Table 7-8: Associations between	Organisational P	M Resource and	Project Success

7.5.3. Associations between Collaborative Social PM Resource and Project Success

The exploratory case study identified collaborative social PM resource as a new resource for NGOs which contributes to project success of NGOs. This is the unique resource for NGOs, highly enhancing knowledge sharing through interactions across the stakeholders. NGOs operate under the turbulent environment and in various communities as it is highly crucial sharing knowledge for doing better and effective projects to the communities. Further, in the Sri Lankan NGOs' context, project managers lack formal PM qualifications and most of them improve their competencies through networking activities. In addition to that, many international NGOs operate in Sri Lanka, however they lack of information of community needs and what NGOs address and how they address these needs. Therefore, this resource is crucial for the NGOs in the Sri Lanka context.

The survey study confirmed that collaborative social PM resource has a significant positive effect on the three levels of project success. It indicated that collaborative social PM resource has a significant direct association with PM success and project success and it does not make a direct contribution to NGO success. However, as with the other two PM resources, it contributed indirectly to NGO success.

The standardised regression (r^2) of direct effects on PM success and project success is 0.186 and 0.328, respectively, and indirect effect on project success and NGO success is 0.082 and 0.354, respectively. It shows that collaborative social PM resource makes a strong contribution to project success compared with the contribution to PM success. This may be acquiring knowledge and skills from external stakeholders who support NGOs to understand more about stakeholders' requirements and how to work with other NGOs to fulfil community requirements. Therefore, collaborative social PM resource greatly supports NGOs for meeting stakeholders' requirements, project impacts and project sustainability more than completing the project within scope, quality, budget and time constraints. This means capacity is highly focused on project outcomes rather than immediate outputs. Further, it is pointed out that collaborative social PM resource did not directly contribute to NGO success; instead, it indirectly contributes to NGO success either through PM success or/and project success. Table 7-9 presents the association between collaborative social PM resource and the three levels of project success.

Collaborative Social PM	Standardised Regression Estimates (r ²)		
Resource	PM Success	Project Success	NGO Success
Direct Effects	0.186	0.328	-
Indirect Effects	-	0.082	0.354
Total Effects	0.186	0.410	0.354

* Significance at 0.001 level

 Table 7-9: Standardised Effects of Collaborative Social PM Resource on Project

 Success

7.5.4. Comparison of Total Effects of Three Levels of PM Resources on Project Success The previous sub-section explained how individual PM resource contributed to the three levels of project success of NGOs. This section compares the total effects of individual level of PM resource over the three levels of project success of NGOs. Standardised regression (r²) of total effects for team PM resource on PM success, project success and NGO success is 0.322, 0.378 and 0.361, respectively. Organisational PM resource's effect on PM success, project success and NGO success is 0.431, 0.190 and 0.245 while collaborative social PM resource's effect is 0.186, 0.410 and 0.354, respectively.

PM success is highly accounted by organisational PM resource. This means standardised regression (r^2) effects of organisational PM resource on PM success is 0.431, while team PM resource on PM success is 0.322 and collaborative social PM resource on PM success is 0.186. Therefore, in order to increase PM success, organisations need to focus on the three levels of PM resources. However, their first priority should be developing the organisational

PM resource by, for example, an effective PM office, PM methodology, standards and process, PM tools and techniques and effective project communication systems and technology.

Project success is highly accounted for by collaborative social PM resource. The standardised regression (r^2) effect of collaborative social PM resource on project success is 0.41, while team PM resource on project success is 0.378 and organisational PM resource on project success is 0.19. Hence, organisations need to focus on all three levels of PM resources to gain project success. However, their main concern should be collaborative social PM resource as it highly impacts on project success ($r^2 = 0.41$) compared with the other two PM resources. These items include project advisory from donors, NGOs intra and consortium meetings, networking with stakeholders and project marketing events.

NGO success is highly accounted by team PM resource which explains that the standardised regression (r^2) effects of team PM resource on NGO success is 0.361. For the other constructs the results are: collaborative social PM resource and organisational PM resource on NGO success are 0.354 and 0.245, respectively. All three levels of PM resources impact on NGO success are medium. However, team PM resource has the highest construct impact on NGO success ($r^2 = 0.361$). Hence, organisations should give first priority to improve team PM resource in order to achieve NGO success. These items include brainstorming sessions, success and failure stories, team cohesion and trust and team values.

Overall, all three levels of PM resources have very good impact on the three levels of project success of NGOs. Organisational PM resource has the highest impact on PM success of the constructs, while collaborative social PM resource has the highest impact on project success and team PM resource has the highest impact on NGO success. Therefore, in conclusion, all three levels of PM resources are vital for NGOs to achieve overall project success. Table 7-10 shows the total effects (standardised regression estimates) of the three levels of PM resources on the three levels of project success in NGOs.

	Standardised Regression Estimates (r ²)		
Constructs	PM Success (mediator)	Project Success (mediator)	NGO Success
Team PM Resource	0.322	0.378	0.361
Organisational PM Resource	0.431	0.190	0.245
Collaborative Social PM Resource	0.186	0.410	0.354

* Significance at 0.05 levels

Table 7-10: Total Effects of the Three Levels of PM Resources on Project Success

7.6. Hypothesis Testing

Previous research findings followed by the present exploratory case study findings led to the derivations of the initial hypothetical relationships between PM resources and project success. It revealed there are positive relationships between PM resources and project success. This section explains the summary of findings and discusses the hypothetical relationships between PM resources and project success based on the findings of the exploratory case study and quantitative survey study. In the previous chapter (section 6.6), it was concluded that 15 hypotheses were supported out of the 19 derived hypotheses. Four hypotheses were not supported in survey study; out of these, three hypotheses did not indicate that the three levels of PM resources have direct effect on NGO success and the other one hypothesis failed to indicate that organisational PM resource has direct effect on project success. Figure 7.8 shows the tested results of all 19 hypotheses; these are explained below.

According to my research findings, team PM resource has a direct and positive effect on PM success. The standardised coefficient for H1 is 0.322, which indicates a medium significant direct effect on PM success by team PM resource.

Hypothesis (H2): Team PM resource has a direct and positive effect on projects success is fully supported. The standardised coefficient for H2a is 0.236, which indicates a fair significant direct effect on project success by team PM resource.

The standardised coefficient for (H2a) is 0.142; team PM resource has an indirect and positive effect on project success through the mediating effect of PM success. This is fully supported and results indicate a fair significant indirect effect on project success through the mediating effect of PM success by team PM resource.

Hypothesis (H3): Team PM resource has a direct and positive effect on NGO success is not significant at the p<0.05 level. Therefore, the hypothesis is rejected. This means there is no direct causal relationship between team PM resource and NGO success. However, the rejection of H3 also indicates there is an indirect effect between team PM resource and NGO success through mediating factors.

The standardised coefficient for (H3a) is 0.361; team PM resource has an indirect and positive effect on NGO success through the mediating effects of PM success and project success. This is fully supported and results indicate a medium significant indirect effect on NGO success through the mediating effects of PM success and project success by team PM resource.

Hypothesis (H4): Organisational PM resource has a direct and positive effect on PM success is fully supported. The standardised coefficient for H4 is 0.431, which indicates a good significant direct effect on PM success by organisational PM resource.

Hypothesis (H5): Organisational PM resource has a direct and positive effect on project success is not significant. Therefore, this hypothesis was rejected. This means there is no direct causal relationship between organisational PM resource and projects success. However, the next hypothesis (H5a) confirms a significant indirect effect on project success through a mediating factor of PM success.

The standardised coefficient for (H5a) is 0.190; Organisational PM resource has an indirect and positive effect on projects success through the mediating effect of PM success. It indicates a fair significant indirect effect on project success through a mediating factor of PM success by organisational PM resource.

Hypothesis (H6): Organisational PM resource has a direct and positive effect on NGO success is not supported as this shows an insignificant coefficient. Therefore, this hypothesis is rejected. This indicates there is no direct causal relationship between organisational PM resource and NGO success. However, the next hypothesis (H6a) confirms there is indirect positive relationship between these two factors through the mediating effects of PM success and project success.

The standardised coefficient for (H6a) is 0.245; Organisational PM resource has an indirect and positive effect on NGO success through the mediating effects of PM success and project success. This indicates a fair effect, which means organisational PM resource positively influences NGO success through the mediating effects of PM success and project success.

Hypothesis (H7): Collaborative social PM resource has a direct and positive effect on PM success is fully supported. The standardised coefficient for H7 is 0.186, which indicates a fair significant direct effect on PM success by collaborative social PM resource.

The standardised coefficient for (H8) is 0.328: collaborative social PM resource, has a direct and positive effect on project success. It indicates a medium significant direct effect on project success by collaborative social PM resource.

Hypothesis (H8a): collaborative social PM resource has an indirect and positive effect on project success through the mediating effect of PM success is fully supported. The standardised coefficient for H8a is 0.082. This indicates a weak indirect effect on project success through the mediating effect of PM success by collaborative social PM resource.

Hypothesis (H9): Collaborative social PM resource has a direct and positive effect on NGO success shows an insignificant coefficient. Therefore, this hypothesis is not supported and rejected. This indicates there is no direct causal relationship between collaborative social PM resource and NGO success. However, the results of the tests on hypothesis (H9a) provides supporting evidence there is indirect positive relationship between these two factors through the mediating effects of PM success and project success.

The standardised coefficient for (H9a) is 0.354. Collaborative social PM resource has an indirect and positive effect on NGO success through the mediating effects of PM success and project success. This indicates a moderate effect on NGO success by collaborative social PM resource through mediating effects of PM success and project success.

Hypothesis (H10): PM success has a direct and positive effect on project success is fully supported. The standardised coefficient for H10 is 0.440. This indicates a good effect on project success by PM success.

The standardised coefficient for (H11) is 0.235: PM success has a direct and positive effect on NGO success is fully supported. This indicates a fair effect on NGO success by PM success.

Hypothesis (H11a): PM success has an indirect and positive effect on NGO success through the mediating effect of project success is fully supported. The standardised coefficient for H11a is 0.333. This indicates a medium indirect effect on NGO success by PM success through the mediating effect of project success by PM success.

Hypothesis (H12): project success has a direct and positive effect on NGO success is fully supported. The standardised coefficient for H12 is 0.756. This indicates a very strong direct effect on NGO success by project success.

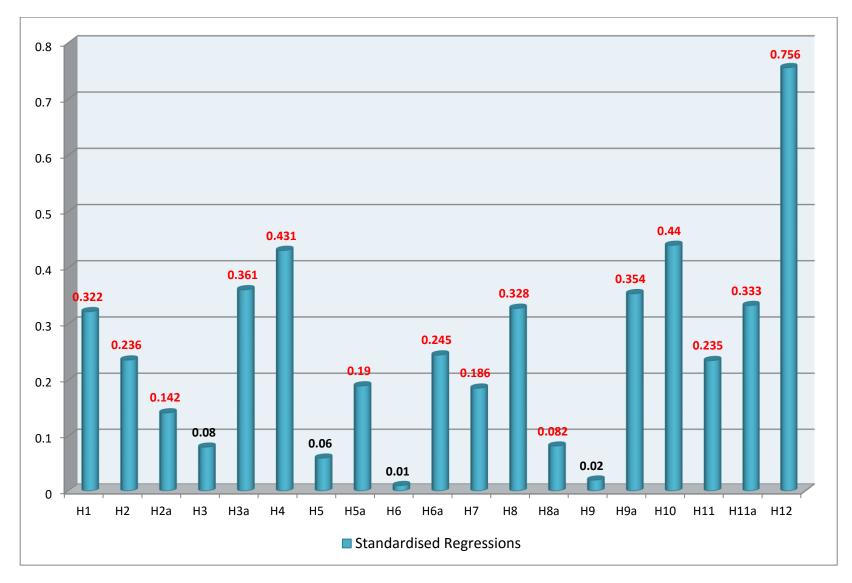


Figure 7-8: Results of Hypothesis Testing

7.7. Comparison of Proposed and Validated Conceptual Models

The previous section explained the constructed hypotheses from the exploratory case study and the tested results from the survey study. The literature review gave preliminary ideas for the researcher about how the PM resources of organisations contributed to project success of organisations (see section 2.8). Further, Jugdev and Mathur (2007) established a model to explain the associations of the tangible and intangible PM assets with the achievement of VRIO characteristics of PM processes in private sector organisations. Subsequently, Mathur et al. (2013) identified a model which explained the associations between VRIO characteristics of the PM assets and PM performance outcomes on two levels: project level and firm level performance. Further, previous research examined the PM resources and VRIO characteristics using EFA and CFA techniques. However, there is no valid model derived by previous researchers for explaining the associations between PM resources and project success.

Therefore, the present first phase of the exploratory case study proposed a model which shows the associations between PM resource and project success. The model explained that there are direct and indirect associations between three levels of PM resources and three levels of project success. Next, the second- phase survey study helped to test the concepts and model developed in the exploratory case study. Finally, the SEM technique was applied to identify the valid model which best explains the associations between PM resource and project success. The survey study results led to remove those hypothetical paths which showed insignificant relationships between these exogenous and endogenous factors (see section 6.5).

The model based on exploratory study proposed reflecting the respondents' views that the three levels of PM resources have direct and indirect associations with three levels of project success. However, the SEM results concluded that there are significant direct relationships between the three levels of PM resources and the first level of PM success and between team and collaborative social PM resources and the second level of project success. Further, it is highlighted that the three levels of PM resources have significant indirect effects on the second level of project success and the third level of NGO success. Therefore, the SEM

technique supported to uncover the actual associations exists between the PM resources and projects success.

Previous researchers highly discussed the organisational level explicit resources and less discussed the team and collaborative social level resources. However, this validated model of PM resources and project success based on NGOs, post-conflict scenario highlights the organisational- level resources have direct positive contributions only with PM success, while fails to explain significant direct contributions with project success. However, the team and collaborative social PM resources have direct positive contributions with PM success and project success. Therefore, in NGOs context, organisational resources are not adequate to achieve the project success, alternatively, they need to develop team and collaborative social level resources in successfully attaining project success. Figure 7-9 shows the proposed model and the valid model of the present mixed methods study.

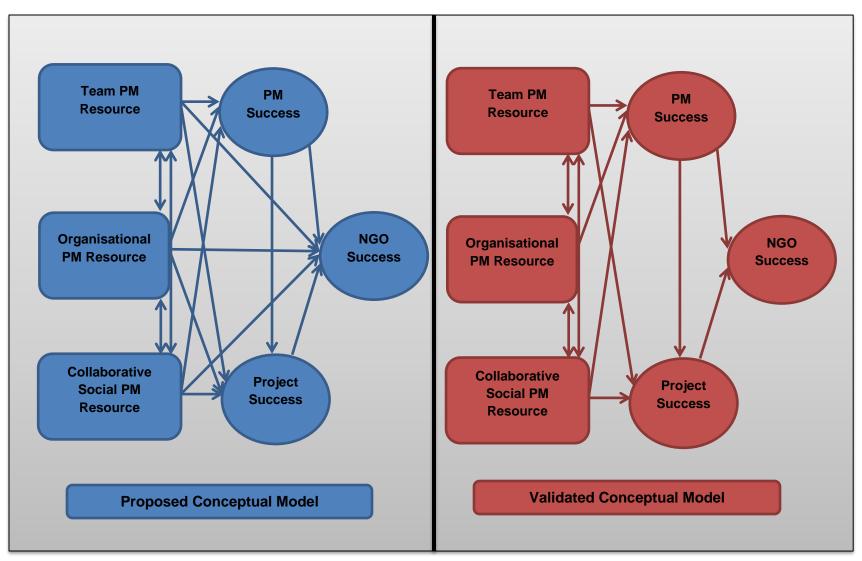


Figure 7-9: Comparison of Proposed and Validated Conceptual Models

7.8 The Role of RBV

The RBV supports organisations in developing strategies by using firm -driven resources (Ho et al., 2016; Fang and Chen, 2016). As the external environment turns out to be more turbulent, the RBV theoretical lens is becoming crucial to increasing the sustainability of organisations (Wernerfelt, 2014; Bhatti and Zaheer, 2014). Many scholars highlighted that resource VRIO characteristics are highly important to achieve sustainability of organisations (Barney and Mackey, 2016; Lin and Wu, 2014). The RBV insights provided an appropriate method for this study to examine PM resources, explicit and tacit in nature, and their contributions to the project success of NGOs. The literature extensively revealed acquisition of explicit and tacit resources by organisations is highly important for organisational success (Brock, 2017; Lin and Wu, 2014). Explicit resource is deemed to be codified and can be articulated while tacit resource is context-dependent and cannot be articulated (Addis, 2016; Collins, 2010; Hislop, 2009). It is worth observing these theoretical understandings in relation to PM resources, which is identified in three levels: team, organisational and collaborative social, through the exploratory case study. The study revealed, that team PM resources widely contain tacit characteristics and organisational PM resources extensively encompass explicit features while collaborative social resources comprehend a mixture of resources of explicit and tacit nature. Therefore, RBV supported this study to analyse broadly what PM resources are built up in NGOs and their explicit and tacit natures.

The RBV lens supported development of the varied PM resources which are categorised into three levels: team, organisational and collaborative to face the changing environment. Especially for NGOs, natural and man-made disasters, globalisation and competition with the private sector and other NGOs make their position more unstable (Zhang et al., 2016; UNDP, 2014; Ika et al., 2012; Aldashev and Verdier, 2009) and this required NGOs, as well- recognised in RBV theory, to understand the nature of PM resources and develop resources to face this dynamic environment. The growing number of natural and man-made disasters has caused substantial damages to third world countries and it increasingly demands rebuilding infrastructure and rehabilitation projects (UNDP, 2014). Globalisation has created an upsurge in vulnerable communities in third world countries and those demand complex community development projects. Further, NGOs' present increase in income generation strategies for establishing social entrepreneurships is competing extensively with the private sector (UNICEF, 2007), and rivalry among NGOs

275

for donor and government funding (Zhang et al., 2016) demands NGOs to show their excellent performance, cost leadership and differentiation. Therefore, the RBV has contributed in this study for revealing diverse PM resources of NGOs to face this turbulent and dynamic environment.

The RBV helped to identify how the environment influences the characteristics of the firm and how the resources are adapted to react to changes in the environment (Barney and Mackey, 2016). Organisations have limited resources and it is critical to identify synergy of complementary resources that can make highly sustainable organisations (Bromiley and Rau, 2016; Cadogan, 2012; Kraaijenbrink, et al., 2010). The study sees the relationships between three types of PM resources - team, organisational and collaborative social – and three levels of project success – PM success, project success and NGO success. Further, firstly the study identified, team, tacit PM resources significantly contributed to the PM and project success of the NGOs. Secondly, organisational, explicit PM resources highly supported the PM success of the organisations while limited in its direct contribution to the project success of the NGOs. Finally, the new emerging resource has been identified: collaborative social PM resource, which is highly required for internalisation to face changing, turbulent environments and for overall project success of the NGOs. Therefore, the RBV helped the organisations to make choices and decisions about which PM resources to invest and develop in when allocating limited resources for achieving project success.

Finally, the RBV theory helped to develop the final model which explains the associations between the PM resources and project success of the NGOs. Using this model helped to develop the PM resources in the organisations for achieving project success and it may lead the NGOs to accomplishing sustainability. The study highlights best configurational paths with the greatest empirical importance for achieving high project success. The empirical, validated findings explain the collaborative social PM resources highly contributed to achieving to the second level of project success and both team and collaborative social resources are crucial to the third level of NGOs success. Therefore, RBV has provided an appropriate method to analyse PM resource in NGOs and develop the varied resources for successful project operations.

7.9 Summary

The chapter explained how the research aim and objectives were achieved through the exploratory case study and survey study. It explained critically the nature of PM resource on three levels, namely, team, organisational and collaborative social levels. The chapter explains: first, in team PM resource four critical elements were identified out of ten studied elements. Those are brainstorming sessions, success and failure stories, team cohesion and trust and team PM values. Next, in organisational PM resource four critical elements were identified out of ten examined elements. Those are effective PM office, PM methodology, standards and process, PM tools and techniques, and effective project communication systems and technology. Finally, in collaborative social PM resource four critical elements were identified out of ten studied elements. Those are project advisory from donors, NGOs intra and consortium meetings, networking with stakeholders and project marketing events. In addition, underlying evaluation elements of the three levels of project success were briefly explained and identified as important elements in evaluating the three levels of project success in NGOs: first, in PM success meeting scope, quality, time and budget; next, in project success stakeholders' satisfaction, project impacts and project sustainability; and finally in NGO success, achieving NGOs' vision, mission and objectives, stakeholders' rapport, NGOs reputation and NGOs sustainability.

Subsequently, the study identified associations between PM resource and project success in NGOs. Findings emphasised the three levels of PM resources make significant contribution to the three levels of project success. Further, the study highlighted that team PM resource makes the highest contribution to NGO success compared with the other two resources and organisational PM resource makes the highest contribution to PM success, while collaborative social PM resource makes the highest contribution to project success.

Finally, the derived hypotheses were tested in the survey study. Altogether 19 hypotheses were derived in the case study and 15 hypotheses were accepted based on the survey study results. The survey study rejected direct associations between the three levels of project success and NGO success and between organisational PM resource and project success. Finally, the valid model was identified which best explains associations between PM resources and project success. The next, concluding chapter explains the contributions and implications of the study.

CHAPTER EIGHT CONCLUSION

8.1. Introduction

The study set out to understand the nature of PM resource in NGOs and has identified PM resources at three levels: team, organisational and collaborative social levels, and their elements, explicit and tacit characteristics, and their importance for effective project operations in NGOs. The study sought to answer the main research question, how does Project Management Resource support the successful delivery of projects in NGOs. In order to address this research question, the study conceptualised from the exploratory case study findings and examined the relationships between PM resource and project success with the support of the survey study. The study produced a valid model which shows the associations between PM resource and project success and has shown significant associations exist between PM resources and project success in NGOs.

The research findings of the exploratory case study and survey study both assisted to achieve the research objectives and finally accomplish the research aim, which was to develop a critical understanding of the nature of PM resource in NGOs and its relationship with project success using a theoretical perspective drawn from the RBV. This chapter briefly explains the concluding comments on the study which includes the study contributions, implications, limitations and suggestions for future research.

Section 8.2 explains the theoretical, empirical and practical contributions of the present study. Next, section 8.3 explains the implications of the study. Section 8.4 acknowledges the limitations of study and subsequently, section 8.5 discusses open viewpoints for future research that could benefit from the present study's findings. Finally, section 8.6 provides the overall conclusion of the study.

8.2. Research Contributions

The study sought a new approach to look at PM resources and their associations with project success with the support of RBV insights in NGOs. The RBV is well-established theory applied in private sector organisations in assessing organisational resources. At present, the RBV is widely accepted in examining PM resources in private sector organisations and highlighted PM resources contribute to the competitive advantage of

private sector organisations (Mathur et al., 2013; Mathur et al., 2007; Jugdev and Mathur, 2006b). However, the previous studies did not extensively discuss the nature of these PM resources and only undertook to explain quantitatively VRIO characteristics of PM resources and their contribution to competitive advantage. Therefore, the present study sought substantial contributions to establish a validated framework for evaluating PM resource and show the associations with project success in NGOs; it was conducted in the under-explored Sri Lankan country context. Significant theoretical, empirical and practical contributions of the study are discussed below.

8.2.1. Theoretical Contributions

The study has made significant contributions to the existing literature.

First, the study adopted the RBV approach from business and strategic perspectives to examine PM resources in NGOs. Commonly, this approach is applied in private sector organisations to examine the competitive advantage of these organisations. However, the study justified that NGOs are currently operating in a turbulent and competitive environmental setting and emphasised that the RBV is more appropriate to examine PM resources in NGOs. Hence, this is a new turning for NGOs for focusing PM resources development with the RBV approach rather than traditional organisational capacity development approaches commonly applied in NGOs.

Second, although many researchers have reported the advantages of RBV in gaining sustained competitive advantage for the organisations, few scholars have paid attention to the role of the PM resources on sustained competitive advantage. However, this study adopted a new approach to identify the associations between PM resources and project success. Therefore, this exploratory, mixed study helps to validate and extend the RBV theories connected with PM resources and project success.

Third, in literature, project management has not been broadly studied using the strategy insights. This study highlighted the wide range of PM resource investigations may advantage from the application of RBV theory from the strategic management. The study takes an exploratory investigation in assessing of what are diverse explicit and tacit PM resources owned by NGOs, why the distinction of explicit and tacit PM resources and

how these are associated with project success in NGOs. This is the opening contribution to theory and suggested extensive future research opportunities.

Fourth, the RBV has been increasingly applied to explain the activities of firms as it forms an adaptable framework for building theories (Kogut and Zander, 2003). This research has identified the resources that underpin PM resource in NGOs and has highlighted the importance of intangible, tacit resources. This is important as in uncertain environments where NGOs operate, explicit resources such as maturity models have less value than resources that are built via actors in interaction with the environment. Further, the study emphasised the importance of tacit PM resources to the project success more than its explicit components.

Fifth, PM resources in the RBV perspective were undertaken in private sector organisations and examined the PM resources inside the organisations, such as team and organisational levels. However, the present study was oriented to the new, NGO context and identified PM resources into three levels: team, organisational and collaborative social PM resources. Hence, the study broadened the theory on the nature of PM resource into three levels, where the most significant contribution made by this study is identification of a new PM resource called collaborative social PM resource, which was not revealed in the literature. This is an emerging area of development for the discipline.

Sixth, the study has achieved the broad objective of developing a validated framework for evaluating PM resource with the support of RBV in NGOs. The study revealed the three levels of PM resource that exist in the NGOs, their assessment elements, and their explicit and tacit characteristics. Firstly, team PM resource refers to the PM knowledge and skills that are contained and shared within the team to deliver good project outcomes; the critical elements identified in the survey study are brainstorming sessions, success and failure stories, team cohesion, and trust and team PM values. These elements all have more tacit characteristics. Next, organisational PM resource means the PM knowledge and skills that are contained and shared within the organisation; the critical elements identified are effective PM office, PM methodology, standards and process, PM tools and techniques, and effective project communication systems and technology. These elements all have more explicit characteristics. Finally, there is collaborative social PM resource, which can be a process of participation outside the organisation, through which people, groups and organisations work together to share the PM knowledge and skills to achieve the desired results. Critical elements identified in collaborative social PM resource are project advisory from donors, NGOs intra and consortium meetings, networking with stakeholders and project marketing, where the first two elements have more explicit characteristics and last two elements have more tacit characteristics.

Seventh, the assessment factors of project success were identified into three levels in the NGO context. Considerable empirical studies have been done in the past in private, public and international organisations in assessing project success using the parameters of meeting scope, quality, time, budget, stakeholder satisfaction and project impacts (Ika et al., 2012; Sutton, 2005; Schwalbe, 2004; Pinkerton, 2003; Thomsett, 2002). However, the present study focused on assessing the project success in three levels: PM success, project success and NGO success. This is a significant contribution to the existing literature examining project success empirically into three levels. Furthermore, the assessment elements for the individual level of project success were identified in the NGO context. Firstly, in PM success, the four key elements consistent with previous studies were identified, namely, meeting scope, quality, time and budget. Secondly, in project success, three key elements, stakeholders' satisfaction, project impacts and project sustainability, were discovered. Finally, in NGO success, four key elements, contribution to NGOs' vision, mission and objectives, stakeholders' rapport, NGOs reputation and NGOs sustainability, were explored.

Eighth, the study adopted a mixed method, sequential exploratory design. The first-phase exploratory case study assisted to achieve understanding the nature of PM resources with RBV perspectives in NGOs and their preliminary associations with project success; the second-phase survey study and advanced statistical techniques, EFA, CFA and SEM, helped to test statistically the case study findings and generalise the valid model to explain the associations between PM resources and project success. The adoption of this method is a new to the existing literature on PM studies. The compilation of this various research approaches help to guide future research.

Ninth, the study contributed a valid theoretical framework for evaluating PM resource in NGOs and shows the associations with project success. The hypothetical associations between PM resources and project success were tested using sophisticated statistical

techniques. Hence, this study demands a new approach to see the associations between PM resource and project success with the support of RBV. The results show good associations between the three levels of PM resources and three levels of project success. Team PM resource has direct and indirect positive associations with PM success and project success and it only has indirect positive association with NGO success. Organisational PM resource has direct positive association with PM success and it only has indirect positive associations with PM success and it only has indirect positive associations with PM success and it only has indirect positive associations with PM success and it only has indirect positive associations with PM success and project success and it only has indirect positive association with NGO success. Furthermore, the study looked at associations between PM success, project success and NGO success has a direct positive association with project success and NGO success.

Tenth and finally, the study increases to the growing body of strategy literature that builds on the RBV of the firm. It is a significant step towards analysis of the association between the PM resources and project success. The study highlights at an improved understanding of how the PM resources in NGOs can be a superior resource for project success. The scholars extensively discussed the project management supports to the PM success of the organisations. The study extended the contribution of PM resources to the project success and NGO success. It provides a foundation to undertake future research to understand how project success might be achived through integrating PM resources and RBV.

8.2.2. Empirical Contributions

The empirical contribution is an examination of PM in an unexplored- country context, Sri Lanka. The study has adopted an inventory approach to understanding this theme of PM in Sri Lanka in its early stages, and so a number of predominantly descriptive characteristics were outlined, so as to provide a benchmark for further studies. The study explored PM resources with RBV perspective through exploratory case study and examined the proposed model with the support of a survey in the setting of the developing world. The previous research on PM resources was conducted in developed economies' settings. Thus, the present study findings contribute by filling the important field gap on taking the studies on PM resources, RBV insights and project success in the context of developing economies. Further, research findings contribute for the future researchers to extend their research in PM with RBV views in context of emerging economies. It helps to build common framework for PM with RBV perspectives to develop the resources of NGOs to successfully operate in the present turbulent and competitive environment.

8.2.3. Practical Contributions

This study has provided useful findings and valuable insights on PM resource in order to improve project success in NGOs. The results of the study have a number of significant practical contributions.

The practical contribution is achieved through the study improving project delivery among the NGOs by exploring and understanding PM resource. This study confirms there are significant associations between PM resources and project success. Therefore, the study will improve PM practices in the NGOs. This will lead to successful project delivery and improvements in organisational performance and sustainability in NGOs.

The study has provided extended knowledge in the domain of PM resource and project success from a developing country's context, i.e., Sri Lanka. However, it could be transferable to other settings and to other types of organisation. The study attempted to minimise the paucity of the studies in the domain of PM resource and project success from NGOs and a developing countries' setting. The previous studies were conducted in private sector organisations and also in developed country contexts. However, this study is conducted in a new setting of the developing world and the NGO sector.

Non-governmental organisations face many challenges and difficulties in providing services and programs to their communities, members, and beneficiaries at this present competitive environment. Understanding and building their PM resource to respond in an effective manner requires an investment not only of money, but also of time and effort. It also calls for the actual participation of many organisational development players to properly find out the key domains of PM resource to improve project delivery by NGOs.

8.3. Research Implications

The study has filled the research gap that currently exists: a research gap in evaluating the capacity of NGOs to undertake projects. The study proposed a new validated framework for evaluating PM resource with the support of the RBV in NGOs. In addition,

it showed the significant associations between PM resource and project success. The study found substantial implications as indicated below.

First, the study enhanced the concepts of PM resource into three levels: team organisational and collaborative social PM resource. The literature on private sector studies suggested the PM resources occur at two levels. However, this study has identified a new PM resource, called collaborative social PM resource in the NGO context.

Second, this study provided an integrated conceptual model for PM resource and project success. This is a new approach to see the associations between PM resource and project success by using the SEM statistical technique. Applying SEM, new insights were drawn in these complex relationships between PM resource and project success. The study has identified significant associations between PM resource and project success. Therefore, the comprehensive model developed in this study has crucial implications for the literature on PM resource and project success. The results could be applied to the developing world where similar contexts of post-conflict and post-disaster recovery.

Third, the study was conducted by using mixed methods: exploratory qualitative case study and survey study. Combination of mixed methods enables explaining the findings with strong reliability and validity. In addition, SEM is used to test the proposed models and validate the empirical significance. Use of this methodology employing advanced sophisticated statistical techniques is limited in previous literature. Thus, this study sets a new pattern in the research in looking at associations between PM resource and project success.

Fourth, the exploratory case study explored the elements of PM resources and project success in the NGO context. Then, it organised PM resources under three levels: team, organisational and collaborative social PM resources, and organised project success under three levels: PM success, project success and NGO success. This helps NGOs management to understand the nature of PM resources in NGOs. Further, survey study and statistical techniques identified the best elements in each PM resource and their associations with project success. Hence, NGO managers will understand the best elements of PM resources by priority to improve successful project delivery in NGOs.

Fifth and finally, the study emphasised the importance of the three levels of PM resources on three levels of project success. It signifies that three levels of PM resources were identified as the influential factors on the three levels of project success either directly or/and indirectly. However, team PM resource is the most influential factor on NGO success compared with other capacities, while organisational PM resource was identified as the most influential factor on PM success, and collaborative social PM resource is the most influential factor on project success. However, the study highlighted that the three levels of PM resources have no direct contributions to NGO success and further emphasised that organisational PM resource does not have direct associations with project success. The findings help management of organisations to prioritise and develop PM resources in NGOs and make changes in organisational development policies of NGOs.

8.4. Limitations of the Study

The study has some limitations that should be noted when interpreting the findings.

The first is the representation of the population by the sample respondents. NGOs are generally classified into four types: community-based organisations, local NGOs, city-wide organisations and international NGOs. However, the study only considered two types of NGO: local and international. Therefore, this cannot be considered representative of the whole NGO population and limits the generalisability to all types of NGO.

The second is the exploratory study selected only senior project management staff from each organisation. It excludes other staff members, for example, junior officers and governance members. Therefore, this limits the exploratory findings to all levels of NGO staff.

The third is the survey study sample. The questionnaires used for statistical analysis for this study numbered 447. Although the sample of respondents used in the survey study was adequate for the purpose of this study (Chin and Newsted, 1999), however, it did not meet the suggested very good sample size of 20:1 for SEM testing (Tanaka, 1987).

The fourth, the study was conducted in Sri Lankan NGOs and settings of post-conflict and post-disaster recovery. NGOs which operate in different countries and different settings may have different PM applications. Therefore, the results of the present study may limit the generalisability of findings to other countries in different settings.

Finally, the study was conducted in NGOs. Different organisations such as private and public sector organisations may have different PM applications. Therefore, the results cannot be applied directly to other types of organisation.

8.5. Suggestions for Future Research

Recommendations for future PM resource and project success research resulting from this study are as follows.

First, the study was conducted in local and international NGOs operating in Sri Lanka. Therefore, future studies could extend to other countries which have similar contexts of post-conflict and natural disaster recovery as this will increase the generalisability of the findings. Furthermore, the study could be undertaken in other developing economy settings, as this will address variations such as testing the developed conceptual model in another economic context. Overall, the testing of findings in similar and dissimilar country contexts assists to generalise the generated model globally for all NGOs.

Second, as this study's findings are based on the NGO setting, future studies could be oriented to test the applicability of the findings to other types of private and public sector organisation. The present study results may be transferable to the private sector organisations that practise PM largely similarly to NGOs. However, their PM resources and degree of PM applications might differ from project to project and in the contexts they implement projects in. Therefore, the current study findings may not be generalised completely to private and public sector organisations. Therefore, future studies should test the developed conceptual model in other types of organisation to understand the holistic view of PM resources and capacities.

Third, developing a framework for PM resource of NGOs is not a straightforward task. It is a time-consuming and incremental process. The exploratory case study findings and survey study developed a conceptual model to construct preliminary understandings for making an outline of PM resource and project success with the RBV. It will contribute to NGOs improving their PM resource and understanding of how to compete for resources

for their long-term sustainability. However, the newly developed collaborative social PM resource here needs further research in different countries and other types of organisation to test whether it is applicable to all types of organisation and to all other countries.

Fourth and finally, the study is focused to understand the nature of PM resources in NGOs and the dominant RBV approach has been applied. However, as this is the first study oriented to exploring PM resources through qualitative case study methods, the study was restricted to examinations of primary explicit and tacit characteristics of PM resources in NGOs. Future studies could be directed to examining in detail the VRIO characteristics of PM resources and further could be directed to examine PM dynamic capabilities or capacities of NGOs, which is the extended form of RBV. This extended investigation will provide useful findings on how NGOs tend to nurture their PM resources in the changing contexts of external environment.

8.6. Conclusion

Non-governmental organisations may begin operations to meet the needs of an underserved population or to satisfy a perceived need in the community. Improving the PM resource of NGOs will improve organisational performance and lead to better service to the community. Therefore, to NGO managers building PM resource can seem daunting, indeed. An important concept is that the organisations should understand the nature of PM resources and how those are actually support NGO project success.

The exploratory case study revealed there are three levels of PM resources in NGOs, namely, team, organisational and collaborative social PM resources. The collaborative social PM resource identified is a new and important addition to the existing literature, improving team and organisational resources while improving project outcomes. The survey study results revealed that project success is directly and/or indirectly affected by team, organisational and collaborative social PM resources. Understanding the nature of the constructs of PM resources and these effects on project success helps the NGOs to focus their efforts and investment to develop appropriate PM resources and to increase better services to the community.

This chapter has discussed the summary of the research contributions to the growing literature, implications of this study, limitations of this study and suggestions for future

research to conduct study on PM resources and project success. The study provides empirical evidence to support the generated theoretical model that links PM resources and project success. In addition, it offers a set of measures to evaluate PM resources and project success with the support of the RBV approach that can be used to guide future research on PM resources and project success. The contributions and implications that are presented in this study can be valuable to both academic researchers and practitioners. Overall, the study builds a breakthrough for NGO managements to move ahead with the resource-based perspective on project management from the traditional capacity development approaches for better performance and long-term survival.

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325

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342

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343

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Appendices

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No	Activities		20	12		2013			2014				
		1	2	3	4	5	6	7	8	9	10	11	12
1	Phase 1 – Case study: Pretesting interviews												
2	Phase 1 – Case study: In-depth Interviews												
3	Phase 1 – Case Study: Semi-structured Interviews												
4	Phase 2 – Survey Study: Pretesting interviews												
5	Phase 2 – Survey Study: Pilot study												
6	Phase 2 – Survey study: Data Collection in the field												

Appendix 1: Time Frame for Research (Phase 1 and Phase 2)

	RESOURCES / ELEMENTS	CODING	
	Informal Meetings	TPR Informal Meetings	
	Casual Conversations	TPR Casual Conversations	
	Brainstorming Sessions	TPR Brainstorming	
	Field Level Discussions & Review Visits	TPR Field Level Discussions & Review Visits	
	Personal Coaching	TPR Personal Coaching	
	On-the Job Training	TPR On-the Job Training	
Team PM Resource	Job Shadowing & Mentoring	TPR Job Shadowing & Mentoring	
(TPR)	Case Studies & Success Stories	TPR Case Studies & Success Stories	
	Team Cohesion and Trust	TPR Team Cohesion and Trust	
	Team Values	TPR Team Values	
	Deeper Understanding of project Lifecycle and Operations	TPR Deeper Understanding	
	Best PM Practices	TPR Best PM Practices	
	Project Management Expertise	TPR PM Expertise	
	Synthesise New knowledge in PM	TPR Synthesise New knowledge in PM	
	PM Office & Structure	OPR PM Office & Structure	
	Project Management Methodology, Standards & Process	OPR PM Methodology, Standards & Process	
	Project Management Tools & Techniques	OPR PM Tools & Techniques	
	Project Management Information System	OPR PM Information System	
Organisational	Project Monitoring and Evaluation Mechanism	OPR Project M & E Mechanism	
PM Resource (OPR)	Staff Capacity Building Programs	OPR Staff Capacity Building Programs	
	Shared Project Vision, Objectives and Policy	OPR Shared Project Vision, Objectives and Policy	
	Formal Meetings for Sharing Knowledge	OPR Formal Meetings for Sharing Knowledge	
	Effective Project Communications Systems and Technology	OPR Effective Project Communication Systems & technology	
	Supportive Organisational Culture to PM	OPR Supportive Organisational Culture to PM	

Appendix 2: Case Study Coding Table

	Supportive Organisational Leadership to PM	OPR Organisational Supportive Leadership to PM
	Project Advisory from Government t Bodies	CPR Project Advisory from Government Bodies
	Project Advisory from Donors	CPR Project Advisory from Donors
	NGOs Intra and Consortium Meetings	CPR Intra and Consortium Meetings
	Official information Releases	CPR Official Information Releases
Collaborative Social PM	Joint Projects Formal Interactions	CPR Joint projects Formal Interactions
Resource (CPR)	Joint Projects Informal Interactions	CPR Joint Projects Inormal Interactions
(CIK)	Networking with Stakeholders (External collaborators, Grass root level, government t body)	CPR Networking with Stakeholders
	Beneficiary Connections in Projects	CPR Beneficiary Connections in Projects
	Project Marketing	CPR Project Marketing
	Community of Practice through Online Social Networks	CPR Community of Practice through Online Social Networks
	Meeting Scope	PMS Meeting Scope
Project Management	Meeting Quality	PMS Meeting Quality
Success (PMS)	Meeting Budget / financial targets	PMS Meeting Budgets
(1 1415)	Meeting Time / Schedule	PMS Meeting Time
	Stakeholders Satisfaction (Donors, NGO, Community)	PS Stakeholders Satisfaction
Project Success	Contribution to Development Objectives	PS Contribution to development Objectives
(PS)	Project impacts / Results (Intended and unintended)	PS Project Impacts
	Project Sustainability	PS Project Sustainability
	Contribution to NGOs' Vision, Mission and Objectives	NS Contribution to NGOs' Vision, Mission and Objectives
NGOs Success	Stakeholders Rapport	NS Stakeholders Rapport
(NS)	NGOs Reputation	NS NGOs Reputation
	NGOs Sustainability	NS NGOs Sustainability

Appendix 3: In-depth Interview Questionnaire Exploring Project Management Resources in NGOs

Name of Interviewee: Designation: Organization: Date:

- 1. What types of projects does your organization undertake? GIVE EXAMPLES
- 2. What are the project management activities do you carry out in your project?
- 3. What are the challenges do you face to implement projects? EXPLAIN. WHY?

4. How do you define a successful project?

5. What are factors does your organization consider to evaluate the project success?

6. What are the factors causes to the project failure?

7. What do you consider to be project management resources? Relate to success factors?

8. What are the Project Management Resources commonly existing in your organization?

9. Does Project Management Office exist in your organization? Do you think is it an asset to your organization? Why?

10. Is your organization has effective PM standards, Policies and Procedures? Briefly explain of these assets?

11. Did your organization well establish the PM Methodology, Tools and Techniques? What are the PM tools and techniques used by the organization in needs identification, planning, implementing, monitoring and controlling and closing stage of projects?

12. What do you say about the project management capability of your organization staff members?

13. How is explicit knowledge sharing process taking place in your organization?

14. How is tacit knowledge sharing process taking place in your organization?

15. How does Organization Project Culture support to the knowledge sharing?

16. How does social networking support to the knowledge sharing?

17. Does your organization use Social Marketing in order to attract the community? How is taking place?

18. How do Skills and experience sharing take place through community of practice?

19. Do you find any other ways of knowledge sharing taking place in your organizations?

20. Social networking how does impact on project success in your organization?

21. Do you wish to say anything that we did not discuss so far but that is important to note down while talking about project management.

Appendix 4: Semi-structured Interview Questionnaire

Confirming Project Management Resources, Capacities and Project Success in NGOs

Name of Interviewee:

Designation:

Organization:

Date:

I. **Project Success**

1. Could you say your views on project success?

2. Could you add any more factors that you consider for project success?

II Collaborative Social PM Resource

3 Could you add any more resources which are available in your organization?

4. How these resources influence on project success

(Scope, Schedule, Budget, Stakeholder satisfaction, Project impacts)

5. Why are these resources important to your organization?

III. Organizational PM Resource

6. Could you add any more resources which are available in your organization?

7. How these resources influence on project success

(Scope, Schedule, Budget, Stakeholder satisfaction, Project impacts)

8. Why are these resources important to your organization?

IV Team PM Resource

9. Could you add any more resources which are available in your organization?

10. How these resources influence on project success(Scope, Schedule, Budget, Stakeholder satisfaction, Project impacts)

11. Why are these resources important to your organization?

Appendix 5: Excel Table: Case Study Interviews and Coding

RE	INGO 1 - Interviewee 1 (Code)	INGO 1 - Actual Response 1	INGO 1 - Interviewee 2 (Code)	INGO 1 - Actual Response 2
R1	TPR Deeper understanding	PM is Planning, Organizing and Controlling	TPR Deeper understanding	Project management is managing projects within the budget and scheduled time
R2	External Factor / Inflation	Prices goes up cannot finish within budget	CPR Project Advisory from Govt Bodies	Main challenge is difficulties in getting government stakeholders support
R3	OPR Right team selection, Team motivation & Career path	Managing the people (Staff turnover) is very challenging	CPR Social Marketing	That is Explaining the project to stakeholders
R4	CPR Project Advisory from Govt Bodies	Government, their policy and rules are bit struggle for us getting approval and support.	CPR Networking with stakeholders	Networking with other stakeholders
R5	CPR Project Advisory	Less willingness from govt and they don't have adequate capacity	CPR Joint project Interactions	Implementing projects through partners
R6	OPR Right team selection, Team motivation & Career path	Staff high salary expectations	CPR Social Marketing	attracting people to this project is very challenging one
R7	OPR PM Tools & Techniques	We should identify the real community needs	TPR Team Commitment	Staff commitment
R8	TPR Team Commitment	then with committed staff	OPR Effective project communication	Support from the program manager and Organisation and administration
R9	TPR Resources	Improving team PM resources would improve the team PM applications	CPR Project Advisory from Donors	Stakeholders support and specially adequate funding from UNHCR.
R10	OPR Right team selection, Team motivation & Career path	Also we can say Motivating and Evaluation rewarding system	External Factor / Donor Funding	Adequate funding from donors
R11	OPR Effective project communication	Definitely too many managers for a program	OPR Effective project communication	Lack of support and less commitment from the program manager
R12	OPR Effective project communication	They put their control according to their vision.	TPR PM Expertise	Less capacity of program staff.

R13	TPR Deeper understanding	Second thing is Improper planning	TPR PM Expertise	Sometimes the manager does not understand the project very clearly
R14	OPR PM Tools & Techniques	If we don't find the real need of the community	TPR PM Expertise	Weak Budget Management
R15	OPR PM Methodology, Standards & Process	We have manual, this is called Program Hand	OPR PM Tools & Techniques	We have Project simple action plans and Gantt Charts for all projects
R16	OPR PM Methodology, Standards & Process	Have living document called Strategic Program	OPR Formal Meetings for sharing knowledge	We have Training materials and Reports
R17	OPR Formal Meetings for sharing knowledge	We have meeting called Annual Review	TPR On-the job training	I did on job training to the field level staff
R18	OPR PM Methodology, Standards & Process	We have Administration Handbook	TPR Informal Meetings	Also we had discussions (Experience sharing) among the staff
R19	OPR Staff Capacity building programs	Mainly that is Capacity building	OPR Formal Meetings for sharing knowledge	Then it will be converted as discussion reports
R20	OPR PM Methodology, Standards & Process	We have a document called HAP;	OPR Right team selection, Team motivation & Career path	Capable team members and manager
R21	TPR Team Cohesion and Trust	one good resource is organizational culture	OPR Right team selection, Team motivation & Career path	Committed staff and manager
R22	OPR PM Office & Structure	Also we have Flatten and friendship structure of organization	CPR Networking with stakeholders	Support from the stakeholders and partner organizations
R23	OPR Right team selection, Team motivation & Career path	We have Human Resources and physicl	OPR Non project staff support to PM	Support from the non program staff in time
R24	OPR PM Office & Structure	Yes we have Three SBUs; Program office, Logistics and Finance and provide guidelines	OPR PM Methodology, Standards & Process	Program Handbook
R25	OPR PM Office & Structure	We are conducting Monthly meetings, senior management meetings and Portfolio allocation meetings	OPR PM Office & Structure	It supports to; Capacity building for program staff, Program support, Guidance to field staff, Support to prepare action plan and Capacity building for Partners,
R26	OPR PM Office & Structure	We provide technical support and other all	OPR PM Office & Structure	Monitoring and Evaluation
R27	OPR PM Office & Structure	We have Skype Discussions with project teams and top management.	OPR PM Office & Structure	Proposal assessment, Budget management

R28	OPR PM Methodology, Standards & Process	We have 10 Chapters Program Hand Book to program implementation	OPR PM Office & Structure	Determine HR requirements and inform to Administration.
R29	OPR Shared project vision, objectives and policy	We do induction programs	OPR PM Tools & Techniques	We have Work break down Analysis and Gantt chart
R30	OPR Shared project vision, objectives and policy	We have Monthly meetings and provide adequate information and disseminate Leaflets	OPR PM Tools & Techniques	Logical Framework Analysis
R31	OPR PM Tools & Techniques	In the planning stage, we normally do right base approach.	OPR Formal Meetings for sharing knowledge	We use Daily/ Weekly and monthly reports
R32	OPR PM Tools & Techniques	In right base approach, we use Participatory Rural Appraisal.	OPR Project M & E Mechanism	We do Process monitoring and impact monitoring
R33	OPR PM Tools & Techniques	In the PRA, there are five tools; we use Problem tree analysis, Objective Tree and Logical Framework Matrix	OPR PM Tools & Techniques	Interviews (Structured and semi structured interviews) and Questionnaire. Also we use Annual reports.
R34	CPR Project Advisory from Govt Bodies	We will try to develop their capacity. If they are not willing, then we will do the advocacy.	OPR PM Tools & Techniques	We practice all the times participatory management approach.
R35	CPR Social Marketing	We do Inauguration meetings	OPR Shared project vision, objectives and policy	We do PM training and also conducting meetings
R36	CPR Social Marketing	We will display this all information in the community halls	OPR Effective project communication	We use E-mail for Reporting and giving Guidelines.
R37	CPR Social Marketing	We do Social Process to get their participation	TPR Informal Meetings	We have Informal Table to Table Discussions
R38	OPR PM Tools & Techniques	It is called IPC: Individual Project Contract.	TPR Field Level Discussions & Review Visits	Field level Discussions
R39	OPR PM Tools & Techniques	We have Monitoring tools; Participatory monitoring tool Using Gant Charts, Network analysis	TPR Brain Storming	To find solutions
R40	OPR Staff Capacity building programs	we provide training based on their needs	TPR On-the job training	On job training we use to share our skills
R41	OPR Formal Meetings for sharing knowledge	We do inductions programs, monthly meetings and informal meetings.	OPR Right team selection, Team motivation & Career path	We have Career path for project staff
R42	CPR Intra and Consortium meetings	This kind of intra forum helps to share the knowledge and skills	OPR Shared project vision, objectives and policy	It is shared through orientation and training programs

R43	OPR Right team selection, Team motivation & Career path	We have grading system. Based on staff evaluation and grading system, we provide the promotions	OPR PM Methodology, Standards & Process	We provide program handbook trainings to staff time to time
R44	OPR Effective project communication	We do E-mail, Skype and Mobile	OPR Formal Meetings for sharing knowledge	In formal ways; Reports and official meeting we organized.
R45	OPR Effective project communication	We have still communication gap; Sometimes language and interpretation barriers.	OPR Effective project communication	In informal way, Telephone and unofficial meetings we conducted
R46	OPR Non-project staff support to PM	We provide Technical support and we review the program, and provide all support based on their requirements	CPR Joint project Interactions	We had Regular meetings with partner organizations
R47	OPR PM Office & Structure	Also we do Field visits and provide all supports to	CPR Intra and Consortium meetings	We had Protection Forums.
R48	CPR Joint Project Interactions	The Participatory monitoring, when we do internal renovation of the road	CPR Networking with stakeholders	We conducted Informal meetings with stakeholders
R49	CPR Beneficiary integration in projects	And also about resources, they would say where we can get the resources	OPR PM Office & Structure	We have good project management structure
R50	CPR Intra and Consortium meetings	district level we do have Consortium meetings	OPR PM Tools & Techniques	Donors expected Results based management
R51	CPR Networking with stakeholders	informal meeting with other stakeholders	OPR Supportive organizational Culture to PM	And Results based management and trasparency
R52	-	-	OPR Supportive Organizational Culture to PM	Organization culture promotes project works

RE	INGO 1 - Interviewee 3 (Code)	INGO 1 - Actual Response 3	INGO 1 - Interviewee 4 (Code)	INGO 1 - Actual Response 4
R1	TPR Deeper understanding	Using the resources at maximum level by doing proper planning and controlling.	TPR Deeper understanding	Needs identificati, planning, execution,M&E
R2	CPR Project Advisory from Govt Bodies	Delays in getting government approval	OPR Effective project communication	Co-ordination problems
R3	OPR Right team selection, Team motivation & Career path	Paying less salary to staff	CPR Project Advisory from Govt Bodies	Delays in getting approval from government
R4	OPR Right team selection, Team motivation & Career path	Staff turnover problems are high	OPR Non project staff support to PM	Less knowledge of logistic staff
R5	CPR Social Marketing	Less awareness of Community based rehabilitation projects among the community.	OPR PM Tools & Techniques	Base line survey in the beginning
R6	External Factor / Donors funding	Depending on Donors for funding	OPR PM Tools & Techniques	End line survey in the closing
R7	Internal Factor / Financial Resource	Stability in Financial Resources and also human resources	PMS Meeting Scope & Quality	Project achieved the objectives
R8	OPR Right team selection, Team motivation & Career path	And also human resources	PMS Meeting Budgets	Meeting planned budget
R9	Internal Factor / Physical Resource	Adequate physical resources like building facilities.	PS Project Impacts	Impact of projects
R10	OPR Formal Meetings for sharing knowledge	Information Resources	PMS Meeting Time	Timely completion of the projects
R11	OPR PM Methodology, Standards & Process	We don't follow any project operations based on any established theories	Internal factor/Short term projects	
R12	OPR Effective project communication	Communication problems (Top to Bottom communication gap)	OPR PM Tools & Techniques	Short term projects Wrong beneficiary and location selection
R13	OPR Right team selection, Team motivation & Career path	Not committed staff and leader,	OPR PM Methodology, Standards & Process	Not linked with sustainable mechanism
R14	External factor/ Security Risk	Less security for the staff while they are out in the fields	OPR PM Methodology, Standards & Process	We have Operational Manual / Handbook

R15	OPR Effective project communication	Leaders' instructions are not appropriate to the situations.	OPR PM Methodology, Standards & Process	Program Manual
R16	OPR Effective project communication	Field level staff sometimes, they don't understand the instructions clearly.	OPR Staff Capacity building programs	We do Meetings and Workshops
R17	OPR PM Tools & Techniques	We have Timeframe with budget for our activities	OPR PM Office & Structure	Designing progress reporting format
R18	OPR Formal Meetings for sharing knowledge	We use Monthly Reports	OPR PM Office & Structure	Quality advice
R19	OPR PM Tools & Techniques	and pre-planning reports	OPR PM Office & Structure	Problem solution in field level
R20	OPR Effective project communication	Network sharing system	OPR PM Office & Structure	Evaluation support
R21	OPR Effective project communication	Superiors' guidance	OPR PM Methodology, Standards & Process	Logistic manual and Payment policy
R22	CPR Networking with stakeholders	Other NGOs and local authorities support	OPR PM Tools & Techniques	PRA
R23	OPR Formal Meetings for sharing knowledge	Commonly we use Weekly reports.	OPR PM Tools & Techniques	Focal group discussion,
R24	OPR PM Office & Structure	PM office support to Monitoring, Future planning for coming years	OPR PM Tools & Techniques	Peer group discussion
R25	OPR PM Office & Structure	Direct contact with funding agencies and getting funds	OPR PM Tools & Techniques	Secondary data from government departments
R26	OPR PM Office & Structure	Progress report writing and sending to donors	OPR PM Tools & Techniques	LFM
R27	OPR PM Office & Structure	Reporting to donors.	OPR PM Tools & Techniques	Action Plan
R28	OPR PM Methodology, Standards & Process	Funding agencies gives guidelines for projects.	OPR PM Tools & Techniques	Gantt chart
R29	OPR PM Tools & Techniques	Mainly we have Log Frame	OPR PM Tools & Techniques	Implementation plan

R30	OPR PM Tools & Techniques	Also we use Activity Plan	OPR PM Tools & Techniques	
K30	OFR FM 10018 & Techniques			Interviews & Questionnaire
R31	OPR PM Tools & Techniques	Normally we do Data collection	OPR Project M & E Mechanism	
K31	Of KT M Tools & Techniques			Field visits
R32	OPR PM Tools & Techniques	Through observations, direct interviews, NGOs meeting and we contact with organizations they do CBR	OPR PM Tools & Techniques	Check list
R33	OPR Staff Capacity building programs	Providing project management trainings to our staff	OPR Project M & E Mechanism	Impact assessment through PRA approach
R34	TPR Rational and Consensus decision making	through Participatory decision making,	CPR Offical Information releases	Closing meeting and will explain all of our works
R35	TPR Brain Storming	We do brainstorming sessions to discuss important issues	CPR Offical Information releases	Providing Leaflets and booklets
R36	TPR Job Shadowing & Mentoring	and Sending staff to work with other experts	TPR Deeper understanding	Understanding of project life cycle and operations
R37	TPR On-the job training	We do on the job training.	TPR PM Expertise	Project management experience is good
R38	OPR Formal Meetings for sharing knowledge	Also we maintain a library in our office premises	TPR Synthesise new knowledge in PM	We have improved in all stages of our process
R39	OPR Staff Capacity building programs	We conduct Trainings	TPR Case Studies & Success Stories	Writing case studies
R40	OPR Shared project vision, objectives and policy	and Orientation programs to our staff	OPR PM Methodology, Standards & Process	We have HAP certificate
R41	OPR Shared project vision, objectives and policy	Most cases, senior staff inform to their junior staff	OPR Formal Meetings for sharing knowledge	Monthly meetings
R42	OPR Effective project communication	Sometimes communication is going through improper channel.	OPR Effective project communication	
R43	OPR Effective project communication	We do things what we planned but the questionable is how we do the things?	OPR Formal Meetings for sharing knowledge	E- mails Leaflets
R44	OPR Supportive leadership to PM	Top management don't' know ground situation	OPR Formal Meetings for sharing knowledge	We maintain a small library

R45	CPR Networking with stakeholders	We have Common meetings and we share our experience	OPR Formal Meetings for sharing knowledge	Progress meetings
R46	CPR Networking with stakeholders	Also we have Linkages with other organizations	CPR Joint project Interactions	Exposure visits and discussions
R47	CPR Networking with stakeholders	We share our knowledge over the phone or e-mail.	TPR Informal Meetings	Informal discussions
R48	CPR Joint project Interactions	We visit other countries and observe their project mechanism	TPR Job Shadowing & Mentoring	Shadowing
R49	CPR Offical Information releases	We send our Magazines and Publications to other organizations.	OPR Shared project vision, objectives and policy	Meetings
R50	CPR Offical Information releases	Also we use NGOs Websites to know about their activities.	OPR Staff Capacity building programs	Diary, Wall hanger
R51	CPR Offical Information releases	Also we use NGOs Websites to know about their activities.	CPR Joint project Interactions	Group discussions
R52	NS- NGO Sustainability	Support to sustain the NGO _	CPR Intra and Consortium meetings	Inter agency meetings (UNDP, INGO, Consortium),
R53	_	_	CPR Intra and Consortium meetings	Cluster meetings
R54	-		CPR Social Marketing	Inauguration meetings
R55	-	_	CPR Social Marketing	Distributing leaflets
R56	-	_	CPR Social Marketing	Complaint box
R57	_	_	CPR Social Marketing	Home visits

RE	INGO 1 - Interviewee 5 (Code)	INGO 1 - Actual Response 5	LNGO 1 - Interviewee 1 (Code)	LNGO 1 - Actual Response 1
R1	TPR Deeper understanding	Implementation, Monitoring, Reporting	TPR Deeper understanding	It is combination of planning, monitoring, evaluation and reporting and Optimizing resources
R2	CPR Project Advisory from Govt Bodies	Difficulties in getting government approval	TPR Team Cohesion and Trust	Bringing people is under one program team and changing their mind set under one common goal
R3	PMS Meeting Scope & Quality	Deliverables are met with plans	TPR Team Cohesion and Trust	Some staffs are not willing to work together
R4	PMS Meeting Time	On time	TPR Team Cohesion and Trust	Some people are facing difficulties to adopt team culture.
R5	PS Project Impacts	Behavioural changes in the community	OPR PM Tools & Techniques	First one is Good Planning
R6	PMS Meeting Scope & Quality	Project met with LFA activities	TPR Team Commitment	then committed team
R7	OPR Right team selection, Team motivation & Career path	Staff turnover	TPR Best PM Practices	Good PM practices
R8	OPR PM Methodology, Standards & Process	We have Operational Handbook	OPR Project M & E Mechanism	Good monitoring and evaluation plan
R9	OPR PM Methodology, Standards & Process	Humanitarian Assistance Plan	OPR Formal Meetings for sharing knowledge	Good reporting and communication
R10	OPR PM Methodology, Standards & Process	Humanitarian Accessibility Framework	OPR PM Tools & Techniques	Poor planning
R11	CPR Social Marketing	We have Suggestion Box	TPR Team Commitment	Not committed team
R12	OPR Shared project vision, objectives and policy	Induction program	TPR Best PM Practices	Poor leadership and management practices
R13	OPR Staff Capacity building programs	Internal and External training	OPR Project M & E Mechanism	Poor project monitoring
R14	OPR PM Office & Structure	They support to Budgeting and Funding	OPR Formal Meetings for sharing knowledge	Poor reporting and communication.
R15	OPR PM Office & Structure	Grants opening meetings	OPR PM Methodology, Standards & Process	Guidelines for projects and Policies for projects
R16	OPR PM Office & Structure	Field monitoring	OPR PM Methodology, Standards & Process	We have constitution

R17	OPR PM Office & Structure	Designing Reporting forms	OPR PM Methodology, Standards & Process	Strategic direction given in strategic plan
R18	OPR PM Tools & Techniques	PRA	OPR Project M & E Mechanism	Monitoring mechanism
R19	OPR PM Tools & Techniques	Venn diagram	OPR PM Tools & Techniques	Logical Framework Matrix
R20	OPR PM Tools & Techniques	Seasonal calendar	OPR PM Tools & Techniques	Check list for project approval
R21	OPR PM Tools & Techniques	Resource mapping	OPR PM Methodology, Standards & Process	Financial manual, HR manual
R22	OPR PM Tools & Techniques	Risk Mapping	CPR Project Advisory from Donors	Donor guidelines for projects
R23	OPR PM Tools & Techniques	Service delivery analysis	OPR PM Office & Structure	Discussions with field staff rectifying their problems
R24	OPR PM Tools & Techniques	LFA	OPR PM Office & Structure	Technical support
R25	OPR PM Tools & Techniques	Action Plan	OPR PM Office & Structure	Organizing workshops
R26	OPR PM Tools & Techniques	Step by Step Guide	OPR PM Office & Structure	Providing facilities and coordination.
R27	OPR PM Methodology, Standards & Process	Strategic Plan	OPR PM Methodology, Standards & Process	We have policies and procedures for all projects
R28	OPR Project M & E Mechanism	Process & Monitoring	OPR PM Tools & Techniques	Participatory needs identification
R29	OPR Formal Meetings for sharing knowledge	Complete Reporting	OPR PM Tools & Techniques	Vulnerable capacity assessment
R30	OPR Formal Meetings for sharing knowledge	Meetings	OPR PM Tools & Techniques	Venn diagram,Problem tree analysis
R31	TPR PM Expertise	Project management experience	OPR PM Tools & Techniques	Resource Mapping,

R32	TPR Synthesise new knowledge in PM	Designing tailor-made software	OPR PM Tools & Techniques	We use Logic model
R33	TPR Best PM Practices	Best PM Practices	OPR PM Tools & Techniques	Logical framework
R34	OPR PM Methodology, Standards & Process	HAP training	OPR PM Tools & Techniques	Results based management
R35	OPR Staff Capacity building programs	Internal and External training programs	OPR PM Tools & Techniques	PM Software for construction projects
R36	OPR Formal Meetings for sharing knowledge	Meetings	OPR Project M & E Mechanism	Monitoring and evaluation plan
R37	OPR PFSK Displays in boards	Display the information in boards	OPR Formal Meetings for sharing knowledge	Week progress meeting, Monthly progress meeting
R38	OPR Formal Meetings for sharing knowledge	Progress meetings	OPR Formal Meetings for sharing knowledge	Monthly and bi annual and annual Reporting
R39	TPR Informal Meetings	Informal discussions & Meetings	OPR PM Methodology, Standards & Process	Sustainability plan including project plans
R40	TPR Job Shadowing & Mentoring	Mentoring	OPR PM Methodology, Standards & Process	Strategic plan
R41	TPR Job Shadowing & Mentoring	Shadowing	OPR Staff Capacity building programs	We have internal capacity building training programs
R42	OPR Right team selection, Team motivation & Career path	Career path for project staff	TPR On-the job training	On job training we use to share our our skills to junior staff
R43	CPR Social Marketing	Awareness programs	OPR Staff Capacity building programs	We do online courses to all staff and volunteers
R44	CPR Social Marketing	Display	OPR PM Information System	We develop PM information system. (Filing, reporting),
R45	CPR Joint project Interactions	We do have formal meetings with partner	TPR Case Studies & Success Stories	Case studies
R46	CPR Joint project Interactions	Formal meetings	TPR Best PM Practices	Best practices put in bulletin

R47	CPR Networking with stakeholders	Progress meetings	OPR Formal Meetings for sharing knowledge	Progress meetings and reports
R48	CPR Networking with stakeholders	Coordination meetings	TPR Informal Meetings	We have informal meetings within teams
R49	CPR Beneficiary integration in projects	Beneficiary implementation	TPR Brain Storming	we do brain storming sessions,
R50	CPR Offical Information releases	Leaflets	OPR Right team selection, Team motivation & Career path	We have career path for project staff
R51	CPR Offical Information releases	Coordination meetings	OPR Shared project vision, objectives and policy	We do Induction programs
R52	CPR Offical Information releases	Inter agency meetings	OPR Formal Meetings for sharing knowledge	We have meetings officially sometimes we have some informal communications.
R53	CPR Social Marketing	Home visits	OPR Non project staff support to PM	They support to attend the training locally and abroad
R54	CPR Community of practice	Inter agency meetings	TPR Case Studies & Success Stories	We distribute our news letters to our stakeholders
R55	CPR Community Advocacy	Advocacy task force	TPR Best PM Practices	Official information releases through consortium
R56	CPR Community of practice	Coordination meetings	CPR Social Marketing	We do some propaganda programs (Television, Radio, Banners, Leaflets and articles).
R57			CPR Networking with stakeholders	We have networking relationships with beneficiaries

RE	LNGO 1 - Interviewee 2 (Code)	LNGO 1 - Actual Response 2	LNGO 1 - Interviewee 3 (Code)	LNGO 1 - Actual Response 3
R1	TPR Deeper understanding	Needs Identifica,Planning, Implem & Moni	TPR Deeper understanding	Needs identification, planning, implementing, monitoring and evaluation, community
R2	Internal Factor / Financial Resource	Insufficient funds, delays in getting funds	External factor/ Community support	Some people they are against for project
R3	External Factor / Bad Weather	Bad weather (Heavy rains)	External factor/ Security Risk	Security problem (Travelling)
R4	PMS Meeting Scope & Quality	Objectives achievement	PMS Meeting Scope & Quality	Quality and Objectives achievement
R5	PMS Meeting Scope & Quality	Process is implemented in a right way	PS Stakeholders support	Stakeholders support (People, Govt and
R6	PS Project Sustainability	Sustainability of project	PMS Meeting Scope & Quality	Achieving Objectives
R7	External factor/ Community support	Self dedication and motivation of beneficiary	PS Fulfilling right needs of right people	Reaching appropriate persons and
R8	OPR Right team selection, Team motivation & Career path	Staff turnover problem	OPR PM Methodology, Standards & Process	Admin Manuals
R9	OPR PM Methodology, Standards & Process	We have ICRC Guidelines	OPR PM Methodology, Standards & Process	Finance Manuals
R10	OPR PM Methodology, Standards & Process	SLRC Policy and Procedures	OPR PM Tools & Techniques	Structural design and Architectural design
R11	OPR PM Office & Structure	They conduct meetings	OPR Formal Meetings for sharing knowledge	Evaluation & Planning meetings
R12	OPR PM Office & Structure	Progress Report	OPR Formal Meetings for sharing knowledge	Reports and
R13	OPR PM Office & Structure	Evaluation	OPR Effective project communication	E-mail communication
R14	OPR PM Office & Structure	Technical support	OPR PM Office & Structure	Information sharing & Guidelines

R15	OPR PM Office & Structure		OPR PM Office & Structure	
KI3		Advisory and Training		Security support
R16	OPR PM Tools & Techniques	Bottom up Approach (Under GS Leadership),	OPR PM Office & Structure	Report Writing
R17	OPR PM Tools & Techniques	Tailor made approach	OPR PM Office & Structure	Technical support
R18	OPR PM Tools & Techniques	<u>^</u>	OPR PM Office & Structure	
R19	OPR PM Tools & Techniques	CBOs meeting in the village level	OPR PM Office & Structure	Financial support
		We do observation to identify		Training
R20	OPR PM Tools & Techniques	Log frame	OPR PM Methodology, Standards & Process	SLRC Guidelines and Manuals
R21	OPR Project M & E Mechanism	Field Visits	OPR PM Tools & Techniques	Participatory needs identification
R22	OPR PM Tools & Techniques	Structural questionnaire	OPR PM Tools & Techniques	Program Chart (six months),
R23	TPR PM Expertise	Project management experience: Average	OPR PM Tools & Techniques	Bar Chart, and Gantt chart.
R24	TPR PM Expertise	Project management expertise: Average	OPR PM Tools & Techniques	LFM
R25	TPR Best PM Practices	Best PM Practices: Average	OPR PM Tools & Techniques	Network Analysis
R26	OPR Staff Capacity building programs	Ť	TPR PM Expertise	
R27	OPR Formal Meetings for sharing knowledge	Short term trainings	TPR Best PM Practices	Project management experience
R28	OPR Formal Meetings for sharing	Meetings	OPR Staff Capacity building programs	Best PM Practices: Average
K20	knowledge	Reporting		Short trainings
R29	OPR Formal Meetings for sharing knowledge	Monthly and Progress Meetings	OPR Formal Meetings for sharing knowledge	Meetings and Discussions

R30	TPR Informal Meetings	Informal meetings	OPR Formal Meetings for sharing knowledge	Monthly meetings
R31	TPR Job Shadowing & Mentoring	Mentoring Expert guidance	OPR Formal Meetings for sharing knowledge	Technical meetings, Tender meetings
R32	TPR Job Shadowing & Mentoring	Shadowing through meetings	TPR Informal Meetings	Group discussions
R33	TPR Perosnal Coaching	Coaching: Average	TPR Informal Meetings	Experience sharing meetings and discussions
R34	TPR Synthesise new knowledge in PM	Innovations: Average	CPR Joint Project Interactions	We have informal meetings with grass root level organisations
R35	OPR Right team selection, Team motivation & Career path	Career path for project staff: Yes	TPR Brain Storming	Brain storming
R36	OPR Shared project vision, objectives and policy	Orientation Meetings	TPR On-the job training	On the job training
R37	PSN JPR implmentation	Individual, Group and Community projects	OPR PM Office & Structure	Career path for project staff : Yes
R38	CPR Intra and Consortium meetings	Cluster Meetings	OPR Shared project vision, objectives and policy	Orientation
R39	CPR Networking with stakeholders	Informal meetings	OPR Shared project vision, objectives and policy	Meetings
R40	CPR Project Advisory from Donors	Regional conferences	OPR Effective project communication	Appropriate channel
R41	CPR Beneficiary integration in projects	Making beneficiaries to implement the projects	OPR PM Office & Structure	OPR PM Office & Structure
R42	CPR Offical Information releases	Manuals	OPR Non-project staff support to PM	Advice, Technical support, Finance support
R43	CPR Social Marketing	We do meetings and technical assistance	CPR Joint Project Interactions	Joint implementation
R44	TPR Case Studies & Success Stories	Success stories will be shared: Manuals	CPR Joint Project Interactions	Joint monitoring

D 45	CPR Community of practice		CPR Networking with stakeholders	
R45		On-line social networking		OCHA Meetings
R46	CPR- Collaborative resource, informal knowledge sharing	Informal knowledge sharing is the most important and give more knowledge	CPR Beneficiary integration in projects	Yes in planning
R47	-	-		W 1 1
			CPR Offical Information releases CPR Social Marketing	Websites
R48	-	-	Ci i boolar Marketing	Community meetings
R49	_	_	CPR Social Marketing	
R47				Displays, Audio and video aids
R50	_	_	CPR Social Marketing	
K 50				Group and street drama
R51	_	_	CPR Community of practice	
KJI				Group will have expert, Meetings
R52	_	_	CPR Community of practice	Websites and mails

RE	LNGO 1 - Interviewee 4 (Code)	LNGO 1 - Actual Response 4	LNGO 1 - Interviewee 5 (Code)	LNGO 1 - Actual Response 5
R1	TPR Deeper understanding	Monitoring and Evaluation activities in the p	TPR Deeper understanding	Planning, Implementing, M & E, Reporting
R2	External factor/ Security Risk	Security problems in the field	External factor/ Security Risk	We face Security problems in
R3	CPR Project Advisory from Govt Bodies	Government control over the projects	OPR Non project staff support to PM	Conflict between mgtt & govrnance
R4	PMS Meeting Scope & Quality	We normally see the outcomes of the project	PMS Meeting Scope & Quality	Achieving the planned activities
R5	PS Project Sustainability	We look in to Sustainability of the project	PS Project Impacts	How many beneficiaries received benefits
R6	PMS Meeting Scope & Quality	Firstly Identified needs should be fulfilled	PMS Meeting Scope & Quality	Objectives achieved
R7	PS Project Impacts	Project Benefits to the community	Internal factor/Short term projects	We close the projects in very short period
R8	OPR PM Methodology, Standards & Process	We have Child Development Policy	CPR Beneficiary integration in projects	Beneficiaries not understood well the proje
R9	OPR PM Methodology, Standards & Process	Procedures and	TPR PM Expertise	Staff Less knowledge in PM knowledge
R10	OPR PM Methodology, Standards & Process	Strategic plan	OPR PM Methodology, Standards & Process	PM Policy
R11	OPR Staff Capacity building programs	Training	OPR Staff Capacity building programs	Trainings
R12	OPR Non project staff support to PM	Good governance	OPR PM Methodology, Standards & Process	PM Guidelines
R13	OPR PM Office & Structure	Support to in provision of resources and Guidance	TPR Team Values	Team Values
R14	OPR PM Office & Structure	Funding	OPR Formal Meetings for sharing knowledge	Staff meetings

D15	PMM PMO Planning			
R15		Planning	TPR Informal Meetings	Informal discussions
R16	OPR PM Methodology, Standards & Process	Operations procedures	OPR PM Office & Structure	Trainings
R17	OPR PM Tools & Techniques	PRA	OPR PM Office & Structure	Technical support
R18	OPR PM Tools & Techniques			
R19	OPR PM Tools & Techniques	RRA	OPR PM Office & Structure	Solve field level problems
	OPR PM Tools & Techniques	PNA (Participatory network analysis)	OPR PM Tools & Techniques	Baseline Survey
R20	OPR PM Tools & Techniques	Social mapping	OPR PM Tools & Techniques	Prioritise the needs and selecting
R21		Resource mapping	OPR PM Tools & Techniques	Community Participatory approach
R22	OPR PM Tools & Techniques	Venn diagram	OPR PM Tools & Techniques	Gantt chart
R23	OPR PM Tools & Techniques	Income circle	OPR PM Tools & Techniques	LFA
R24	OPR PM Tools & Techniques	Problem tree analysis	OPR Project M & E Mechanism	Monitoring plans, monitoring forms
R25	OPR PM Tools & Techniques	Logical framework analysis	OPR Formal Meetings for sharing knowledge	Closing Meetings and inform to all relevant
R26	CPR Joint project Interactions	Exposure visit	CPR Joint project Interactions	Discussions with Partners
R27	OPR Project M & E Mechanism	Participatory monitoring	TPR PM Expertise	
R28	OPR Project M & E Mechanism			Project management experience
R29	OPR Formal Meetings for sharing knowledge	Field level survey Closing meetings and Handing over	TPR PM Expertise TPR Best PM Practices	Project management expertise Best PM Practices

D 20	TPR PM Expertise			
R30		Project management experience	OPR Staff Capacity building programs	Only we undergo short training programs
R31	TPR PM Expertise			
KJI		Project management expertise	TPR On-the job training	On the Job training
R32	TPR Best PM Practices			
KJ2		Best PM Practices	OPR Staff Capacity building programs	Short courses
R33	OPR Staff Capacity building programs		OPR Formal Meetings for sharing	
K 55		We have training programs	knowledge	Reporting and Meetings
R34	TPR Informal Meetings	Informal discussions	OPR Formal Meetings for sharing knowledge	Progress meetings
R35	TPR Informal Meetings		Ĭ	
	OPR Formal Meetings for sharing	Experience sharing meetings	TPR Informal Meetings	Informal discussions
R36	knowledge	Monthly Meetings	TPR Job Shadowing & Mentoring	Shadowing
R37	OPR Formal Meetings for sharing knowledge			
		Progress meetings	TPR Case Studies & Success Stories	Writing success stories and Presentations
R38	TPR Brain Storming	We organize session to generate new ideas	TPR Perosnal Coaching	Coaching
	OPR Right team selection, Team			Codeming
R39	motivation & Career path	Career path for project staff	OPR Right team selection, Team motivation & Career path	Career path for project staff
R40	OPR Shared project vision, objectives and policy	The state of the s	I I I I I I I I I I I I I I I I I I I	Organisational culture promotes team
		Through line management	OPR Supportive orgn culture to PM	performance
R41	OPR Effective project communication			
		E-mail	OPR Supportive Leadership to PM	Project coordination;
R42	OPR Shared project vision, objectives and policy			Group discussions, Lessons learning
	*	Inauguration meetings	CPR Joint project Interactions	sessi
R43	CPR Joint project Interactions			
		Meetings	CPR Networking with stakeholders	Meetings
R44	CPR Networking with stakeholders			
		Coordination meetings	CPR Project Advisory from Govt Bodies	Funding & Approval of project

R45	CPR Project Advisory from Donors			Collaborative resource is important
K 4J		Funding & guidance	CPR Collaborative Resources	because og knowledge gap
R46	CPR Beneficiary integration in projects	Participatory methods in decision making	CPR Offical Information releases	Coordination meetings
R47	CPR Offical Information releases	Project meetings	CPR Social Marketing	Meetings
R48	CPR Community Advocacy	We do Child parliament & Advocacy (children networking)	CPR Community of practice	UN OCHA Coordination meetings
R49	CPR Social Marketing	Inaugural meetings	CPR Community of practice	Internal websites of our organization to
R50	CPR Social Marketing	Exhibitions	NS Stakeholders acceptance	Community and government acceptance
R51	CPR Social Marketing	Theatre program		
R52	CPRIntra and Consortium meetings	District level consortium meetings		_

RE	INGO 2 - Interviewee 1 (Code)	INGO 2 - Actual Response 1	INGO 2 - Interviewee 2 (Code)	INGO 2 - Actual Response 2
R1	TPR Deeper understanding	Planning projects and implementation	TPR Deeper understanding	coordinating and implementing the training programs.
R2	OPR PM Tools & Techniques	baseline survey in the starting of project	PS Project Impacts	reducing the domestic violence in community level
R3	OPR PM Tools & Techniques	we do assessment at the end of project	PMS Meeting Scope & Quality	Meeting project goals
R4	PMS Meeting Scope & Quality	that we have achieved project objectives	PS Project Impacts	We would see the attitude and behavioral changes in the community through projects
R5	PS Project Impacts	they have got jobs or started their own businesses	TPR Case Studies & Success Stories	Cases discussions
R6	PS Project Impacts	income of youth	TPR Case Studies & Success Stories	Story telling
R7	PS Project Impacts	their lifestyle changes.	OPR Formal Meetings for sharing knowledge	Meeting reports
R8	PS Project Impacts	Outcomes of projects	Internal factor/ Inappropriate planning	Not proper planning
R9	PS Project Impacts	Impacts of projects	Internal factor/ Less govt Support	Less Government support,
R10	PMS Meeting Scope & Quality	Meeting Log frame	Internal factor/ Less community acceptance	less community acceptance
R11	TPR Team cohesion and trust	Team cohesion and trust	OPR PM Methodology, Standards & Process	We have proper policy
R12	Internal Factor / Inappropriate location	Failure in appropriate location selection	OPR PM Information System	and system
R13	External factor / Less support from partner organizations	less support from partner organizations	OPR PM Office & Structure	Yes we have similar body lead by Area director
R14	OPR PM Methodology, Standards & Process	Care organization manual	OPR PM Methodology, Standards & Process	program manual for projects implementation
R15	OPR PM Methodology, Standards & Process	HR, Finance and projects are written	OPR PM Tools & Techniques	PNA

R16	OPR PM Methodology, Standards & Process	individual project implementation agreement (IPIA)	OPR PM Tools & Techniques	PRA
R17	OPR PM Office & Structure	Yes, we got North East Office, Program unit	OPR PM Tools & Techniques	Venn diagram
R18	OPR PM Tools & Techniques	PRA	OPR PM Tools & Techniques	Stakeholders Mapping
R19	OPR PM Tools & Techniques	LFA	OPR PM Tools & Techniques	LFA
R20	OPR Project M & E Mechanism	Impact assessment	OPR PM Tools & Techniques	Action Plan
R21	OPR Project M & E Mechanism	Evaluation	OPR Project M & E Mechanism	Regular Field level visits
R22	TPR Deeper understanding	Understanding of project life cycle and operations	OPR PM Tools & Techniques	Focus group meetings,
R23	TPR PM Expertise	Project management expertise	TPR Case Studies & Success Stories	Story,
R24	OPR Staff Capacity building programs	Online courses	OPR PM Tools & Techniques	Questionnaire
R25	OPR Staff Capacity building programs	Trainings	OPR PM Tools & Techniques	Observation
R26	OPR Formal Meetings for sharing knowledge	On-line documents	TPR Deeper understanding	Understanding of project life cycle and operations
R27	OPR Formal Meetings for sharing knowledge	open documents	TPR PM Expertise	Project management expertise
R28	OPR Formal Meetings for sharing knowledge	Project meetings	OPR Staff Capacity building programs	We have needs based trainings
R29	OPR Formal Meetings for sharing knowledge	staff meetings	OPR Formal Meetings for sharing knowledge	Meetings
R30	OPR Shared project vision, objectives and policy	Team leader explain to the staff	OPR Effective project communication	TELE Conference
R31	TPR Informal Meetings	Skill and experience sharing meetings	OPR Effective project communication	E-mail

R32	TPR Job Shadowing & Mentoring	mentoring	OPR Effective project communication	Skype
R33	TPR Job Shadowing & Mentoring	Shadowing through observations	OPR Formal Meetings for sharing knowledge	Monthly Meetings
R34	TPR Perosnal Coaching	We got personal coacher	OPR Formal Meetings for sharing knowledge	Review meetings
R35	OPR Shared project vision, objectives and policy	Meetings	OPR Formal Meetings for sharing knowledge	Planning meetings
R36	OPR Effective project communication	on-line	OPR Formal Meetings for sharing knowledge	Integration meetings
R37	OPR Effective project communication	e-mails	OPR Formal Meetings for sharing knowledge	progress reviews
R38	OPR PM Office & Structure	Effective structure	TPR Rational and Consensus decision making	Pariticipatory Decision Making
R39	OPR Supportive Leadership to PM	Technical advice	TPR Perosnal Coaching	We do coaching
R40	OPR Supportive Leadership to PM	Conducting Project review meetings	OPR Supportive Leadership to PM	Right team selection
R41	OPR Supportive Leadership to PM	conducting financial review meetings	OPR Shared project vision, objectives and policy	Meetings
R42	CPR Joint project Interactions	Joint project meetings	OPR Supportive Leadership to PM	planning
R43	CPR Joint project Interactions	Discussions	OPR Non project staff support to PM	HR planning
R44	Networking with stakeholders (External collaborators, Grass root level, govt body)	National Forums	OPR Supportive Leadership to PM	Meetings and overall coordination
R45	Networking with stakeholders (External collaborators, Grass root level, govt body)	District level coordination meetings	CPR Joint project Interactions	Formal and informal meetings
R46	CPR Beneficiary integration in projects	cash for work projects, we use beneficiary involvement.	CPR Networking with stakeholders	National Forums
R47	CPR Social Marketing	Orientation programs	CPR Networking with stakeholders	District level coordination meeting

R48	CPR Social Marketing	Meetings with stakeholders	CPR Project Advisory from Donors	Donors Advisory
R49	CPR Social Marketing	Awareness programs	CPR Offical Information releases	Websites
R50	CPR Community of practice	On-line social networks solve our technical issues	OPR PM Tools & Techniques	We do participatory approache
R51	CPR Community of practice	Discussions with beneficiary	CPR Social Marketing	Street dramas
R52	CPR Community of practice	Inter organizational meetings	CPR Social Marketing	Awareness programs
R53	CPR Intra and Consortium meetings	Sector-wise meetings	CPR Community of practice	E-mail and Meetings
R54	CPR Joint project Interactions	Lesson learning sessions	OPR Formal Meetings for sharing knowledge	Frequent and Regular meetings
R55	OPR Formal Meetings for sharing knowledge	network sharing system. This means we have shared folders	OPR PM Information System	Data base
R56	_	-	CPR Joint project Interactions	We do outsourcing of training programs
R57	_	-	OPR PM Tools & Techniques	software for Analysis

RE	INGO 2 - Interviewee 3 (Code)	INGO 2 - Actual Response 3	INGO 2 - Interviewee 4 (Code)	INGO 2 - Actual Response 4
R1	TPR PM Expertise	Selecting beneficiaries, planning vocational trainings	CPR Social Marketing	Meeting with entrepreneurs and informing the objectives
R2	PMS Meeting Scope & Quality	Meeting project objectives is very much important	TPR Deeper understanding	Screening business proposals and monitoring t
R3	PS Stakeholders support	Youth participation / attendance in course	PS Project Sustainability	Profitability of Business
R4	PS Project Impacts	youth starting their own businesses	PS Project Sustainability	Sustainability of project
R5	PS Development Objectives	Development Objectives considered	PS Project Impacts	Number of employments provided
R6	OPR PM Tools & Techniques	We do job market assessment	PMS Meeting Scope & Quality	The funds spent fulfilled the beneficiary requirements
R7	OPR PM Methodology, Standards & Process	We work with designed proposal and plan.	PS Stakeholders support	Participation of beneficiary
R8	OPR PM Tools & Techniques	field level information	NS Achieving Vision, mission and objectives	Vision, mission, objectives
R9	OPR PM Office & Structure	Yes we work as team.	Internal factor/ Poor Management	Failure in proper Implementations
R10	OPR PM Methodology, Standards & Process	We have program manual for projects implementation	OPR PM Methodology, Standards & Process	Organization administrative
R11	OPR PM Tools & Techniques	PNA	OPR PM Methodology, Standards & Process	finance manual
R12	OPR PM Tools & Techniques	PRA	OPR PM Methodology, Standards & Process	project manual
R13	OPR PM Tools & Techniques	Venn diagram	OPR PM Office & Structure	We got project office for project operations
R14	OPR PM Tools & Techniques	Log frame	OPR PM Methodology, Standards & Process	Grant policy and

R15	OPR PM Tools & Techniques	Action Plan	OPR Project M & E Mechanism	Standard manuals for M & E
R16	OPR PM Tools & Techniques	Gantt chart	OPR PM Tools & Techniques	Meetings with community
R17	OPR Project M & E Mechanism	Field level Monitoring	OPR PM Tools & Techniques	Action Plans
R18	OPR Project M & E Mechanism	Complaint mechanism,	OPR PM Tools & Techniques	BOQs
R19	OPR Project M & E Mechanism	Reporting	OPR Formal Meetings for sharing knowledge	Monthly review meetings
R20	OPR Project M & E Mechanism	M& E team and they will conduct meetings	OPR Formal Meetings for sharing knowledge	Field level discussions
R21	TPR Deeper understanding	Understanding of project life cycle and operations	TPR PM Expertise	Project Management expertise
R22	TPR Synthesise new knowledge in PM	We design new tools for PM practice	OPR Staff Capacity building programs	Training programs
R23	OPR Staff Capacity building programs	We have lots of trainings	Informal Meetings	Annual get-together
R24	OPR Formal Meetings for sharing knowledge	Progress meetings	OPR Formal Meetings for sharing knowledge	Monthly meetings,
R25	OPR Effective project communication	E-mail	OPR Formal Meetings for sharing knowledge	Review meetings
R26	OPR Effective project communication	Skype,	OPR Formal Meetings for sharing knowledge	Policy level meetings
R27	OPR Formal Meetings for sharing knowledge	Monthly and Review meetings	TPR Perosnal Coaching	Coaching
R28	OPR Formal Meetings for sharing knowledge	Staff meetings,	TPR Case Studies & Success Stories	Success stories
R29	OPR Formal Meetings for sharing knowledge	progress meetings	OPR Shared project vision, objectives and policy	Meetings
R30	TPR Casual Conversations	casual conversations	OPR Effective project communication	E-mail communication

R31	TPR Informal Meetings	Skill and experience sharing	TPR PM Expertise	Strong project management expertise
R32	TPR Perosnal Coaching	We do personal coaching sessions	OPR Supportive Leadership to PM	Advice,
R33	OPR Shared project vision, objectives and policy	Meetings	OPR Supportive Leadership to PM	Support to Evaluations,
R34	OPR Effective project communication	TELE conference	OPR Supportive Leadership to PM	Monthly meetings (Bottle neck)
R35	OPR Effective project communication	E-mail,	CPR Joint project Interactions	Technical support
R36	OPR Effective project communication	Skype	CPR Networking with stakeholders	Informal meetings
R37	OPR Supportive Leadership to PM	Technical advice and	CPR Networking with stakeholders	experience sharing
R38	OPR Supportive Leadership to PM	project planning	CPR Project Advisory from Govt Bodies	Advisory
R39	CPR Joint project Interactions	Joint project meetings, Discussions	CPR Beneficiary integration in projects	experience sharing
R40	CPR Networking with stakeholders	National Forums	CPR Beneficiary integration in projects	Meetings
R41	CPR Networking with stakeholders	District level coordination meetings,	CPR Offical Information releases	Magazines
R42	CPR Project Advisory from Govt Bodies	formal and informal communications to share	CPR Offical Information releases	Sectoral Meetings
R43	CPR Social Marketing	Project Orientation programs	CPR Social Marketing	Meetings
R44	CPR Social Marketing	Applications forms with Leaflets, Banners	CPR Social Marketing	Folders /Leaflets
R45	CPR Social Marketing	Awareness meetings to GS	CPR Social Marketing	through banks inform to business peop
R46	CPR Community of practice	E-mail and Meetings	CPR Social Marketing	Paper Advertisements

R47	OPR PM Information System	Data base	CPR Community of practice	Informal meetings
R48	OPR Formal Meetings for sharing knowledge	Team planning,	TPR Case Studies & Success Stories	Success stories and
R49	Informal Meetings	This society will organize some get together	TPR Case Studies & Success Stories	Case studies are very much useful
R50	TPR Team Cohesion and trust	Team cohesion nd trust improve our communication	CPR Community of practice	foreign delegates visit here and share their country working experiences
R51	OPR Right team selection, Team motivation & Career path	right team appointments	CPR Community of practice	Delegate's visits and discussions

RE	INGO 2 - Interviewee 5 (Code)	INGO 2 - Actual Response 5	LNGO 2 - Interviewee 1 (Code)	LNGO 2 - Actual Response 1
R1	CPR Joint project Interactions	We work with other agencies for some projects.	TPR PM Expertise	need identification from the community, planning
R2	External Factor/ Changing needs of community	Changes ever occur in living conditions of community	PMS Meeting Scope & Quality	will look into objectives achievement of projects
R3	PS Project Impacts	How many employments provided by business projects	PS Project Impacts	incomes of beneficiary after project completion
R4	PS Project Impacts	Indirect benefits to community a	PS Fulfilling right needs of right people	beneficiary safety/security needs to be fulfilled
R5	PS Project Impacts	improvements in living conditions.	PMS Meeting Scope & Quality	we will ensure all the beneficiary use the toilets
R6	PMS Meeting Scope & Quality	Meeting objectives	PS Project Impacts	Improvements of lifestyle and other family developments
R7	PS Fulfilling right needs of right people	Meeting right needs of community	PMS Meeting Budgets	within budget level
R8	PS Project Impacts	Direct impacts	PMS Meeting Time	Project completion within time
R9	PS Project Impacts	Indirect impacts:	Internal Factor/ Improper selection of beneficiary	Inappropriate beneficiary selection
R10	PS Project Impacts	Behavioral changes and	TPR PM Expertise	We got very experienced and competent staff
R11	PS Stakeholders support	beneficiary participation	OPR PM Methodology, Standards & Process	Standard manual for
R12	Internal Factor/ Improper selection of beneficiary	improper beneficiary for our projects.	OPR PM Office & Structure	We have project office led by program manager.
R13	OPR Formal Meetings for sharing knowledge	Field level reports	OPR PM Methodology, Standards & Process	Policy Guide for each project
R14	OPR PM Tools & Techniques	Desk Based Assessments	CPR Project Advisory from Govt Bodies	Government policy

R15	OPR PM Office & Structure	Then project director and projects teams	OPR PM Tools & Techniques	Direct interviews
R16	OPR PM Methodology, Standards & Process	Financial standards	OPR PM Tools & Techniques	Interviews through partners,
R17	OPR PM Methodology, Standards & Process	Organizational Policy	OPR PM Tools & Techniques	PRA methods
R18	OPR Project M & E Mechanism	M & E Framework and	OPR PM Tools & Techniques	We use LFA
R19	OPR PM Methodology, Standards & Process	Sphere Humanitarian Handbook	OPR PM Tools & Techniques	BOQs for shelter projects
R20	OPR PM Tools & Techniques	Community level meetings	OPR Formal Meetings for sharing knowledge	Field level meetings,
R21	OPR PM Tools & Techniques	PRA	OPR Formal Meetings for sharing knowledge	Milestones meetings,
R22	OPR PM Tools & Techniques	Direct interviews	OPR Formal Meetings for sharing knowledge	Weekly and monthly meetings
R23	OPR PM Tools & Techniques	Pocket based assessments	CPR Intra and Consortium meetings	Partners meetings
R24	OPR PM Tools & Techniques	LFA,	OPR Project M & E Mechanism	Internal and External audits
R25	OPR PM Tools & Techniques	Budgeting	OPR Formal Meetings for sharing knowledge	Closing ceremony
R26	OPR PM Tools & Techniques	Indicators,	OPR Formal Meetings for sharing knowledge	Meetings with all parties.
R27	OPR Project M & E Mechanism	Field level assessments	TPR Deeper understanding	Understanding of project life cycle and operations:
R28	TPR PM Expertise	Project management experience,	TPR Best PM Practices	and PM best practices
R29	TPR Best PM Practices	Best PM Practices	TPR PM Expertise	Project management expertise
R30	OPR Staff Capacity building programs	Workshops,	OPR Staff Capacity building programs	Trainings,

R31	OPR Staff Capacity building programs	Social Mobilization trainings	OPR Staff Capacity building programs	Attending foreign workshops
R32	OPR Formal Meetings for sharing knowledge	Project review meetings	OPR Staff Capacity building programs	capacity building trainings
R33	OPR Formal Meetings for sharing knowledge	Monthly meetings	OPR Formal Meetings for sharing knowledge	Team meetings
R34	OPR Formal Meetings for sharing knowledge	We organize M & E Co-group meetings	OPR Formal Meetings for sharing knowledge	Planning meetings,
R35	TPR Informal Meetings	Informal meetings	OPR Formal Meetings for sharing knowledge	Monthly staff meetings
R36	TPR Field visits	Field visits	OPR Formal Meetings for sharing knowledge	Project orientation programs
R37	OPR Right team selection, Team motivation & Career path	Career path for project staff	TPR Informal Meetings	Informal meetings,
R38	OPR Shared project vision, objectives and policy	Orientation programs	TPR Field visits	Field visits
R39	OPR Shared project vision, objectives and policy	Handbooks	TPR Perosnal Coaching	Coaching
R40	OPR Effective project communication	E-mails	OPR Right team selection, Team motivation & Career path	Career path for project staff
R41	OPR Effective project communication	Telephone	OPR Shared project vision, objectives and policy	Staff meetings
R42	OPR Supportive organizational culture to PM	Organizational culture promotes team perfomance	OPR Shared project vision, objectives and policy	workshops
R43	OPR Supportive Leadership to PM	Report writings	OPR Effective project communication	Mail and
R44	OPR Supportive Leadership to PM	Proposal development	OPR Supportive Leadership to PM	transparency of all activities and meetings
R45	CPR Joint project Interactions	Meetings	OPR Supportive Leadership to PM	assigned task for individual staff
R46	CPR Networking with stakeholders	NGOs coordination meetings,	OPR Supportive Leadership to PM	Attend meetings and give their advices

R47	CPR Networking with stakeholders	Sectoral Forums,	OPR Supportive Leadership to PM	planning meetings
R48	CPR Networking with stakeholders	Government Agent meetings	CPR Joint project Interactions	Partners meetings
R49	CPR Project Advisory from Donors	Meetings and Reporting	CPR Joint project Interactions	Joint plans a
R50	CPR Project Advisory from Govt Bodies	GA Reviews	CPR Joint project Interactions	Joint implementation
R51	CPR Offical Information releases	we organize meetings in ministry level to inform our project progress.	CPR Intra and Consortium meetings	NGOs Consortium meetings
R52	CPR Beneficiary integration in projects	Review programs with beneficiary	CPR Project Advisory from Govt Bodies	Government policy
R53	CPR Offical Information releases	NGOs Consortium and coordination meetings,	CPR Beneficiary integration in projects	Make beneficiary implement the projects
R54	CPR Social Marketing	Project Orientation programs,	CPR Offical Information releases	Monthly newsletters
R55	CPR Social Marketing	CBOs meetings	CPR Offical Information releases	Websites
R56	CPR Social Marketing	Demonstrations	CPR Social Marketing	Community meetings and
R57	TPR Team Cohesion and Trust	Also we work with different nationals	CPR Social Marketing	Stakeholders meetings
R58	-	-	CPR Community of practice	countries and look into their projects and having discussions
R59	_	_	OPR Project M & E Mechanism	M & E Reports
R60	_	-	OPR PM Tools & Techniques	Budgeting Document

RE	LNGO 2 - Interviewee 2 (Code)	LNGO 2 - Actual Response 2	LNGO 2 - Interviewee 3 (Code)	LNGO 2 - Actual Response 3
R1	TPR Deeper understanding	I carry out beneficiary selection, planning,	TPR PM Expertise	proposal development, project designing, planning
R2	External Factor/ Changing needs of community	difficulties to identify real needs of community	External Factor/ Inefficiency of Govt bodies	Difficulties in getting PTF
R3	External Factor/ Inefficiency of Govt bodies	to work with government depts	PS Project Impacts	based on impacts of project
R4	PS Stakeholders Satisfaction	NGO and Beneficiary satisfaction	OPR PM Tools & Techniques	base line study to identify the community needs
R5	PS Project Sustainability	Project continuity / sustainability,	PS Fulfilling right needs of right people	fulfilled the needs of community form this project
R6	PS Project Impacts	their income increases	PS Project Impacts	how many people using the new constructed roads
R7	PS Project Impacts	Project impacts	PS Project Impacts	behavioral changes happened in the community.
R8	PMS Meeting Time	Time frame for project	OPR Project M & E Mechanism	we do case studies to evaluate the project
R9	Internal factor: inappropriate needs identification	Not addressing actual community needs	External Factor/ Changing needs of community	Changing needs of community,
R10	Internal factor: inappropriate beneficiary selection	not identified right beneficiary	External Factor/ Conflict among CBOs	misunderstanding and conflict in CBOs.
R11	TPR Team Values	Team members have strong belief	OPR PM Methodology, Standards & Process	keep Sewalanka organization manual
R12	OPR Formal Meetings for sharing knowledge	Project Reports	OPR PM Office & Structure	we have project office for livelihoods projects
R13	OPR PM Methodology, Standards & Process	Organization Manual and Policy	OPR PM Methodology, Standards & Process	HR Policy
R14	OPR PM Office & Structure	Yes. We got program manager	OPR PM Methodology, Standards & Process	Ethics hand book,

R15	OPR PM Methodology, Standards & Process	Sewalanka Organization handbook	OPR PM Methodology, Standards & Process	Terms of Reference (TOR)
R16	OPR PM Methodology, Standards & Process	Child Right Policy	OPR PM Tools & Techniques	Village plans
R17	OPR PM Methodology, Standards & Process	Women protection policy	OPR PM Tools & Techniques	Mapping
R18	OPR PM Tools & Techniques	PRA	OPR PM Tools & Techniques	Log frame,
R19	OPR PM Tools & Techniques	Village development plan	OPR PM Tools & Techniques	Operational Plan
R20	OPR PM Tools & Techniques	Needs prioritization list	OPR PM Tools & Techniques	Gantt chart
R21	OPR Formal Meetings for sharing knowledge	Planning meetings	OPR PM Tools & Techniques	work plan,
R22	CPR Networking with stakeholders	Stakeholders meetings	OPR PM Tools & Techniques	Monthly and weekly plans
R23	OPR PM Tools & Techniques	Action plan	OPR Project M & E Mechanism	Indicators,
R24	OPR PM Tools & Techniques	village level meetings	OPR Project M & E Mechanism	Midterm evaluation
R25	OPR Project M & E Mechanism	suggestion box	OPR Project M & E Mechanism	End evaluation and
R26	OPR Formal Meetings for sharing knowledge	finishing documents to the community.	OPR Project M & E Mechanism	Post evaluation,
R27	TPR PM Expertise	Project management expertise	CPR Networking with stakeholders	Stakeholders meeting,
R28	TPR Best PM Practices	Best PM Practices	CPR Offical Information releases	Delivering Broachers
R29	OPR Staff Capacity building programs	Staff capacity building training programs	TPR Deeper understanding	Understanding of project life cycle as operations

R30	OPR Formal Meetings for sharing knowledge	Monthly meetings	TPR PM Expertise	Project management expertise:
R31	TPR Informal Meetings	Lesson learning sessions	TPR Best PM Practices	Best PM Practices: Good
R32	CPR Joint project Interactions	Exposure visits	OPR Staff Capacity building programs	based on conducting trainings
R33	OPR Project M & E Mechanism	Review visits.	CPR Joint project Interactions	Exposure visits
R34	TPR Perosnal Coaching	Coaching	OPR Formal Meetings for sharing knowledge	Monthly meetings,
R35	OPR Right team selection, Team motivation & Career path	Career path for project staff	OPR Formal Meetings for sharing knowledge	Staff meetings
R36	OPR Shared project vision, objectives and policy	Project orientation programs	OPR Formal Meetings for sharing knowledge	Weekly meetings,
R37	OPR Supportive Leadership to PM	Advisory in planning	OPR Supportive Leadership to PM	Management team meetings
R38	OPR Supportive Leadership to PM	Visionary leadership	TPR Field Level Discussions & Review Visits	Field level discussions
R39	CPR Joint project Interactions	joint project implementations	TPR Perosnal Coaching	Coaching
R40	CPR Networking with stakeholders	Experience sharing visits	OPR Right team selection, Team motivation & Career path	Career path for project staff
R41	CPR Networking with stakeholders	Stakeholders meetings,	OPR Shared project vision, objectives and policy	Meetings
R42	CPR Project Advisory from Govt Bodies	Government body support: Advisory	OPR PM Tools & Techniques	Monthly targets will be given
R43	CPR Beneficiary integration in projects	Joint planning	OPR Supportive Leadership to PM	Implementing,
R44	CPR Beneficiary integration in projects	Joint implementation	OPR Supportive Leadership to PM	Monitoring,

R45	CPR Offical Information releases	Leaflets,	OPR Supportive Leadership to PM	Reporting,
R46	CPR Offical Information releases	Brochures we prepared for giving about project information	CPR Joint project Interactions	Planning meetings
R47	CPR Social Marketing	Community meetings	CPR Joint project Interactions	Inter exposure visits
R48	CPR Social Marketing	Exhibitions	CPR Intra and Consortium meetings	Cluster meetings
R49	CPR Community of practice	through Websites	CPR Project Advisory from Govt Bodies	GA and DS meetings for discussing
R50	CPR Community of practice	Stakeholder's discussions	CPR Project Advisory from Donors	Planning and implementation advisor
R51	OPR Supportive Leadership to PM	Transparency in projects	CPR Project Advisory from Donors	Donors visits every three months and review the
R52	OPR Supportive Leadership to PM	Good leadership in projects	CPR Beneficiary integration in projects	CBOs monthly meetings
R53	_	_	CPR Beneficiary integration in projects	Producer group discussions
R54	_		CPR Offical Information releases	Regional manual
R55	_		CPR Offical Information releases	Best practices data base
R56			CPR Social Marketing	Community meetings,
R57	_		CPR Social Marketing	Project orientation programs
R58	_	_	CPR Offical Information releases	Regional Manual will be published by donors
R59	_		CPR Offical Information releases	Regional conferences will be conduc
R60	_		CPR Community of practice	We do exposure visits to other countr

RE	LNGO 2 - Interviewee 4 (Code)	LNGO 2 - Actual Response 4	LNGO 2 - Interviewee 5 (Code)	LNGO 2 - Actual Response 5
R1	TPR Deeper understanding	I do needs identification, planning and implementing	TPR Deeper understanding	I am doing CBOs strengthening activities, organizing capacity
R2	External Factor/ Accessibility problems	Accessibility problems	PS Project Impacts	Household income increases after livelihoods projects
R3	External Factor/ Bad weather	bad weather	PS Project Sustainability	Regular recovery of revolving loans
R4	External Factor/ Inefficiency of Govt bodies	these organizations are not much well organized	PS Project Sustainability	Project sustainability
R5	PS Stakeholders Satisfaction	beneficiary and community satisfaction	NS NGOs Reputation	Government recommendation to projects,
R6	PS Project Sustainability	Sustainability of the projects	PS Stakeholders Satisfaction	Community acceptance to
R7	PS Stakeholders support	relevant govt bodies accepted	PMS Meeting Scope & Quality	How far project achieved objectives
R8	PS Project Impacts	Project impacts on community	Internal factor: Lack of commitment of staff	Lack of commitment of staff
R9	External Factor/ Lack of coordination with Govt bodies	Lack of coordination with govt bodies	Internal factor: inappropriate needs identification	community needs are not properly identified
R10	External Factor/ Changing needs of community	Changes in community needs might	Internal factor: Lack of funds	Lack of funds
R11	OPR PM Methodology, Standards & Process	HR Manual	OPR PM Methodology, Standards & Process	We have Organization Admin
R12	OPR PM Methodology, Standards & Process	Administrative Manual	OPR PM Methodology, Standards & Process	HR Handbook
R13	OPR PM Office & Structure	Yes, we have effective project office.	OPR PM Office & Structure	Yes. Project manager, project coordinator
R14	OPR PM Methodology, Standards & Process	We have Policies as HR and finance	OPR PM Methodology, Standards & Process	We have Policy (Alcohol policy, Legal policy

R15	OPR PM Tools & Techniques	PRA,	OPR PM Methodology, Standards & Process	CBOs Assessment standards
R16	OPR PM Tools & Techniques	PNA,	OPR PM Tools & Techniques	PRA,
R17	TPR Casual Conversations	Casually we share expereinces	OPR PM Tools & Techniques	PNA
R18	OPR PM Tools & Techniques	Home visits	OPR PM Tools & Techniques	Secondary sources
R19	OPR PM Tools & Techniques	Observation,	OPR PM Tools & Techniques	GDP (Grass root development plan),
R20	OPR PM Tools & Techniques	LFM,	OPR PM Tools & Techniques	village level discussions
R21	OPR PM Tools & Techniques	Risk planning,	OPR PM Tools & Techniques	Log frame,
R22	OPR Formal Meetings for sharing knowledge	Team planning	OPR PM Tools & Techniques	activity plans
R23	TPR Rational and Consensus decision making	participatory decision making	CPR Social Marketing	Project marketing events
R24	TPR Field Level Discussions & Review Visits	Field level meetings	CPR Social Marketing	Stakeholders meetings,
R25	CPR Social Marketing	CBOs meetings	OPR Formal Meetings for sharing knowledge	monthly meetings
R26	TPR Team cohesion and trust	Team cohesion	TPR Deeper understanding	Understanding of project life cycle and operations
R27	TPR Best PM Practices	Best PM Practices: Good	TPR PM Expertise	Project management experience
R28	OPR Staff Capacity building programs	Activity based training	OPR Staff Capacity building programs	We conduct many training programs for staff
R29	OPR Formal Meetings for sharing knowledge	Open discussions	OPR Formal Meetings for sharing knowledge	Team meetings

R30	CPR Joint project Interactions	Outsourcing,	OPR Formal Meetings for sharing knowledge	committee meetings
R31	OPR Shared project vision, objectives and policy	Orientation programs	OPR Formal Meetings for sharing knowledge	Minutes of meetings
R32	TPR Informal Meetings	Skill and experience sharing meetings	TPR Informal Meetings	Experience sharing meetings
R33	TPR Job Shadowing & Mentoring	mentoring	OPR Right team selection, Team motivation & Career path	Career path for project staff:
R34	OPR Right team selection, Team motivation & Career path	Career path for project staff: yes	OPR Shared project vision, objectives and policy	Induction programs
R35	OPR PM information system	We don't have extensive applications in PMIS	OPR Effective project communication	E-mail and
R36	OPR Supportive Leadership to PM	M & E support	OPR Supportive Leadership to PM	Reporting,
R37	OPR Supportive Organisational PM culture	PM culture Promotes team works, communication	OPR Supportive Leadership to PM	Technical support,
R38	OPR Supportive Leadership to PM	Field level discussions	OPR Supportive Leadership to PM	Solution to field level problems,
R39	CPR Joint Project Interactions	Informal meetings,	OPR Supportive Leadership to PM	Coordination is less
R40	CPR Joint project Interactions	experience sharing meetings	CPR Joint project Interactions	Exposure visits and observations
R41	CPR Intra and Consortium meetings	Coordination meetings	OPR Formal Meetings for sharing knowledge	Regular meetings,
R42	CPR Project Advisory from Donors	Expatriates share meetings	TPR Field Level Discussions & Review Visits	Field level meetings
R43	OPR Supportive Leadership to PM	Transparency,	CPR Networking with stakeholders	Informal communication with government bodies
R44	CPR Beneficiary integration in projects	suggestion box,	CPR Networking with stakeholders	Stakeholders meetings,
R45	CPR Offical Information releases	Reports,	CPR Intra and Consortium meetings	District forums

R46	CPR Social Marketing	Notice boards,	CPR Project Advisory from Donors	Filed level support
R47	CPR Offical Information releases	government body maintain a system to update the	CPR Project Advisory from Govt Bodies	Guidance,
R48	CPR Social Marketing	Project orientation meetings	CPR Project Advisory from Donors	Reporting
R49	CPR Social Marketing	GS and DS meetings	CPR Social Marketing	Home visits,
R50	CPR Community of practice	Staffs go for trainings and exposure visits in abroad	CPR Beneficiary integration in projects	Community involvement in needs identification and planning
R51	OPR Formal Meetings for sharing knowledge	Annual Reports	CPR Offical Information releases	Letters,
R52	OPR Formal Meetings for sharing knowledge	Internal networking system	CPR Offical Information releases	Hand manuals
R53	OPR Effective project communication	We have Face book and discuss internally	CPR Social Marketing	Project awareness meetings,
R54	OPR Supportive Leadership to PM	chairman organizes meetings to project managers	CPR Beneficiary integration in projects	Community involvement in planning and implementation and Discussions
R55	OPR Supportive Leadership to PM	Management level meetings	CPR Community of practice	Project reports and Case studies
R56	_	_	CPR Community of practice	International forums
R57	_	_	CPR Joint project Interactions	Joint field visits where
R58	_	_	CPR Intra and Consortium meetings	Consortium meetings
R59	_	_	CPR Intra and Consortium meetings	Cluster meetings / Sectoral meetings
R60			CPR Networking with stakeholders	GA Meetings

Questio ns	Comprehension (How respondents understood the questions and suggested changes)	Changes made in the questionnaire	
	M Resource		
Q1	Fine	No change	
Q2	Fine	No change	
Q3	Replace the term as 'Field visits' instead of 'Review visits'.	We regularly have field visits to observe and discuss the progress of our projects.	
Q4	We use mostly the 'On the job training' more than personal coaching. You may avoid this question if you wish.	Question eliminated	
Q5	This seems as general statement. Please include 'our' PM Skills	On-the-job training is not helpful in improving our PM skills.	
Q6	Job shadowing is a new term. Give small explanation on it.	Job shadowing (learning by observing the works of an expert) and mentoring sessions help to improve our project works.	
Q7	Include failure stories as well. This gives a lot of learning to us.	We learn project experiences through discussing success and failure stories.	
Q8	Fine	No Change	
Q9	I feel two things have been discussed in this question. Better to avoid 'effective team work'.	Our team values promote strong PM discipline.	
Q10	You may avoid this question as you are assessing the expertise of PM in the question number 11.	Question Eliminated	
Q11	Fine	Our team has very good expertise in applying PM knowledge, skills, tools and techniques.	
Q12	Fine	No Change	
Organiz	ational PM Resource		
Q13	Fine	No Change	
Q14	Fine	No Change	
Q15	Fine	No Change	
Q16	Fine	No Change	
Q17	Fine	No Change	
Q18	Fine	No Change	
Q19	Fine	No Change	
Q20	Fine	No Change	
Q21	Have it separate questions for project culture and leadership.	The organizational project culture is well- defined and promotes project works within an organization.	
		The organizational leadership provides adequate support and motivation to the project teams.	

Appendix 6: Pretesting Questionnaire: Summary Sheet

Collaborative Social PM Resource						
Q22	Fine	No change				
022	Fine	No shares				
Q23	Fine	No change				
Q24	Fine	No change				
Q25	It may be good to change the question as "We have lack of official information releases among the NGOs".	We have lack of official information sharing among the NGOs through websites, social media, and/or other means.				
Q26	Eliminate 'do' and "to". Consider formal and informal knowledge sharing process. Better to make as two questions as it is an important process.	We have combined projects with other organizations and share our project experiences through formal meetings. Our joint projects with partner organizations promote informal discussions to generate appropriate solutions to project issues.				
Q27	Fine	No Change				
Q28	You can make stronger this question as "We have joint discussions and meetings with project beneficiaries in project cycle activities".	We have joint discussions and meetings with the project beneficiaries in project cycle activities.				
Q29	Project awareness programs give more interactions with community more than inauguration programs.	Our project marketing events such as project awareness and inauguration programs help us to gather useful knowledge from the community for implementing projects.				
Q30	Please mention 'Online' social networks and ask why these are used? Because sometimes everyone can't understand this term.	We participate in our community of practice through online social networks (Eg. Twitter /NGOs websites) to discuss project issues.				
Project S	Success					
Q30	Fine	No change				
Q31	Fine	No change				
Q32	Fine	No change				
Q33	Fine	No change				
Q34	Fine	No change				
Q35	Fine	No change				
Q36	Consider as Long-term development Objectives.	Our projects frequently fail to contribute to the long-term development objectives.				
Q37	Fine	No Change				
Q38	Fine	No Change				
Q39	Fine	No Change				
Q40	Fine	No Change				
Q41	Fine	No Change				
Q42	Fine	No Change				

Demographic Information						
Introduction	Make short the paragraph or remove the paragraph as it gives enough information in the cover letter.	Please complete the information below. This demographic information is private and confidential, and analysis will be conducted on the aggregate data only and will not be used on an individual basis.				
Name of NGO	You may avoid this information as you consider for the analysis only national and international NGOs.	Eliminated				
Type of Project	Put it after the respondent information since we consider these as NGO projects.	Changed accordingly				
General Commer	nts					
	ry good scale to rate our But it is important to give in values.	 Strongly disagree Disagree Somewhat Disagree Neutral Somewhat agree Agree Strongly agree 				
Is privacy respected	ed and protected?					
2. Well explanation feel good	ained research ethics and we					
Potential Respond	ents					
	el project managers are most this survey instrument					

Dimensions & Items	Survey Questions from private and public organisations	Researchers	Publications	Improved Survey Question for this Specific NGO study
Team PM Resource				
Casual Conversations & Informal Meetings	We explore project management topics among ourselves through informal get together	Judgev & Mathur	Management Research News. Vol. 29 No. 10, 2006	We discuss project experiences among our team members in casual conversations and informal meetings
Brainstorming Sessions	Constructive brainstorming is often used to improve project management practices at my organization	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	Our group brainstorming sessions help us to discuss important project problems and find appropriate solutions
Field Visits	At my organization, we use collective reflection to share project management knowledge	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	We regularly have field visits to observe and discuss the progress of our projects
On-the-job training	At my organization we share project management knowledge by showing each other how we do things in project management	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	On-the-job training is not helpful in improving our PM skills
Job shadowing & Mentoring	At my organization we shadow each other to share project management knowledge Our project management mentoring program helps us be more effective on projects	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	Job shadowing (learning by observing the works of an expert) and mentoring sessions help to improve our project works
Success & Failure Stories	We often share know-how through "war stories" about our project experiences	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	We learn project experiences through discussing success and failure stories
Team Cohesion and Trust	We use project management consistently on projects at my organization	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	Our team members are always working with mutual understanding and trust
Team Values	We use project management to make organizational decisions for the future. My organization supports creative thinking in project management	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	Our team values promote strong PM discipline

Appendix 7: Examination of Previous Survey Tools related to PM R	Resources and Project Success
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PM Expertise	When it comes to project management, we are the best of breed	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	Our team has very good expertise in applying PM knowledge, skills, tools and techniques
Best PM Practices	We try to improve our project management practices according to a project management maturity framework We benchmark regularly with to assess best practices in project management	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	We always abide by best PM practices
	that could help us improve our practices			
Organizational PM Resource				
PM Office & Structure	We have an effective project Management Office. A project management office helps organization	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006 Emerald Publishing	We have an effective PM office/unit which supports all of the ways to implement projects effectively and efficiently
PM Methodology, Standards & Process	We have a good project management methodology Our project management program is based on organization standards We have adequate organizational processes to share project management knowledge	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	We have sound PM methodology, standards and processes when it comes to managing our projects
PM Tools & Techniques	We effectively use project management tools and techniques to manage projects Our project management tools meet our project needs	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	We effectively use PM tools and techniques to manage our projects

PM Information System	We have adequate organizational systems to share project management knowledge We share project management knowledge through databases We regularly use our organizational systems and processes to share project	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	Our PM information system is not sound to effectively share PM knowledge among our team members
Project M & E Mechanism	All of the Organization's existing programs have clearly defined indicators of success. The Organization has performed internal evaluations of program impacts.	Pact, 1996	A Handbook on assessing organizational capacity	Our monitoring and evaluation mechanisms are effective in tracking the projects
Staff Capacity building programs	My organization invests in developing project manager competences in tools and techniques There is support for project management training The organization supports project management certification management professionals	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	The organization invests in capacity building training programs for developing our PM knowledge and skills
Formal Meetings for sharing knowledge	Staff meetings are held on a regular basis. Staff participates in executive decisions.	Pact, 1996	A Handbook on assessing organizational capacity	We are accustomed to having several formal meetings to discuss and share projects experiences
Effective project communication systems and technology	We share project management knowledge through our internet We share project management knowledge through documented practices at my organization	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	We have very effective project communication systems and technology.
Supportive organizational Culture to PM	Project management is an organization wide initiative	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	The organizational culture is well-defined and promotes project works within an organization

Supportive Organizational Leadership to PM Collaborative Social PM	Management supports project management at my organization We have a career path for those in project management positions	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	The organizational project culture is well- defined and promotes project works within an organization
Resource				
Project Advisory from Government Bodies	The Organization works collaboratively with all of the key government agencies responsible for some aspect of social assistance for the vulnerable groups it currently targets	Pact, 1996	A Handbook on assessing organizational capacity	We receive highly important support for our projects from government bodies, including advisory and technical support
Project Advisory from Donors	The Organization is able to have a free and open dialogue with its donors	Pact, 1996	A Handbook on assessing organizational capacity	Project donors support us through meetings, discussions and standard manuals
Intra and Consortium meetings	The Organization has experience involving NGO partners in advocacy networks serving the interests of its beneficiary groups	Pact, 1996	A Handbook on assessing organizational capacity	NGOs' Intra forums and consortium meetings help us to share project experiences amongst the staff of NGOs
Official Information releases	The Organization presents high quality, tailored reports to its donors in a timely fashion. The Organization publishes the results of its program evaluations	Pact, 1996	A Handbook on assessing organizational capacity	We have lack of official information sharing among the NGOs through websites, social media, and/or other means
Joint project Formal Interactions Joint project Informal Interactions	The Organization has worked in partnership with local and international NGOs in the past	Pact, 1996	A Handbook on assessing organizational capacity	We have combined projects with other organizations and share our project experiences through formal meetings Our joint projects with partner organizations promote informal discussions to generate
				appropriate solutions to project issues
Networking with stakeholders	My organization encourages us to explore project management topics with colleagues at other organization	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	Networking relationships which include face-to-face discussions and informal meetings with stakeholders help us to share PM knowledge and skills
Beneficiary connections in projects	The beneficiary groups targeted by this program are actively involved as true partners in program implementation	Pact, 1996	A Handbook on assessing organizational capacity	We have joint discussions and meetings with the project beneficiaries in project cycle activities.

Project Marketing	The Organization disseminates information on its programs to the public The Organization uses the press for public education purposes about issues related to its mission	Pact, 1996	A Handbook on assessing organizational capacity	Our project marketing events such as project awareness and inauguration programs help us to gather useful knowledge from the community for implementing projects
Community of practice through online social networking	Our community of practice helps us be more effective in project management	Judgev & Mathur	Management Research News Vol. 29 No. 10, 2006	We participate in our community of practice through online social networks (e.g. Twitter /NGOs websites) to discuss project issues
PM Success				
Meeting Scope	The initially identified objectives were attained	Ika, Diallo & Thuillier	International Journal of Managing Projects in Business.Vo3. No1. 2010. Emerald Publishing	Generally we achieve the scope and objectives of a project
Meeting Quality	The goods and services produced by the project conform to those described in the project documents	Ika, Diallo & Thuillier	ditto	We usually achieve the quality deliverables of a project
Meeting Time	Generally our projects meet their time objectives	Ika, Diallo & Thuillier	ditto	We typically complete projects within the planned time period
Meeting Budgets	We are usually good at delivering projects within budget	Ika, Diallo & Thuillier	ditto	We frequently fail to complete our projects within the planned budget
Project Success				
Stakeholders' Satisfaction	Generally customers of our projects are satisfied with the outcome Project team members are usually happy working on projects	Ika, Diallo & Thuillier	ditto	Generally our stakeholders (donors, implementing NGO and beneficiary) are satisfied with the project outcomes
	Our key stakeholders are usually happy with the way our projects are managed			
Contribution to Development Objectives	The project is achieved a high national profile	Ika, Diallo & Thuillier	ditto	Our projects frequently fail to contribute to the long-term development objectives

Project Impacts (Intended and unintended)	There are often clearly identified intangible benefits from the projects we carry out The project had a visible impact on the beneficiaries	Ika, Diallo & Thuillier	ditto	Our projects successfully produce the intended impacts as well as favorable unintended impacts
Project Sustainability	The project has a good chance of being extended with additional funding	Ika, Diallo & Thuillier	ditto	The projects have attained sustainability in the community
NGOs Success				
Contribution to NGOs' Vision, Mission and Objectives	Our projects usually result in tangible benefits for the organization	Ika, Diallo & Thuillier	ditto	Our projects contribute to achieving the vision, mission and objectives of the organization
NGOs Rapport	The project increase the stakeholders Link	Ika, Diallo & Thuillier	ditto	Our projects fail to increase the long term rapport with our stakeholders
NGOs Reputation	The project had a good reputation among the principal donors	Ika, Diallo & Thuillier	ditto	Overall, our projects have improved the reputation of the organization amongst the stakeholders, government and the general public
NGOs Sustainability	The project built an institutional capacity within the country	Ika, Diallo & Thuillier	ditto	Our projects have increased the fundraising abilities and the sustainability of the organization

Appendix 8: Survey Pilot Study Results (Reliability)

Reliability Test

Latent Constructs	Number of Items	Cronbach Alpha
Exogenous Constructs		
Team PM Resource	30	0.769
Organisational PM Resource	30	0.834
Collaborative Social PM Resource	30	0.701
Endogenous Constructs		
PM Success	30	0.776
Project Success	30	0.703
NGO Success	30	0.705

	Initial	Extraction
Casual Conversations & Informal Meetings	1.000	.833
Brain Storming Sessions	1.000	.871
Field Visits	1.000	.865
On-the-Job Training	1.000	.560
Job Shadowing and Mentoring	1.000	.896
Success and Failure Stories	1.000	.702
Team Cohesion and Trust	1.000	.841
Strong PM Discipline	1.000	.775
Team PM Expertise	1.000	.767
Best PM Practices	1.000	.882
PM Office	1.000	.855
PM Methodology, Standards and Process	1.000	.825
PM Tools and Techniques	1.000	.853
PM Information System	1.000	.804
Monitoring and Evaluation Mechanism	1.000	.870
Staff Capacity Building programs	1.000	.891
Formal Meetings for Sharing Knowledge	1.000	.863
Effective Project Communication	1.000	.917
Supportive Orgn Culture to PM	1.000	.883
Supportive Leadership to PM	1.000	.845
Project Advisory from Government Bodies	1.000	.850
Project Advisory from Donors	1.000	.830
NGOs Intra and Consortium Meetings	1.000	.829
Official Information Releases	1.000	.825
Joint projects formal interactions	1.000	.899
Joint Projects informal interactions	1.000	.956
Networking with stakeholders	1.000	.818
Beneficiary connections in Projects	1.000	.875
Project Marketing events	1.000	.851
Community of practice through Social networks	1.000	.890
Meeting Scope	1.000	.903
Meeting Quality	1.000	.763
Meeting Time	1.000	.886
Meeting Budget	1.000	.900
Stakeholders Satisfaction	1.000	.905
Contribution to Development Objectives	1.000	.847
Project Impacts	1.000	.868
Project Sustainability	1.000	.852
Contribution to NGOs' vision, mission and Objectives	1.000	.852
Stakeholders Rapport	1.000	.818
NGOs Reputation	1.000	.860
NGOs Sustainability	1.000	.837

Appendix 9: Survey Pilot Study Results (Communality Values)

Communalities

Extraction Method: Principal Component Analysis

Appendix 10a: Survey Questionnaire in English

Dear Coordinator / Manager

I am Nanthagopan Yogarajah, a PhD candidate at Bournemouth University, United Kingdom. I am undertaking a research project entitled "Resource - Based Perspective on Project Management (PM) in NGOs". The aim of this study is to identify the relationships between the PM resource and project success. The study will explore how much project managers feel that their organizations are applying PM resources and capacities in their projects and how successful they consider these projects.

I assure you that all information you provide will be treated in strict confidence. Neither you nor your NGO will be identified by name in my study nor will this information be revealed to anyone. All survey questionnaires that I receive will be stored in locked cabinets and all data entries will be safely stored in a computer with password protection. Once the research program has been completed, it will be safely destroyed by 2016. The research is supervised by Professor Stephen Page and Dr Nigel Williams, and subject to the strict professional ethical codes of the Bournemouth University, UK.

The success of the research is dependent on the cooperation of NGOs staff like you, who can provide valuable information on this topic. Your participation in this research study is completely voluntary and you are free to decide not to be in this study, or stop participating at any time, or not to answer any parts of the questions. However, the partially completed questionnaire will not be considered for this study. This comprehensive survey study will take approximately 25 minutes to complete. Please feel free to consult me if you have questions regarding either the content or the process of this study.

With many thanks for your support. Yours Sincerely,

Y. Nanthagopan (TP: 0771 999379) PhD Researcher Bournemouth University, UK

Survey Instrument

"A Resource-Based Perspective on Project Management in NGOs"

PART 1: Project Management (PM) Resources

PM resources can be defined as PM knowledge (explicit/tacit) elements that support effective project operations including PM knowledge, skills, systems, processes, culture, tools and techniques.

For each question, there are seven (7) possible answers (1- Strongly disagree, 2- Disagree, 3- Somewhat Disagree, 4- Neither agree nor disagree, 5- Somewhat agree, 6- Agree and 7- Strongly Agree) to choose from. Please circle the answer which you believe best fits the projects you have been involved in your organization.

Part 1 A: Team PM Resources

Team PM resources consider the PM knowledge and skills that are accumulated and shared within the team to deliver good project outcomes. The PM resources such as team informal meetings, on-the-job trainings, team trust, and team PM expertise are collectively known as team PM Resource.

			Strongly Disagree				Strongly Agree	
		▲						▲
	Team PM Resource	1	2	3	4	5	6	7
1	We discuss project experiences among our team members in casual conversations and informal meetings.	1	2	3	4	5	6	7
2	Our group brainstorming sessions help us to discuss important project problems and find appropriate solutions.	1	2	3	4	5	6	7
3	We regularly have field visits to observe and discuss the progress of our projects.	1	2	3	4	5	6	7
4	On-the-job training is not helpful in improving our PM skills.	1	2	3	4	5	6	7
5	Job shadowing (learning by observing the works of an expert) and mentoring sessions help to improve our project works.	1	2	3	4	5	6	7
6	We learn project experiences through discussing success and failure stories.	1	2	3	4	5	6	7
7	Our team members are always working with mutual understanding and trust.	1	2	3	4	5	6	7
8	Our team values promote strong PM discipline.	1	2	3	4	5	6	7

9	Our team has very good expertise in applying PM knowledge, skills, tools and techniques.	1	2	3	4	5	6	7
10	We always abide by best PM practices.	1	2	3	4	5	6	7

PART 1 B: Organizational PM Resource

Organisational PM resource is the PM knowledge and skills that are incorporated and shared within the organization. The PM resources such as PM office, methodology, standards, processes, tools, techniques, and formal knowledge sharing activities are collectively known as organizational PM resource.

	[Strong Disag					Stror Agr	
	Organizational PM Resource	∧ 1	2	3	4	5	6	ጥ 7
11	We have an effective PM office/unit which supports all of the ways to implement projects effectively and efficiently.	1	2	3	4	5	6	7
12	We have sound PM methodology, standards and processes when it comes to managing our projects.	1	2	3	4	5	6	7
13	We effectively use PM tools and techniques to manage our projects.	1	2	3	4	5	6	7
14	Our PM information system is not sound to effectively provide information among our team members.	1	2	3	4	5	6	7
15	Our monitoring and evaluation mechanisms are effective in tracking the projects.	1	2	3	4	5	6	7
16	The organization invests in capacity building training programs for developing our PM knowledge and skills.	1	2	3	4	5	6	7
17	We are accustomed to having several formal meetings to discuss and share projects experiences.	1	2	3	4	5	6	7
18	We have very effective project communication systems and technology.	1	2	3	4	5	6	7
19	The organizational project culture is well-defined and promotes project works within an organization.	1	2	3	4	5	6	7
20	The organizational leadership provides adequate support and motivation to the project teams.	1	2	3	4	5	6	7

PART 1 C: Collaborative Social PM Resource

Collaborative social PM resource can be a process of participation outside the organisation through which people, groups and organisations work together to share the PM knowledge and skills to achieve the desired results. The PM knowledge can be shared through formal or informal ways of interactions with external bodies.

	[itrongly isagree				Strongly Agree	
	Collaborative Social PM Resource	1	2	3	4	5	6	7
21	We receive highly important support for our projects from government bodies, including advisory and technical support.	1	2	3	4	5	6	7
22	Project donors support us through meetings, discussions and standard manuals.	1	2	3	4	5	6	7
23	NGOs' Intra forums and consortium meetings help us to share project experiences amongst the staff of NGOs.	1	2	3	4	5	6	7
24	We have lack of official information sharing among the NGOs through websites, social media, and/or other means.	1	2	3	4	5	6	7
25	We have combined projects with other organizations and share our project experiences through formal meetings.	1	2	3	4	5	6	7
26	Our joint projects with partner organizations promote informal discussions to generate appropriate solutions to project issues.	1	2	3	4	5	6	7
27	Networking relationships which include face-to-face discussions and informal meetings with stakeholders help us to share PM knowledge and skills.	1	2	3	4	5	6	7
28	We have joint discussions and meetings with the project beneficiaries in project cycle activities.	1	2	3	4	5	6	7
29	Our project marketing events such as project awareness and inauguration programs help us to gather useful knowledge from the community for implementing projects.	1	2	3	4	5	6	7
30	We participate in our community of practice through online social networks (e.g. Twitter /NGOs websites) to discuss project issues.	1	2	3	4	5	6	7

PART 2: Project Success of NGOs

Project success can be defined as a project that meets its objectives within budget and on schedule, expectations of stakeholders, and supports organizational success. It can be evaluated at three levels as PM success, Project success and NGO success.

Part 2 A: PM Success

PM success refers to the ability to achieve the project objectives, produce quality deliverables and complete the projects within the planned timeframe and budget.

	s within the planned timeframe and budget.	Strongly Disagre					Stro Ag	
	PM Success	1	2	3	4	5	6	7
31	Generally we achieve the scope and objectives of a project.	1	2	3	4	5	6	7
32	We usually achieve the quality deliverables of a project.	1	2	3	4	5	6	7
33	We typically complete projects within the planned time period.	1	2	3	4	5	6	7
34	We frequently fail to complete our projects within the planned budget.	1	2	3	4	5	6	7

Part 2 B: Project Success

Project success occurs when the project produces favorable impacts and the stakeholders are satisfied with the project outcomes.

 Strongly
 Strongly

		Disagre						gree
		٨						٨
	Project Success	1	2	3	4	5	6	7
35	Generally our stakeholders (donors, implementing NGO and beneficiary) are satisfied with the project outcomes.	1	2	3	4	5	6	7
36	Our projects frequently fail to contribute to the long-term development objectives.	1	2	3	4	5	6	7
37	Our projects successfully produce the intended impacts as well as favorable unintended impacts.	1	2	3	4	5	6	7
38	The projects have attained sustainability in the community.	1	2	3	4	5	6	7

Part 2 C: NGO Success

NGO success occurs when, in overall, the project has contributed to the NGO's success. The projects contribute to achieve the organizational objectives, increase stakeholders' rapport and reputation and help to sustain the NGO for a long period.

	Strongly Disagree										ongly gree
	▲						▲				
NGO Success	1	2	3	4	5	6	7				
Our projects contribute to achieving the vision, mission and objectives of the organization.	1	2	3	4	5	6	7				
Our projects fail to increase the long term rapport with our stakeholders.	1	2	3	4	5	6	7				
		2	3	4	5	6	7				
Our projects have increased the fundraising abilities and the sustainability of the organization.	1	2	3	4	5	6	7				
	NGO Success Our projects contribute to achieving the vision, mission and objectives of the organization. Our projects fail to increase the long term rapport with our stakeholders. Overall, our projects have improved the reputation of the organization amongst the stakeholders, government and the general public. Our projects have increased the fundraising abilities and the	Strong Disage NGO Success 1 Our projects contribute to achieving the vision, mission and objectives of the organization. 1 Our projects fail to increase the long term rapport with our stakeholders. 1 Overall, our projects have improved the reputation of the organization amongst the stakeholders, government and the general public. 1 Our projects have increased the fundraising abilities and the 1	Strongly Disagree NGO Success 1 2 Our projects contribute to achieving the vision, mission and objectives of the organization. 1 2 Our projects fail to increase the long term rapport with our stakeholders. 1 2 Overall, our projects have improved the reputation of the organization amongst the stakeholders, government and the general public. 1 2 Our projects have increased the fundraising abilities and the 1 2	Strongly Disagree Strongly Disagree NGO Success 1 2 3 Our projects contribute to achieving the vision, mission and objectives of the organization. 1 2 3 Our projects fail to increase the long term rapport with our stakeholders. 1 2 3 Overall, our projects have improved the reputation of the organization amongst the stakeholders, government and the general public. 1 2 3 Our projects have increased the fundraising abilities and the 1 2 3	Strongly DisagreeNGO Success1234Our projects contribute to achieving the vision, mission and objectives of the organization.1234Our projects fail to increase the long term rapport with our stakeholders.1234Overall, our projects have improved the reputation of the organization amongst the stakeholders, government and the general public.1234Our projects have increased the fundraising abilities and the1234	Strongly DisagreeNGO Success12345Our projects contribute to achieving the vision, mission and objectives of the organization.12345Our projects fail to increase the long term rapport with our stakeholders.12345Overall, our projects have improved the reputation of the organization amongst the stakeholders, government and the general public.12345Our projects have increased the fundraising abilities and the12345	Strongly DisagreeStrongly DisagreeStrongly ANGO Success123456Our projects contribute to achieving the vision, mission and objectives of the organization.123456Our projects fail to increase the long term rapport with our stakeholders.123456Overall, our projects have improved the reputation of the organization amongst the stakeholders, government and the general public.123456Our projects have increased the fundraising abilities and the general public.123456				

Demographic Information

Please complete the information below. This demographic information is private and confidential, and analysis will be conducted on the aggregate data only and will not be used on an individual basis.

a.	Type of	Local NGO		International NGO	
Org	anization:				
b.	Age of Respondent:]
c.	Experience in NGO (Years)	projects:			

	Livelihoods	Health & Nutrition	Capacity Building
d. Type of Project you have been	Infrastructure	Training / Education	Women Development
Involved in: (Select one which	Relief & Disaster Management	Protection (Human (Rights, child protection etc.)	Gender Equity
most suits you)	Water and Sanitation	Social Mobilization	Others Please Specify

e.	Sex:	Male		Female	
c	E harred and	High School		Bachelor's Degree	
f.	Education:				
(Sele	ect the highest level	Postgraduate Degree		Doctoral Degree	
	No 🗆				
Please Specify :					

Please provide your valid email address in the box below if you wish to receive the results of the survey.

Email:

THANK YOU VERY MUCH

Appendix 10b: Survey Questionnaire in Tamil

ஆய்வு வினாக்கொத்து (Survey Questionnaire)

"அரச சார்பற்ற நிறுவனங்களில் (NGOs) செயற்திட்ட முகாமைத்துவத்தை வள அடிப்படையில் நோக்குதல்"

பகுதி 1 : செயற்திட்ட முகாமைத்துவ வளங்கள் (Resources)

செயற்திட்ட முகாமைத்துவ வளங்கள் என்பது செயற்திட்ட முகாமைத்துவ அறிவு பகுதிகள், செயற்திட்ட நடவடிக்கைகளை விளைதிறனுடையதாக (நுககநஉவளைநடல) செய்வதற்கு உதவி செய்வதனை குறிக்கின்றது. செயற்திட்ட முகாமைத்துவ அறிவு, திறமை, முறைமை, செய்முறை, கலாச்சாரம், கருவிகள் மற்றும் நுட்பங்கள் என்பன இவற்றுள் உள்ளடங்குகின்றன.

ஒவ்வொரு வினாவிலும் ஏழு சாத்தியமான விடைகள் உள்ளன. (1- உறுதியாக ஏற்றுக்கொள்ளவில்லை, 2- ஏற்றுக்கொள்ளவில்லை, 3- ஓரளவு ஏற்றுக்கொள்ளவில்லை, 4- நடுநிலை, 5- ஓரளவு ஏற்றுக்கொள்கிறேன், 6- ஏற்றுக்கொள்கிறேன், 7- உறுதியாக ஏற்றுக்கொள்கிறேன்). உங்களது நிறுவன செயற்திட்ட அனுபவத்தில் இருந்து மிகவும் பொருத்தமான ஒரு விடையை நீங்கள் தெரிவு செய்து வட்டமிடுமாறு தயவுடன் கேட்டுக்கொள்கிறேன்.

பகுதி 1 A: குழுவின் செயற்திட்ட முகாமைத்துவ வளங்கள்

குழுவின் செயற்திட்ட முகாமைத்துவ வளங்கள் என்பது சிறப்பான செயற்திட்ட விளைவுகளை பெறக்கூடிய வகையில் செயற்திட்ட முகாமைத்துவ அறிவு மற்றும் திறமைகள் என்பன குழுவிற்குள் ஒன்றிணைக்கப்பட்டு பகிர்ந்தளிக்கப்பட்டுள்ளமையை கருதுகின்றது. குழுவின் முறைசாரா கூட்டங்கள் (Informal Meetings), வேலையின் போது பயிற்சி (On- the- job traning), குழு நம்பிக்கை (Team trust) , மற்றும் குழுவின் ஆற்றல் (Team expertise) ஆகியவற்றின் தொகுப்பாக இதனை கருதலாம்.

	குழுவின் செயற்திட்ட முகாமைத்துவ வளங்கள்	1	2	3	4	5	6	7
1	நாங்கள் தற்செயலான (ஊயளரயட) மற்றும் முறைசாரா கூட்டங்கள் மூலம்							
	செயற்திட்ட அனுபவங்களை எமது குழு உறுப்புனர்களுக்கிடையில்	1	2	3	4	5	6	7
	கலந்தாலோசிக்கின்றோம்.							
2	எமது குழு மூளை உருட்டுதல் (டீசயனை ளவசழஅவை) நிகழ்வுகள் மூலம்							
	முக்கியமான செயற்திட்ட பிரச்சினைகளுக்கு பொருத்தமான தீர்வுகளை	1	2	3	4	5	6	7
	பெற்றுக்கொள்கிறோம்.							
3	நாங்கள் வழமையாக கள விஜயங்கள; (Field visits) மூலம் செயற்திட்ட							
	முன்னேற்றங்களை அவதானித்தல் மற்றும் கலந்துரையாடல்களை	1	2	3	4	5	6	7
4	மேற்கொள்கின்றோம். எங்களது செயற்திட்ட முகாமைத்துவ திறமைகளை உயர்த்துவதற்கு							
	வேலையின் போது பயிற்சி (On- the- job training) ஆனது உதவி	1	2	3	4	5	6	7
5	செய்யவில்லை. எமது செயற்திட்ட வேலைகளின் தரமானது வல்லுனருடைய வேலைகளை							
	அவதானித்தல் (துழடி ளாயனழறபைை)இ வழிகாட்டல் (Mentoring)	1	2	3	4	5	6	7
	நிகழ்வுகள் மூலம் உயருகின்றது.							

6	நாங்கள் செயற்திட்ட அனுபவங்களைஇ செயற்திட்ட வெற்றியீட்டிய மற்றும்							
	தோல்வியடைந்த கதைகளை கலந்தாலோசிப்பதன் மூலம்	1	2	3	4	5	6	7
	கற்றுக்கொள்கிறோம்.							
7	எமது குழு உறுப்பினர்கள் பரஸ்பர புரிந்துணர்வுடனும், நம்பிக்கையுடனும் வேலை செய்கின்றனர்.	1	2	3	4	5	6	7
8	எங்களுடைய குழு விழுமியங்கள் (Team values) செயற்திட்ட முகாமைத்துவ ஒழுங்கு விதி முறைகளை கடுமையாக பேணுகின்றது.	1	2	3	4	5	6	7
9	எமது குழு செயற்திட்ட முகாமைத்துவ அறிவு, திறமைகள், கருவிகள் மற்றும் நுட்பங்கள் ஆகியவற்றை மிகவும் ஆற்றலுடன் பிரயோகிக்கின்றது.	1	2	3	4	5	6	7
10	நாங்கள் சிறந்த செயற்திட்ட முகாமைத்துவ பிரயோகங்களை (Practices) தொடர்ந்து பேணுகின்றோம்.	1	2	3	4	5	6	7

பகுதி 1 B : நிறுவன செயற்பாட்டு முகாமைத்துவ வளங்கள்.

நிறுவன செயற்பாட்டு முகாமைத்துவ வளங்கள் என்பது செயற்திட்ட முகாமைத்துவ அறிவு மற்றும் திறமைகள் நிறுவன ரீதியில் ஒன்றிணைக்கப்பட்டு பகிர்ந்தளிக்கப்பட்டுள்ளமையை கருதுகின்றது. செயற்பாட்டு முகாமைத்துவ அலகு, முறைமை, நியமம், செய்முறை, கருவிகள், நுட்பங்கள் ஆகியவற்றின் தொகுப்பாக இது உள்ளது.

	நிறுவன செயற்பாட்டு முகாமைத்துவ வளங்கள்.	1	2	3	4	5	6	7
11	எங்களுடைய செயற்திட்டங்களை விளைதிறனாகவும் (நுககநஉவளைநடல)							
	வினைத்திறனாகவும் (Efficiently) அமுல்படுத்துவதற்கு வேண்டிய							
	அனைத்து உதவிகளையும், செயற்திட்ட முகாமைத்துவ அலகு	1	2	3	4	5	6	7
	வழங்குகின்றது.							
12	எமது நிறுவனத்தில் செயற்திட்டங்களை முகாமை செய்யக்கூடிய வகையில்							
	மிகவும் சிறந்த செயற்திட்ட முகாமைத்துவ செயல்முறையியல்							
	(Methodology), நியமங்கள் (Standards) மந்றும் செய்முறைகள் (Process)	1	2	3	4	5	6	7
	உள்ளன.							
13	நாங்கள் செயற்திட்ட முகாமைத்துவ கருவிகளையும், நுட்பங்களையும்							
	மிகவும் சிறந்த முறையில் எமது செயற்திட்டங்களை அமுல்படுத்துவதற்கு	1	2	3	4	5	6	7
	பிரயோகிக்கின்றோம்.							
14	எமது செயற்திட்ட முகாமைத்துவ தகவல் முறைமை (Information system)							
	குழு உறுப்பினர்களுக்கு செயற்திட்ட முகாமைத்துவம் தொடர்பான	1	2	3	4	5	6	7
	தகவல்களை பரிமாற்றம் செய்வதற்கு ஏற்புடையதாக இல்லை.	1	2	3	4	3	0	/
15	எமது கண்காணித்தல் (ஆழவைழசபை)இ மதிப்பிடுதல் (Evaluation)							
	பொறிமுறை (Mechanism) செயற்திட்டங்களை பரிசீலிப்பதற்கு	1	2	3	4	5	6	7
	உகந்ததாக உள்ளது.							
16	எமது நிறுவனம் ஆனது செயற்திட்ட முகாமைத்துவ அறிவு மற்றும்							
	திறமைகளை விருத்தி செய்வதற்கு தேவையான இயலுமை விருத்தி	1	2	3	4	5	6	7
	பயிற்சிகளை வழங்குகின்றது.							

17	எமது நிறுவனமானது பல வகையான முறைசார் கூட்டங்களை (Formal							
	meetings) செயற்திட்ட அனுபவங்களை கலந்தாலோசித்தல் மற்றும் பகிர்ந்து	1	2	3	4	5	6	7
	கொள்ளும் வகையில் நடாத்துவதனை வழமையாக கொண்டுள்ளது.							
18	எமது நிறுவனத்தில் மிகவும் விளைதிறனான செயற்திட்ட தொடர்பாடல்							
	முறைமை (Communication system) மற்றும் தொழில்நுட்பங்கள்	1	2	3	4	5	6	7
	(Technology) உள்ளன.							
19	எமது நிறுவன செயற்திட்ட கலாச்சாரம் மிகவும் சிறப்பாக							
	வடிவமைக்கப்பட்டுள்ளதுடன் இது செயற்திட்ட செயற்பாடுகளை	1	2	3	4	5	6	7
	ஊக்குவிக்கக்கூடிய வகையில் உள்ளது.							
20	எமது நிறுவன தலைமைத்துவமானது செயற்திட்ட குழுக்களுக்கு போதிய	1	2	3	4	5	6	7
	உகவிகளையும், ஊக்குவிப்பக்களையும் வழங்குகின்றது.	1	2	3	4	3	0	/

பகுதி 1 C: சமூக இணைப்புடனான செயற்திட்ட முகாமைத்துவ வளங்கள்.

உதவிகளையும், ஊக்குவிப்புக்களையும் வழங்குகின்றது.

நிறுவனத்திற்கு ഖെണിധ്വേധ്വന്ത சமூகமட்ட இணைப்பினை இது குறிக்கின்றது. நிறுவனத்திற்கு இங்கு வெளியேயான மக்கள், குழுக்கள் மற்றும் நிறுவனங்கள் இணைந்து சிறப்பான விளைவுகளை பெறுவதற்காக செயற்திட்ட முகாமைத்துவ அறிவு மற்றும் திறமைகளை பகிர்ந்து கொள்கின்றன. இங்கு செயற்திட்ட முகாமைத்துவ அநிவானது வெளியக முறைசார் (Formal) மற்றும் முறைசாரா (Informal) வழிகளில் பகிரப்படுகின்றது.

21	சமூக இணைப்புடனான செயற்திட்ட முகாமைத்துவ வளங்கள் எமது செயற்திட்டங்களுக்கு அரச நிறுவனங்களிடம் இருந்து மிகவும்	1	2	3	4	5	6	7
21	முக்கியமான உதவிகளான ஆலோசனை மற்றும் தொழில்நுட்ப உதவி என்பவற்றை பெற்றுக்கொள்கிறோம்.	1	2	3	4	5	6	7
22	எமது செயற்திட்டங்களுக்கு கூட்டங்கள், கலந்துரையாடல்கள் மற்றும் வடிவமைக்கப்பட்ட கையேடுகள் மூலம் நன்கொடை அளிக்கும் நிறுவனங்கள் (Donors) உதவியளிக்கின்றன.	1	2	3	4	5	6	7
23	செயற்திட்ட அனுபவங்களை நிறுவன ஊழியர்களுக்கிடையில் பகிர்ந்து கொள்வதற்கு அரச சார்பற்ற நிறுவனங்களுக்கிடையிலேயான மாநாடுகள், மற்றும் சமாச கூட்டங்கள் (Consortium meetings) உதவி செய்கின்றன.	1	2	3	4	5	6	7
24	நாங்கள் அரச சார்பற்ற நிறுவனங்களுக்கிடையில்இ இணையத்தளம் (Website), சமூக ஊடகம் (ளுழஉயைட அநனயை) அல்லது வேறு மூலங்களினான உத்தியோகபூர்வமான தகவல் பரிமாற்றங்களை போதிய அளவில் கொண்டிருக்கவில்லை.	1	2	3	4	5	6	7
25	நாங்கள் வேறு நிறுவனங்களுடன் இணைந்த செயற்திட்டங்களை (Combined projects) கொண்டிருப்பதுடன்இ இத்தகைய இணை செயற்திட்ட அனுபவங்களை முறைசார் கூட்டங்களினூடாக பகிர்ந்து கொள்கின்றோம்.	1	2	3	4	5	6	7

433

26	எங்களுடைய பங்காளி நிறுவனங்களுடனான செயற்திட்டங்கள் முறைசாரா கலந்துரையாடல்களை (Informal discussions) உயர்த்துவதுடன், செயற்திட்ட பிரச்சினைகளுக்கு சரியான தீர்வுகளை கொண்டு வருகின்றது.	1	2	3	4	5	6	7
27	ஆர்வலர்களுடனான வலைப்பின்னல் உறவுகளான நேரடி (Face-to-face) மற்றும் முறைசாரா கூட்டங்கள்இ எங்களுக்கிடையில் செயற்திட்ட முகாமைத்துவ அறிவு மற்றும் திறமைகளை பகிர்ந்து கொள்வதற்கு உதவி செய்கின்றது.	1	2	3	4	5	6	7
28	நாங்கள் செயற்திட்ட வட்ட (Project cycle) செயற்பாடுகளினைஇ செயற்திட்ட பயனாளிகளுடன் (Beneficiary) கலந்தாலோசிக்கின்றோம்.	1	2	3	4	5	6	7
29	எங்களுக்கு செயற்திட்டத்தை அமுல்ப்படுத்த உதவக்கூடிய நல்ல அறிவை பெறுவதற்கு செயற்திட்டத்தை தெரியப்படுத்தும் நிகழ்வுகளான செயற்திட்ட அறிமுகப்படுத்தல் (Project awareness) மற்றும் ஆரம்பிக்கும் கூட்டங்கள் (Inauguration meetings) உதவி செய்கின்றன.	1	2	3	4	5	6	7
30	நாங்கள் எமது சக சமூகத்துடன் இணைய வலைப்பின்னல் ஊடாக (Twitter/ Website) செயற்திட்ட பிரச்சினைகளை கலந்தாலோசிக்கின்றோம்.	1	2	3	4	5	6	7

பகுதி 2: அரசசார்பற்ற நிறுவனங்களின் (NGOs) செயற்திட்ட வெற்றி

செயற்திட்ட வெற்றி என்பது செயற்திட்ட திட்டமிட்ட நோக்கங்கள் அடையப்படுதல்இ திட்டமிட்ட பாதீடு மற்றும் கால எல்லைக்குள் செயற்திட்டத்தை பூர்த்திசெய்தல். மேலும் செயற்திட்ட ஆர்வலர்களுடைய எதிர்பார்ப்புக்களை பூர்த்தி செய்து நிறுவன வெற்றிகளுக்கும் பங்களிப்பு செய்வதனை குறிக்கும். இவ் செயற்திட்ட வெற்றியானது மூன்று மட்டங்களில் மதிப்பீடு செய்யப்படுகிறது. அவையாவன செயற்திட்ட முகாமைத்துவ வெற்றி, செயற்திட்ட வெற்றி மற்றும் நிறுவன வெற்றி.

பகுதி 2 யு: செயற்திட்ட முகாமைத்துவ வெற்றி (Project Management Success)

செயற்திட்ட முகாமைத்துவ வெற்றி என்பது செயற்திட்டமானது செயற்திட்ட திட்டமிட்ட நோக்கங்களையும் தர நியமங்களையும் அடைவதோடு திட்டமிடப்பட்ட பாதீடு மற்றும் கால எல்லைக்குள் முடிவதனை குறிக்கும்.

	செயற்திட்ட முகாமைத்துவ வெற்றி	1	2	3	4	5	6	7
31	எமது செயற்திட்டமானது பொதுவாக திட்டமிடப்பட்ட செயற் பரப்பு (Scope)							
	மற்றும் நோக்கங்களை (ழுடிதநஉவளைநள) அடைகின்றது.	1	2	3	4	5	6	7

32	எமது செயற்திட்டமானது வழமையாக தர நியமங்களை (ஞரயடவைல							
	னநடனைநசயடிடநள) பூர்த்தி செய்கின்றது.	1	2	3	4	5	6	7
33	நாங்கள் வழமையாக செயற்திட்டத்தினை திட்டமிட்ட கால எல்லைக்குள் பூர்த்தி செய்கின்றோம்	1	2	3	4	5	6	7
34	நாங்கள் திட்டமிட்ட பாதீட்டினுள் (Budget) செயற்திட்டங்களை அனேகமாக பூர்த்தி செய்வதில்லை.	1	2	3	4	5	6	7

பகுதி 2 B : செயற்திட்ட வெற்றி (Project Success)

செயற்திட்ட வெற்றி என்பது செயற்திட்டமானது சாதகமான விளைவுகளை வெளியீடு செய்வதுடன் ஆர்வலர்களுடைய திருப்தியையும் பெற்றுக் கொள்வதை குறிக்கின்றது.

	செயற்திட்ட வெற்றி	1	2	3	4	5	6	7
35	பொதுவாக எங்கள் ஆர்வலர்கள் (நன்கொடையளிக்கும் நிறுவனம், அமுல்படுத்தும் நிறுவனம் மற்றும் பயனாளிகள்) செயற்திட்ட வெளியீடுகள்							
	மீது திருப்தியடைகின்றனர்.	1	2	3	4	5	6	7
36	எங்களுடைய செயற்திட்டங்கள் நீண்டகால அபிவிருத்தி நோக்கங்களுக்கு பங்களிப்புச் செய்ய அடிக்கடி தவறுகின்றது.	1	2	3	4	5	6	7
37	எங்கள் செயற்திட்டங்கள் உத்தேசிக்கப்பட்ட மற்றும் உத்தேசிக்கப்படாத சாதகமான விளைவுகளை வெற்றிகரமாக வெளியீடு செய்கின்றது.	1	2	3	4	5	6	7
38	எங்கள் செயற்திட்டங்கள் சமூகத்தில் நீண்ட காலம் நிலைத்திருக்கும் தன்மையை அடைகின்றது.	1	2	3	4	5	6	7

பகுதி 3 C: நிறுவன வெற்றி (NGO Success)

நிறுவன வெற்றியானது, செயற்திட்டங்கள் முழுமையாக நிறுவன வெற்றிக்கு பங்களிப்புச் செய்யும் போது ஏற்படுகின்றது. செயற்திட்டங்கள் ஆனது நிறுவன நோக்கங்களை அடைதல், ஆர்வலர்களினூடான உறவுகளையும் நன்மதிப்புகளையும் உயர்த்துதல்இ மற்றும் நிறுவனத்தை நீண்டகாலம் நிலைத்திருக்கச் செய்வதற்கும் பங்களிப்பு செய்வதனை கருதும்.

	நிறுவன வெற்றி	1	2	3	4	5	6	7
39	எமது செயற்திட்டங்கள் நிறுவன தூர நோக்கு (ஏளைழை6)இ இலட்சிய	-	-	U	•	U	Ū	
0,	நோக்கு (Mission), மற்றும் நோக்கங்களை (Objectives) அடைவதற்கு	1	2	3	4	5	6	7
	பங்களிப்பு செய்கின்றது.							
40	எமது செயற்திட்டங்கள் ஆர்வலர்களினூடான நீண்ட கால உறவுகளை							
	விருத்தி செய்வதற்கு தவறுகின்றது.	1	2	3	4	5	6	7

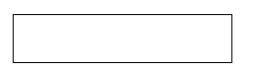
- எமது செயற்திட்டங்கள் நிறுவனத்தினுடைய நன்மதிப்பினை ஆர்வலர்கள், 41 அரசாங்கம், மற்றும் மத்தியில் சாதாரண மக்கள் முழுமையாக 1 2 3 4 5 6 7 உயர்த்துகின்றது. செயற்திட்டங்கள் இயலுமைகள் 42 எமது பணம் திரட்டும் மற்றும்
- நிறுவனத்தினுடைய நிலைத்திருக்கும் தன்மை (Sustainability) 1 2 3 4 5 6 7 ஆகியவற்றை உயர்த்துகின்றது.

தனிநபர் பற்றிய தகவல்

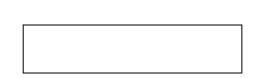
தயவு செய்து கீழே குறிக்கப்பட்டுள்ள தகவல்களை நிரப்புக. இவ் தனிநபர் தகவலானது நம்பகரமாக பாதுகாக்கப்படும். இவ் ஆய்வானது எல்லோருடைய முழுமையான தரவுகளின் தொகுப்பாக மேற்கொள்ளப்படும். தனிநபர் அடிப்படையில் மேற்கொள்ளப்படமாட்டாது.

a. நிறுவன வகை:	உள்நாட்டு அரச சார்பற்ற 🗆 நிறுவனம்	வெளிநாட்டு அரச சாார்பற்ற □நிறுவனம்

b. உங்களுடைய வயது:



c. அரச சார்பற்ற நிறுவனங்களில்
 உங்களது அனுபவம்
 (ஆண்டுகள்)



d. நீங்கள் ஈடுபட்ட செயற்திட்டத்தின் வகை:
(உங்களுக்கு மிகவும் பொருத்தமான ஒரு செயற்திட்டத்தை தெரிவு செய்க)

வாழ்வாதாரம்	சுகாதாரமும் 🗌	இயலுமை விருத்தி
🗆	சத்துணவும்	🗌
கட்டுமானம் 🗆	பயிற்சியும் .். 🗌 கல்வியும்	பெண் — அபிவிருத்தி
நிவாரணம் மற்றும் 🗌 அனர்த்த முகாமைத்துவம்	பாதுகாப்பு (மனித உரிமை (சிறுவர் பாதுகாப்பு நவஉ.) 🗌	பால் சமத்துவம் 🗌
தண்ணீா் 🗌	சமூக	ஏனையவை 🛛
சுத்திகரிப்பு	ஒன்றினைவு 🛛	குறிப்பிடுக

e. பால் நிலை	ஆண் 	பெண் 🗆							
	உயர் பள்ளி	முதலாவது பட்டம்							
f. கல்வி (உயர்									
நிலையை தெரிவு செய்க)	பட்டப்பின்படிப்பு	கலாநிதி							
	<u> </u>								
	வேறு ஏதாவது செயற்திட்ட முகாமைத்துவ கற்கைகள் ஆம் 🗌 இல்லை 🗆								
	ப தயவு செய்து குறிப்பிடுக:								

நீங்கள் இந்த ஆய்வு தொடர்பான பெறுபேறுகளை அறிய விரும்பின் உங்களது மின் அஞ்சல் (ந-அயடை) முகவரியை பெட்டியினுள் எழுதுக.

மின் அஞ்சல்:			
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Appendix 10c: Survey Questionnaire in Sinhala

සමීක්ෂණ පතිකාව (Survey Instrument)

"සම්පත් පාදක කරගත් දුෂ්ටිකෝණයකින් රාජා නොවන සංවිධානයන්හි (NGOs) වාාපෘති කළමනාකරණ අධායනය"

පළමු කොටස : වාාපෘති කළමනාකරණ සම්පත් (Resources)

වාාපෘති කළමනාකරණ දැනුම, කුසලතාවයන්, කුමවේදයන්, කිුයාවලීන්, සංස්කෘතිය, උපකරණ සහ ශිල්පීය කුම අන්තර්ගත වූ එලදායී (Effective) වහාපෘති කියාකාරීත්වයට උපකාරී වන වහාපෘති කළමනාකරණ දැනුම, ව්යාපෘති කළමනාකරණ සම්පත් ලෙස හැදින්විය හැකිය.

වාාපෘති කළමනාකරණ ධාරිතාව යනු වාාපෘති කළමනාකරණ සම්පත්හි එකතුවක් වන අතර එය වාාපෘති කළමනාකරණ කණ්ඩායම, සංවිධානාත්මක සහ සහයෝගී සමාජීය ධාරිතාවන්ද විය හැකිය. සෑම පුශ්නයක් සදහාම සුදුසු පිළිතුරක් පහත කරුණු හතෙන් (07) තෝරාගත හැකිය.(1- තරයේ එකඟ නොවේ, 2- එකඟ නොවේ, 3- යම් පමණකට එකඟ නොවේ, 4- එකග වීම හෝ එකග නොවීම නොවේ, 5- යම් පමණකට එකඟ වේ, 6- එකඟ වේ, 7-තරයේ එකඟ වේ) ඔබ විශ්වාස කරන අන්දමට ඔබගේ සංවිධානයේ වහාපෘතිවලට අදාල වඩාත් සුදුසු පිළිතුර වටා රවුමක් අඳින්න.

පළමු කොටස (අ) :කණ්ඩායම් වාහපෘති කළමනාකරණ ධාරිතාව

වඩාත් එලදායී වාහපෘති පුතිඵල සදහා කණ්ඩායම තුළ රැස්කර ගත් සහ බෙදාහදා ගත් වාහපෘති කළමනාකරණ දැනුම සහ කුසලතාවයන්, කණ්ඩායම් වාහපෘති කළමනාකරණ ධාරිතාව ලෙස සැලකෙයි.කණ්ඩායම් අවිධිමත් හමුවීම් (Informal meetings)" කාර්යාස්ථ පුහුණුවීම් (On-the-job trainings), කණ්ඩායම් විශ්වාසය (Team trust) සහ කණ්ඩායම් වාහපෘති කළමනාකරණ පුවීනතාවය (Team expertise) යන වහාපෘති කළමනාකරණ සම්පත්වල එකතුව, කණ්ඩායම් වහාපෘති කළමනාකරණ ධාරිතාව ලෙස හැදින්වේ.

		තරයේ එකඟ නොවේ				තර	යේ එය වේ	າເວ 1
	කණ්ඩායම් වාාපෘති කළමනාකරණ ධාරිතාව	1	2	3	4	5	6	7
1	සැලසුම් නොකළ සාකච්ඡා (Casual conversation) සහ අවිධි හමුවීම් තුළින් කණ්ඩායම් සාමාජිකයන් අතර වහාපෘති අත්දැකි පිළිබදව අපි සාකච්ඡා කරමු.		2	3	4	5	6	7
2	වැදගත් වහාපෘති ගැටළු සාකච්ඡා කිරීමේදී සහ වඩාත් සුදුසු විසැ සෙවීමේදී අප කණ්ඩායමෙහි බුද්ධි කලම්භන (Brain stormin සැසිවාරයන් අපි යොදා ගනිමු.	<u> </u>	2	3	4	5	6	7

3	වාහපෘතියේ වර්ධනය නිරීක්ෂණය කිරීමට සහ සාකච්ඡා කිරීමට අපි නිතර ක්ෂේතු චාරිකාවල (Field visits) යෙදෙමු.	1	2	3	4	5	6	7
4	වාාාපෘති කළමනාකරණ කුසලතාවයන් වැඩි දියුණු කරගැනීමේදී කාර්යාාස්ථ පුහුණුවීම් (On-the-job training) සහාය නොවේ.	1	2	3	4	5	6	7
5	වෘත්තීමය විශේෂඥයෙකුගේ කාර්යය නිරීක්ෂණයෙන් ඉගෙනීම සහ උපදේශන (Mentoring) සැසිවාරයන් අප වහාපෘති කටයුතුවල වැඩිදියුණුවට සහාය වේ.	1	2	3	4	5	6	7
6	සාර්ථක සහ අසාර්ථක සිද්ධීන් සාකච්ඡා කිරීම තුළින් අපි වහාපෘති අත්දැකීම් ඉගෙන ගනිමු.	1	2	3	4	5	6	7
7	අප කණ්ඩායම් සාමාජිකයන් නිරන්තරයෙන්ම අනොහනා අවබෝධයෙන් සහ විශ්වාසයෙන් යුතුව කටයුතු කරති.	1	2	3	4	5	6	7
8	අප කණ්ඩායම් වටිනාකම් (Team values) මගින් ශක්තිමත් වාහපෘති කළමනාකරණ විනයක් ගොඩ නැගෙයි.	1	2	3	4	5	6	7
9	වාාපෘති කළමනාකරණ දැනුම, කුසලතා, උපකරණ සහ ශිල්පීය කුම යොදා ගැනීම පිළිබඳව ඉතා හොඳ පුවීනතාවයක් අප කණ්ඩායම සතුව ඇත.	1	2	3	4	5	6	7
10	වඩාත් ඵලදායී වාාාපෘති කළමනාකරණ කියාමාර්ග වල අපි නිරන්තරයෙන් යෙදී සිටිමු.	1	2	3	4	5	6	7

පළමු කොටස (ආ)ඃ සංවිධානාත්මක වාාාපෘති කළමනාකරණ ධාරිතාව

සංවිධානාත්මක වාහපෘති කළමනාකරණය යනු සංවිධානය තුල සංස්ථාගත කරන ලද හා බෙදාහදාගනු ලබන වහාපෘති කළමනාකරණ දැනුම සහ කුසලතාවයන් වේ. වහාපෘති කළමනාකරණ කාර්යාලය, කුමවේදය, පුමීතීන්, කුියාවලීන්, උපකරණ, ශිල්පීය කුමයන් සහ විධිමත් දැනුම බෙදාගැනීමේ කුියාකාරකම් යන වහාපෘති කළමනාකරණ සම්පත්හි එකතුවක් වශයෙන් සංවිධානාත්මක වහාපෘති කළමනාකරණ ධාරිතාව හැඳින්වේ.

			ය් එකඟ නාවේ				තර	තරයේ එකඟ වේ	
	- සංවිධානාත්මක ව ාාපෘති කළමනාකරණ ධාරිතා ව		1	2	3	4	5	6	7
			-	2	5	т	5	U	,
11	එලදායී (Effectively) සහ කාර්යක්ෂම අන්දමින් වාාපෘතීන් කි්යාස කරවීම සදහා සෑම ආකාරයකින්ම සහාය ලබා දෙන එ((Efficiently) කි්යාකාරී වාාපෘති කළමනාකරණ කාර්යාලයක්/ඒකස අප සතු වේ.	ලදායී	1	2	3	4	5	6	7
12	වාාපෘති කළමනාකරණය කිරීම සදහා අප සතුව ස්ථීර කුමවේය (Methodology), පුමිතීන් (Standards) සහ කියාවලීන් (Processes)	-	1	2	3	4	5	6	7
13	වහාපෘති කළමනාකරණය සදහා වහාපෘති කළමනාකරණ උපකරණ ශිල්පීය තුම ඵලදායී අන්දමින් අපි භාවිතා කරමු.	සහ	1	2	3	4	5	6	7
14	අප කණ්ඩායම් සාමාජිකයින් අතර වහාපෘති කළමනාකරණ ද ඵලදායී අන්දමින් බෙදා ගැනීම සදහා වහාපෘති කළමනාකරණ තොර කුමවේදය (Information system) සුදුසු නොවේ.		1	2	3	4	5	6	7
15	වාාපෘතීන් සමායෝජනය කිරීම සදහා අපගේ උපදේශන (Monitor සහ ඇගයීම් කුමවේදය (Evaluation mechanism) ඵලදායී වේ	ring)	1	2	3	4	5	6	7

16	වහාපෘති කළමනාකරණ දැනුම සහ කුසලතා සංවර්ධනය කිරීම සදහා පුහුණු වැඩ සටහන් නිර්මාණය කිරීමට සංවිධානය ආයෝජනයන් කරයි.	1	2	3	4	5	6	7
17	වාාපෘති අත්දැකීම් බෙදා ගැනීමට සහ සාකච්චා කිරීම සදහා බොහෝ විධිමත් හමුවීම් (Formal meetings)පැවැත්වීමට අපි නිරන්තරයෙන් පුරුදු වී සිටිමු.	1	2	3	4	5	6	7
18	ඵලදායී වහාපෘති සන්නිවේදන පද්ධතියක් (Communication systems) සහ තාක්ෂණය (Technology) අප සතුව ඇත.	1	2	3	4	5	6	7
19	සංවිධානාත්මක වාාපෘති සංස්කෘතිය මනාව හදුන්වා දී ඇති අතර එය ආයතනයක් තුල වාාපෘති කටයුතු වර්ධනය කරයි.	1	2	3	4	5	6	7
20	වහාපෘති කණ්ඩායම් සදහා පුමාණවත් සහයෝගය සහ අභිපේරණය සංවිධාතාත්මක තායකත්වයෙන් ලබා දෙයි.	1	2	3	4	5	6	7

පළමු කොටස (ඇ): සහයෝගීතා සමාජීය වාාපෘති කළමනාකරණ ධාරිතාව

අභිමත පුතිඵල කරා ළගාවීම සදහා සංවිධානයට බාහිර වූ පුද්ගලයින්, කණ්ඩායම් සහ සංවිධාන සමග වාාපෘති කළමනාකරණ දැනුම සහ කුසලතාවයන් බෙදාහදාගැනීම වෙනුවෙන් එක්ව වැඩ කිරීමේ සහභාගීත්ව කියාවලිය සහයෝගීතා සමාජීය වාාපෘති කළමනාකරණ ධාරිතාව විය හැකිය.බාහිර සංවිධාන සමග පවත්නා විධිමත් (Formal) සහ අවිධිමත් (Informal) සබඳතා තුලින් වාාපෘති කළමනාකරණ දැනුම බෙදාගත හැකිය.

			් එකග ාවේ				තර	තරයේ එකග වේ	
	සහයෝගී සමාජ වාහාපෘති කළමනාකරණ ධාරිතාව)	1	2	3	4	5	6	7
21	රාජා අංශ මගින් අපගේ වාාපෘතී සදහා උපදේශනාත්මක සහ තාස සහාය අන්තර්ගත වූ ඉතා උසස් වැදගත් සහයෝගීතාවයන් ලැබේ.	ත්ෂණික	1	2	3	4	5	6	7
22	හමුවීම්, සාකච්ජා සහ පුමිති නීතිරිති තුළින් වහාපෘති දායකයින් (D අපට සහයෝගය දෙති.	onors)	1	2	3	4	5	6	7
23	රාජා නොවන සංවිධානයන්හි කාර්යමණ්ඩලය අතර වාාපෘති ඈ බෙදා ගැනීම සදහා රාජා නොවන සංවිධානවල විමසා බැලී මූලාායතන රැස්වීම් (Consortium meetings) අපට සහාය වේ.		1	2	3	4	5	6	7
24	වෙබ් අඩවි (Websites), සමාජ මාධා (Social media) සහ/හෝ විධි හරහා රාජා නොවන සංවිධාන අතර කාර්යයාලීය තොරතුරු ෂු කරගැනීමේ ඌනතාවයක් ඇත.		1	2	3	4	5	6	7
25	වෙනත් සංවිධාන සමග ඒකාබද්ධ වහාපෘති (Combined projec සතුව ඇති අතර විධිමත් හමුවීම් තුළින් ඒ සමග අපගේ වහාපෘති අ බෙදා ගනිමු.		1	2	3	4	5	6	7
26	අපේ සහාය සංවිධාන සමග පවත්වන්නාවූ අවිධිමත් සාකච්ජා (In discussions) අපගේ වාාපෘති කරුණු සදහා සුදුසු විසඳුම් මතු කර උපකාරී වේ.		1	2	3	4	5	6	7
27	වහාපෘති කළමනාකරණ දැනුම සහ නිපුණතාවයන් බෙදා ග ආයෝජකයින් සමග පවත්වන්නා වූ සම්මුඛ සාකච්ඡා (Face-to-fao අවිධිමත් හමුවීම් වැනි ජාලමය සම්බන්ධතාවයන් අපට සහාය දේ	ce) සහ	1	2	3	4	5	6	7

28	වාාපෘති චකුයේ (Project cycle) කියාකාරකම් පිළිබඳ වාාපෘති පුතිලාභීන් සමග ඒකාබද්ධ සාකච්ඡා සහ හමුවීම් අපි පවත්වමු.	1	2	3	4	5	6	7
29	වාාපෘති කියාත්මක කිරීම සදහා ඵලදායි දැනුම සමාජයෙන් රැස් කර ගැනීමට වාාපෘති දැනුවත් කිරීම් (Project awareness) සහ සමාරම්භක වැඩසටහන් (Inaguration programs) වැනි වාාපෘති අලෙවිකරණ අවස්ථා අපට සහාය වේ.	1	2	3	4	5	6	7
30	සමාජයේ පවත්තාවූ සෘජු සමාජ ජාලයන්ට (e.g.Twitter / NGO websites) සහභාගී වෙමින් අපගේ වාාපෘති කරුණු පිළිබඳව සාකච්ඡා කරමු.	1	2	3	4	5	6	7

දෙවන කොටසං රාජා නොවන සංවිධානයන්හි (NGOs) වාාපෘති සාර්ථකත්වය.

අයවැය හා කාලසටහන මත පදනම්ව වාාපෘති අරමුණු හා ආයෝජකයින්ගේ අපේක්ෂාවන් කරා ළඟාවන මෙන්ම සංවිධානාත්මක සාර්ථකත්වයට සහයෝගය ලබා දෙන වාාපෘතියක් වශයෙන් වාාපෘති සාර්ථකත්වය නිර්වචනය කළ හැකිය. වාාපෘති කළමනාකරණ සාර්ථකත්වය, වාාපෘති සාර්ථකත්වය සහ රාජා නොවන සංවිධානවල සාර්ථකත්වය යන අවස්ථා තුනකදී මෙය මැන බැලිය හැකිය.

දෙවන කොටස (අ): වාහාපෘති කළමනාකරණ සාර්ථකත්වය (Project Management Success)

වාාපෘති අරමුණු අත්පත් කර ගැනීමට, කාර්යයේ ගුණාත්මක බව ළඟා කරගැනීමට මෙන්ම නියමිත කාලරාමුව සහ අයවැය තුළ වාාපෘතිය සම්පූර්ණ කරගැනීමට ඇති හැකියාව වාාපෘති කළමනාකරණ සාර්ථකත්වය ලෙස සදහන් වේ.

	25520 Ces 0.00220 Ces 0.002	තරයේ එකඟ නොවේ				තරයේ එකඟ වේ		
	වාහාපෘති කළමනාකරණ සාර්ථකත්වය	1	2	3	4	5	6	7
31	සාමානා වශයෙන් අපි වාාපෘතියේ විෂය පථය (Scope) සහ අරමු (Objectives) ළඟාකර ගනිමු.	මණ 1	2	3	4	5	6	7
32	සාමානා වශයෙන් වාාපෘතියක ගුණාත්මක නිමාව (Quality deliverabl අපි ළඟාකර ගනිමු.	les) 1	2	3	4	5	6	7
33	නියමිත කාලරාමුව තුළ නියමානුකුලව අපි වහාපෘතිය නිමා කරමු.	1	2	3	4	5	6	7
34	සැලසුම් කළ අයවැය (Budget) තුළ වාාපෘතීන් සම්පූර්ණ කිරීමට නිතර අපොහොසත් වෙමු.	අපි 1	2	3	4	5	6	7

දෙවන කොටස (අා): වාාාපෘති සාර්ථකත්වය (Project Success)

වාාපෘතිය සාර්ථක පුතිඵල ඇතිකරන විටදී සහ ආයෝජකයින් වාාපෘති පුතිඵල සමග සැහීමකට පත්වන විටදී වාාපෘති සාර්ථකත්වය ඇති වේ.

0,0,0		තරයේ එකඟ නොවේ				තරයේ එක වේ		කඟ	
	වාාපෘති සාර්ථකත්වය		1	2	3	4	5	6	\uparrow_7
35	සාමානා වශයෙන් අපගේ ආයෝජකයින් (දායකයින්, රාජා ෙ සංවිධාන කියා කිරීම සහ පුතිලාභීන්) වහාපෘති පුතිඵල පිළිබඳ සෑහීමක වෙති.		1	2	3	4	5	6	7
36	නිරන්තරයෙන් අපගේ වාාපෘතීන් දිගුකාලීන සංවර්ධන අභිමතාර්ථ දායක වීමට අපොහොසත් වේ.	සඳහා	1	2	3	4	5	6	7
37	වාාපෘතීන් අපි බලාපොරොත්තු වූ මෙන්ම බලාපොරොත්තු නොවූ බ(ඇති කරයි.	ලපෑම්ද	1	2	3	4	5	6	7
38	අපේ වාාපෘතීන් සමාජය තුළ තිරසාර බව අත්පත් කරගෙන ඇත.		1	2	3	4	5	6	7

දෙවන කොටස (ඇ): රාජා නොවන සංවිධානවල සාර්ථකත්වය (NGO Success)

සමස්තයක් වශයෙන් ගත් විට රාජා නොවන සංවිධානවල සාර්ථකත්වය සදහා වාාපෘතිය දායක වේ. සංවිධානාත්මක අරමුණු මුදුන්පත් කරගැනීමට, ආයෝජකයින්ගේ සබඳතා සහ කීර්තිය වැඩි දියුණු කර ගැනීමට සහ දීර්ඝ කාලයක් පුරා රාජා නොවන සංවිධානයන් පවත්වාගෙන යාම සදහා සහාය වීමට වාාපෘතීන් දායකත්වය ලබා දෙයි.

		තරයේ එකඟ නොවේ]			තර	ාය් එක වේ	ඟ ▲
	රාජා නොවන සංවිධානවල සාර්ථකත්වය	1	2	3	4	5	6	 7
39	සංවිධානයේ දැක්ම (Vision), මෙහෙවර (Mission) අභිමතාර්ථ(Objectives) මුදුන්පත් කර ගැනීමට අපේ වහාපෘතීන් ද වේ.	සහ උපකාරී 1	2	3	4	5	6	7
40	අපගේ ආයෝජකයින් සමග දිගු කාලීන සබඳතා වැඩිදියුණු කර ග අපගේ වහාපෘතීන් අපොහොසත් වේ.	තැනීමට 1	2	3	4	5	6	7
41	සමස්තයක් වශයෙන් අපගේ වාාපෘතීන් රජය සහ පොදු ජනතාව සංවිධානයේ කීර්තිය වැඩිදියුණු කර ඇත.) අතර 1	2	3	4	5	6	7
42	අපේ වහාපෘතීත් අරමුදල් රැස් කිරීමේ හැකියාවන් සහ සංවිධානයේ \$ පැවැත්ම (Sustainability) වර්ධනය කර ඇත.	තිරසාර 1	2	3	4	5	6	7

ජනවිකාස (Demographic) විදාාාත්මක තොරතුරු

කරුණාකර පහත තොරතුරු සම්පූර්ණ කරන්න. මෙම ජනවිකාස විදාහත්මක තොරතුරු පුද්ගලික මෙන්ම රහසිගත වන අතර විශ්ලේෂණය සමස්ත දත්ත මත පමණක් පදනම් වන අතර එය පෞද්ගලිකත්වය මත පදනම්ව සිදු නොවේ.

අ. සංවිධාන වර්ගය:	දේශීය රාජා නොවන සංවිධාන		ජාතාන්තර රාජා නොවන සංවිධාන	
ආ. පුතිචාර දක්වන්නාගේ වයස				

^ඇ). රාජා නොවන සංවිධාන වාාපෘතීන් පිළිබද අත්දැකීම් (වර්ෂ) :

(ඈ). ඔබ සම්බන්ධ වී ඇති වහාපෘති වර්ගය (ඔබට ඉතා ගැලපෙන කරුණ තෝරන්න):

ජීවන මාර්ග	සෞඛාා සහ පෝෂණ	ວິລ 🗌	ධාරිතා වර්ධනය	
යටිතල වාූහය	පුහුණුකිරීම්/ අධාහාපනය		කාන්තා සංවර්ධනය	
සහන සහ ආපදා කළමණාකරණය	ආරක්ෂාව (මානවහිමිකම්,ළමා ආරක්ෂණය ආදී)		ස්තී්/පුරුෂ සමාජ සමාතාත්මතාවය	
ජලය සහ සනීපාරක්ෂක	සමාජ සජිවීකරණය		©චනත් (කරුණාකර සදහන් ^{කරන්න})	

(ඉ).ස්තුී/පුරුෂ භාවය:

පිරිමි 🗆 ගැහැණු 🗆

උසස් පාසැල්	සාමානා උපාධි	

	පශ්චාත් උපාධි		ආචාර්ය උපාධි		
(ඊ). අධාහාපනය:					
	වෙනත් වාහපෘති කළමණාකරං	ණ පාඨමා(ළා/සහතික	ඔව් 🗌	නැත 🛛
(ඉහලම අධාාපනය පමණක් සදහන් කරන්න)	(කරුණාකර සදහන් කරන්න)				

මෙම සමීක්ෂණයේ පුතිඵල ලබා ගැනීමට ඔබ බලාපොරොත්තු වන්නේ නම්, කරුණාකර දැනට ඔබගේ වලංගු විදාුත් තැපැල් ලිපිනය පහත කොටුවේ සදහන් කරන්න.

E-mail:

ස්තූතියි

Appendix 11a: Exploratory Factor Analysis: Team PM Resources Step 1

KMO and Bartlett's Test Kaiser–Meyer–Olkin Measure of Sampling Adequacy. .920 Bartlett's Test of Sphericity Approx. Chi-Square 2.037E3 df 45 Sig. .000

Communalities				
	Initial	Extraction		
Casual Conversations & Informal Meetings	.168	.156		
Brain Storming Sessions	.460	.473		
Field Visits	.416	.408		
On-the-Job training	.258	.222		
Job Shadowing and Mentoring	.399	.395		
Success and Failure Stories	.553	.575		
Team Cohesion and Trust	.565	.595		
Strong PM Discipline	.609	.645		
Team PM Expertise	.533	.516		
Best PM Practices	.627	.654		

Extraction Method: Principal Axis Factoring.

	Initial Eigenvalues		Ext	raction Sums of Squared	Loadings	
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.124	51.241	51.241	4.641	46.407	46.407
2	.955	9.547	60.788			
3	.782	7.823	68.611			
4	.677	6.772	75.383			
5	.590	5.897	81.280			
6	.523	5.231	86.511			
7	.409	4.094	90.605			
8	.341	3.414	94.020			
9	.316	3.161	97.181			
10	.282	2.819	100.000			

Total Variance Explained

Extraction Method: Principal Axis Factoring.

	Factor
	1
Casual Conversations & Informal	
Meetings	.395
Brain Storming Sessions	.688
Field Visits	.639
On-the-Job training	.471
Job Shadowing and Mentoring	.629
Success and Failure Stories	.759
Team Cohesion and Trust	.771
Strong PM Discipline	.803
Team PM Expertise	.718
Best PM Practices	.809

Factor Matrix^a

Extraction Method: Principal Axis Factoring.

a. 1 factors extracted. 4 iterations required.

Step 2

KMO and Bartlett's Test		
Kaiser–Meyer–Olkin Measure of S	ampling Adequacy.	.917
Bartlett's Test of Sphericity	Approx. Chi-Square	1.833E3
	df	28
	Sig.	.000

Communalities

-	Initial	Extraction
Brain Storming Sessions	.453	.470
Field Visits	.355	.373
Job Shadowing and Mentoring	.395	.399
Success and Failure Stories	.549	.583
Team Cohesion and Trust	.561	.601
Strong PM Discipline	.609	.663
Team PM Expertise	.529	.520
Best PM Practices	.626	.667

Extraction Method: Principal Axis Factoring.

Total Variance Explained

	Initial Eigenvalues		Ext	raction Sums of Squared	Loadings	
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.722	59.024	59.024	4.275	53.434	53.434
2	.679	8.490	67.515			
3	.661	8.267	75.782			
4	.568	7.097	82.879			
5	.420	5.253	88.132			
6	.349	4.366	92.498			
7	.316	3.952	96.450			
8	.284	3.550	100.000			

Extraction Method: Principal Axis Factoring.

Factor Matrix ^a			
	Factor		
	1		
Brain Storming Sessions	.685		
Field Visits	.610		
Job Shadowing and Mentoring	.631		
Success and Failure Stories	.764		
Team Cohesion and Trust	.775		
Strong PM Discipline	.814		
Team PM Expertise	.721		
Best PM Practices	.817		

Extraction Method: Principal Axis Factoring.

a. 1 factors extracted. 4 iterations required.

Appendix 11b: Exploratory Factor Analysis: Organisational PM Resource Step 1

KMO and Bartlett's Test		
- Kaiser–Meyer–Olkin Measure of Sa	mpling Adequacy.	.936
Bartlett's Test of Sphericity	Approx. Chi-Square	2.313E3
	df	45
	Sig.	.000

Communalities				
	Initial	Extraction		
PM Office	.542	.535		
PM Methodology, Standards and Process	.602	.595		
PM Tools and Techniques	.594	.639		
PM Information System	.239	.187		
Monitoring and Evaluation Mechanism	.455	.479		
Staff Capacity Building programs	.442	.473		
Formal Meetings for Sharing Knowledge	.499	.522		
Effective Project Communication	.518	.548		
Supportive Orgn Culture to PM	.551	.572		
Supportive Leadership to PM	.575	.598		

Extraction Method: Principal Axis Factoring.

	Initial Eigenvalues		Extr	action Sums of Squared 1	Loadings	
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.605	56.055	56.055	5.147	51.466	51.466
2	.875	8.749	64.803			
3	.612	6.123	70.926			
4	.547	5.472	76.398			
5	.507	5.070	81.468			
6	.474	4.740	86.208			
7	.414	4.136	90.344			
8	.374	3.740	94.084			
9	.315	3.154	97.238			
10	.276	2.762	100.000			

Total Variance Explained

Extraction Method: Principal Axis Factoring.

	Factor
	1
PM Office	.731
PM Methodology, Standards and Process	.771
PM Tools and Techniques	.799
PM Information System	.432
Monitoring and Evaluation Mechanism	.692
Staff Capacity Building programs	.688
Formal Meetings for Sharing Knowledge	.722
Effective Project Communication	.740
Supportive Orgn Culture to PM	.756
Supportive Leadership to PM	.773

Factor Matrix^a

Extraction Method: Principal Axis Factoring.

a. 1 factors extracted. 4 iterations required.

Step 2

KMO and Bartlett's Test

Kaiser–Meyer–Olkin Measure of Sampling Adequacy.		.939
Bartlett's Test of Sphericity	Approx. Chi-Square	2.194E3
	df	36
	Sig.	.000

Communalities

	Initial	Extraction
PM Office	.542	.546
PM Methodology, Standards and Process	.602	.599
PM Tools and Techniques	.590	.635
Monitoring and Evaluation Mechanism	.451	.472
Staff Capacity Building programs	.441	.471
Formal Meetings for Sharing Knowledge	.498	.528
Effective Project Communication	.515	.549
Supportive Orgn Culture to PM	.545	.584
Supportive Leadership to PM	.540	.577

Extraction Method: Principal Axis Factoring.

	Initial Eigenvalues			itial Eigenvalues Extraction Sums of Squared I		Loadings
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.404	60.050	60.050	4.960	55.110	55.110
2	.633	7.033	67.083			
3	.556	6.177	73.260			
4	.509	5.653	78.914			
5	.483	5.365	84.279			
6	.414	4.596	88.875			
7	.384	4.269	93.144			
8	.340	3.782	96.927			
9	.277	3.073	100.000			

Total Variance Explained

Extraction Method: Principal Axis Factoring.

Factor Matrix^a

	Factor
	1
PM Office	.739
PM Methodology, Standards and Process	.774
PM Tools and Techniques	.797
Monitoring and Evaluation Mechanism	.687
Staff Capacity Building programs	.686
Formal Meetings for Sharing Knowledge	.727
Effective Project Communication	.741
Supportive Orgn Culture to PM	.764
Supportive Leadership to PM	.760

Extraction Method: Principal Axis Factoring.

a. 1 factors extracted. 4 iterations required.

Appendix 11c: Exploratory Factor Analysis: Collaborative Social PM Resource Step 1

KMO and Bartlett's Test

Kaiser–Meyer–Olkin Measure of Sampling Adequacy.		.873
Bartlett's Test of Sphericity	Approx. Chi-Square	1.436E3
	df	45
	Sig.	.000

Communalities				
	Initial	Extraction		
Project Advisory from Government Bodies	.341	.315		
Project Advisory from Donors	.439	.483		
NGOs Intra and Consortium Meetings	.451	.473		
Official Information Releases	.107	.078		
Joint projects formal interactions	.367	.333		
Joint Projects informal interactions	.435	.374		
Networking with stakeholders	.497	.526		
Beneficiary connections in Projects	.443	.455		
Project Marketing events	.468	.499		
Community of practice through Social networks	.187	.196		

Communalities

Extraction Method: Principal Axis Factoring.

	Initial Eigenvalues		Extraction Sums of Squared Loadings		Loadings	
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.310	43.102	43.102	3.732	37.317	37.317
2	.983	9.828	52.930			
3	.910	9.103	62.032			
4	.795	7.946	69.979			
5	.735	7.355	77.333			
6	.596	5.958	83.291			
7	.495	4.952	88.242			
8	.458	4.577	92.820			
9	.397	3.969	96.789			
10	.321	3.211	100.000	_		

Total Variance Explained

Extraction Method: Principal Axis Factoring.

Factor	Matrix ^a

	Factor
	1
Project Advisory from Government Bodies	.561
Project Advisory from Donors	.695
NGOs Intra and Consortium Meetings	.687
Official Information Releases	.279
Joint projects formal interactions	.577
Joint Projects informal interactions	.612
Networking with stakeholders	.725
Beneficiary connections in Projects	.675
Project Marketing events	.706
Community of practice through Social networks	.442

Extraction Method: Principal Axis Factoring.

a. 1 factors extracted. 4 iterations required.

Step 2

KMO	and	Bartle	tt's T	est

Kaiser–Meyer–Olkin Measure of Sampling Adequacy.		.862
Bartlett's Test of Sphericity	Approx. Chi-Square	1.298E3
	df	28
	Sig.	.000

Communalities

	Initial	Extraction
Project Advisory from Government Bodies	.339	.326
Project Advisory from Donors	.438	.489
NGOs Intra and Consortium Meetings	.432	.460
Joint projects formal interactions	.349	.322
Joint Projects informal interactions	.433	.378
Networking with stakeholders	.489	.525
Beneficiary connections in Projects	.439	.457
Project Marketing events	.463	.496

Extraction Method: Principal Axis Factoring.

_	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.011	50.133	50.133	3.453	43.167	43.167
2	.912	11.395	61.529			
3	.752	9.395	70.924			
4	.613	7.662	78.585			
5	.509	6.365	84.950			
6	.482	6.028	90.978			
7	.400	4.999	95.977			
8	.322	4.023	100.000			

Total Variance Explained

Extraction Method: Principal Axis Factoring.

Factor Matrix ^a	
	Factor
	1
Project Advisory from Government Bodies	.571
Project Advisory from Donors	.699
NGOs Intra and Consortium Meetings	.678
Joint projects formal interactions	.567
Joint Projects informal interactions	.615
Networking with stakeholders	.725
Beneficiary connections in Projects	.676
Project Marketing events	.704

Extraction Method: Principal Axis Factoring.

a. 1 factors extracted. 4 iterations required.

Appendix 12a: CFA Model 1

	Estimate	S.E.	C.R.	Р	Label
Q5 < TPR	1.000				
Q3 < TPR	1.058	.093	11.429	***	par_1
Q2 < TPR	1.144	.095	12.018	***	par_2
Q13 < OPR	1.000				
Q12 < OPR	.991	.055	17.994	***	par_3
Q11 < OPR	.975	.058	16.762	***	par_4
Q23 < CPR	1.000				
Q22 < CPR	1.060	.083	12.778	***	par_5
Q21 < CPR	.896	.088	10.220	***	par_6
Q6 < TPR	1.156	.088	13.074	***	par_7
Q25 < CPR	.921	.088	10.479	***	par_8
Q15 < OPR	.949	.060	15.806	***	par_12
Q7 < TPR	1.309	.099	13.184	***	par_13
Q16 < OPR	.974	.063	15.453	***	par_14
Q26 < CPR	.949	.087	10.949	***	par_15
Q8 < TPR	1.366	.099	13.742	***	par_16
Q17 < OPR	.983	.060	16.406	***	par_17
Q27 < CPR	1.043	.080	12.951	***	par_18
Q9 < TPR	1.251	.096	13.095	***	par_19
Q10 < TPR	1.372	.099	13.912	***	par_20
Q18 < OPR	.976	.059	16.644	***	par_21
Q19 < OPR	.997	.056	17.700	***	par_22
Q20 < OPR	1.051	.059	17.863	***	par_23
Q28 < CPR	.922	.073	12.717	***	par_24
Q29 < CPR	1.051	.081	12.987	***	par_25

Regression Weights: (Group number 1 - Default model)

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	Р	CMIN/DF
Default model	53	854.148	272	.000	3.140
Saturated model	325	.000	0		
Independence model	25	6673.752	300	.000	22.246

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.097	.859	.831	.719
Saturated model	.000	1.000		
Independence model	.786	.172	.103	.159

Baseline Comparisons

Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2	
Default model	.872	.859	.909	.899	.909
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.907	.791	.824
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	582.148	497.757	674.145
Saturated model	.000	.000	.000
Independence model	6373.752	6111.242	6642.638

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1.915	1.305	1.116	1.512
Saturated model	.000	.000	.000	.000
Independence model	14.964	14.291	13.702	14.894

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.069	.064	.075	.000
Independence model	.218	.214	.223	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	960.148	966.710	1177.584	1230.584
Saturated model	650.000	690.238	1983.332	2308.332
Independence model	6723.752	6726.847	6826.316	6851.316

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.153	1.964	2.359	2.168
Saturated model	1.457	1.457	1.457	1.548
Independence model	15.076	14.487	15.679	15.083

HOELTER

Model	HOELTER	HOELTER
MOUEI	.05	.01
Default model	163	172
Independence model	23	25

	Q29	Q28	Q20	Q19	Q18	Q10	Q9	Q27	Q17	Q8	Q26	Q16	Q7	Q15	Q25	Q6	Q21	Q22	Q23	Q11	Q12	Q13	Q2	Q3	Q5
Q2 9	.000																								
Q2 8	1.100	.000																							
Q2 0	1.095	.847	.000																						
Q1 9	053	1.197	.503	.000																					
Q1 8	.696	1.599	472	.837	.000																				
Q1 0	.055	1.477	1.204	.479	357	.000																			
Q9	195	1.135	.094	1.206	.784	1.057	.000																		ļ
Q2 7	147	691	581	1.172	040	.227	.398	.000																	
Q1 7	.847	1.575	146	314	.840	679	029	728	.000																
Q8	.200	.945	1.020	612	-	307	406	454	073	.000															
Q2 6	391	- 1.475	810	1.864	499	425	1.178	2.270	-	.687	.000														
Q1 6	2.277	2.249	.006	533	.571	960	.986	1.414	.679	1.033	.015	.000													
Q7	.181	.108	.640	.045	- 1.799	.083	450	-	048	.867	-	-	.000												
Q1 5	.217	2.308	.649	158	716	.421	.793	527	.304	1.204	1.615	.096	.306	.000											
Q2 5	-	664	157	2.287	1.530	331	1.534	481	.921	497	4.017	.297	.345	-	.000										
Q6	1.215	1.956	090	526	849	721	-	713	311	.257	564	831	1.078	.643	.177	.000									
Q2 1	834	.293	2.158	1.029	993	1.286	.115	-	-	3.186	188	714	1.315	1.525	.399	-	.000								
Q2 2	383	351	.050	389	.287	.024	.779	.322	049	467	1.223	1.316	1.323	1.137	.938	434	1.815	.000							
Q2 3	.303	- 1.466	231	1.276	270	1.013	818	.539	- 1.031	- 1.677	657	1.455	-	-	-	-	2.895	.921	.000						
Q1 1	-	.191	792	098	033	.220	1.454	1.621	.388	.089	- 1.609	679	558	647	.035	194	661	.010	-	.000					
Q1 2	1.189	005	698	299	001	.290	1.863	377	- 1.049	083	375	.017	-	974	.556	1.054	- 1.091	031	325	2.00 8	.000				
Q1 3	492	1.563	301	352	.041	.450	1.024	1.562	050	126	-	264	-	.212	-	769	1.343	159	600	.215	1.11 6	.000			
Q2	108	.521	.503	930	- 1.691	318	- 1.654	.056	.663	1.274	.264	574	.398	593	.525	.901	2.649	583	1.283	598	.106	1.255	.00. 0		
Q3	2.319	2.442	1.540	.573	.667	.143	085	2.353	1.418	- 1.017	.248	1.245	984	1.249	.563	467	.032	1.36 9	.623	715	697	.336	.27 0	.00 0	
Q5	.855	1.932	.924	1.554	- 1.148	588	933	343	460	318	- 1.954	.432	239	.680	.592	2.279	2.208	.313	1.052	461	384	194	.41 0	.95 0	.00. 0

Standardised Residual Covariances (Group number 1 - Default model)

Appendix 12b: CFA Model 2

	Estimate	S.E.	C.R.	Р	Label
Q7 < TPR	1.000				
Q6 < TPR	.864	.054	16.019	***	par_1
Q2 < TPR	.865	.060	14.490	***	par_2
Q13 < OPR	1.000				
Q12 < OPR	1.003	.055	18.328	***	par_3
Q11 < OPR	.988	.057	17.182	***	par_4
Q25 < CPR	1.000				
Q23 < CPR	1.125	.116	9.718	***	par_5
Q22 < CPR	1.216	.119	10.236	***	par_6
Q8 < TPR	1.047	.057	18.312	***	par_7
Q27 < CPR	1.170	.114	10.242	***	par_8
Q17 < OPR	.965	.060	16.209	***	par_12
Q9 < TPR	.948	.056	16.828	***	par_13
Q18 < OPR	.956	.058	16.382	***	par_14
Q28 < CPR	1.082	.103	10.534	***	par_15
Q10 < TPR	1.042	.056	18.612	***	par_16
Q20 < OPR	1.018	.058	17.414	***	par_17
Q29 < CPR	1.230	.117	10.523	***	par_18

Regression Weights: (Group number 1 - Default model)

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	Р	CMIN/DF
Default model	39	362.009	132	.000	2.742
Saturated model	171	.000	0		
Independence model	18	4618.315	153	.000	30.185

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.075	.911	.884	.703
Saturated model	.000	1.000		
Independence model	.801	.210	.117	.188

Baseline Comparisons

Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2	011
Default model	.922	.909	.949	.940	.948
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.863	.795	.818
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	230.009	177.195	290.481
Saturated model	.000	.000	.000
Independence model	4465.315	4247.148	4690.735

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.812	.516	.397	.651
Saturated model	.000	.000	.000	.000
Independence model	10.355	10.012	9.523	10.517

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.063	.055	.070	.004
Independence model	.256	.249	.262	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	440.009	443.480	600.009	639.009
Saturated model	342.000	357.218	1043.538	1214.538
Independence model	4654.315	4655.917	4728.161	4746.161

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.987	.868	1.122	.994
Saturated model	.767	.767	.767	.801
Independence model	10.436	9.947	10.941	10.439

HOELTER

Model	HOELTER	HOELTER
WIOUEI	.05	.01
Default model	197	213
Independence model	18	19

		MI.	Par Change
Q29 <	Q11	5.361	084
Q29 <	Q12	4.257	078
Q20 <	Q29	6.131	.079
Q20 <	Q10	5.972	.082
Q20 <	Q8	5.836	.080
Q20 <	Q7	5.902	.079
Q10 <	Q9	5.428	.069
Q28 <	Q17	4.366	.065
Q28 <	Q23	6.219	072
Q28 <	Q13	6.746	.087
Q28 <	Q6	7.875	.096
Q18 <	Q25	5.209	.067
Q18 <	Q2	4.544	072
Q18 <	Q7	4.371	070
Q9 <	Q18	6.121	.079
Q9 <	Q25	6.331	.068
Q9 <	Q11	6.379	.081
Q9 <	Q12	11.326	.111
Q9 <	Q13	4.527	.071
Q9 <	Q2	9.321	096
Q17 <	Q12	4.336	076
Q27 <	Q13	4.245	082
Q8 <	Q2	6.247	.074
Q23 <	Q28	4.455	097
Q23 <	Q8	4.329	087
Q25 <	Q18	4.227	.099
Q11 <	Q29	9.010	095
Q11 <	Q12	7.706	.095
Q12 <	Q29	5.795	070
Q12 <	Q9	4.394	.065
Q12 <	-	5.913	072
Q12 <	-	9.231	.092
	Q9	6.737	098
Q6 <	-	4.018	.061
Q7 <		5.793	079
Q7 <	-	4.350	063
Q7 <	Q12	4.477	072
Q7 <	Q6	4.517	.075

Regression Weights: (Group number 1 - Default model)

	Q29	Q20	Q10	Q28	Q18	Q9	Q17	Q27	Q8	Q22	Q23	Q25	Q11	Q12	Q13	Q2	Q6	Q7
Q29	.000																	
Q20	1.177	.000																
Q10	134	1.503	.000															
Q28	.769	.899	1.252	.000														
Q18	.688	165	183	1.562	.000													
Q9	353	.389	.997	.946	.973	.000												
Q17	.818	.135	533	1.518	1.011	.131	.000											
Q27	027	160	.399	604	.284	.577	431	.000										
Q8	062	1.222	496	.649	-1.129	559	011	360	.000									
Q22	470	.294	.011	470	.439	.785	.080	.630	552	.000								
Q23	.393	.141	877	-1.409	.009	674	776	.999	-1.611	1.187	.000							
Q25	774	.403	.032	334	2.009	1.895	1.375	.185	198	446	.541	.000						
Q11	-1.935	828	.060	124	173	1.322	.223	-1.565	154	105	-1.159	.226	.000					
Q12	-1.474	728	.131	326	138	1.733	-1.208	312	328	145	283	.837	1.492	.000				
Q13	683	202	.414	1.334	.027	1.014	091	-1.398	251	174	465	.275	160	.726	.000			
Q2	232	.790	348	.371	-1.512	-1.660	.828	.231	1.153	562	-1.142	200	693	.012	-1.244	.000		
Q6	1.175	.331	622	1.888	545	921	029	433	.262	319	941	.609	187	-1.040	642	1.031	.000	
Q7	045	.859	067	145	-1.693	565	.038	-1.093	.616	-1.380	-1.124	.650	760	-1.210	-1.100	.313	1.114	.000

Standardised Residual Covariances (Group number 1 - Default model)

Appendix 12c: CFA Model 3

	Estimate	S.E.	C.R.	Р	Label
Q7 < TPR	1.000				
Q6 < TPR	.867	.052	16.682	***	par_1
Q2 < TPR	.881	.058	15.135	***	par_2
Q13 < OPR	1.000				
Q12 < OPR	1.021	.055	18.661	***	par_3
Q11 < OPR	1.006	.058	17.270	***	par_4
Q25 < CPR	1.000				
Q23 < CPR	1.180	.120	9.837	***	par_5
Q22 < CPR	1.234	.122	10.077	***	par_6
Q8 < TPR	1.045	.055	18.892	***	par_7
Q27 < CPR	1.195	.117	10.175	***	par_8
Q17 < OPR	.956	.060	15.825	***	par_12
Q10 < TPR	.992	.055	18.015	***	par_13
Q18 < OPR	.953	.059	16.152	***	par_14
Q29 < CPR	1.186	.118	10.090	***	par_15

Regression Weights: (Group number 1 - Default model)

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	Р	CMIN/DF
Default model	33	192.253	87	.000	2.210
Saturated model	120	.000	0		
Independence model	15	3524.131	105	.000	33.563

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.070	.947	.927	.686
Saturated model	.000	1.000		
Independence model	.781	.255	.149	.223

Baseline Comparisons

Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2	
Default model	.945	.934	.969	.963	.969
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.829	.783	.803
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	105.253	68.942	149.301
Saturated model	.000	.000	.000
Independence model	3419.131	3228.877	3616.682

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.431	.236	.155	.335
Saturated model	.000	.000	.000	.000
Independence model	7.902	7.666	7.240	8.109

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.052	.042	.062	.352
Independence model	.270	.263	.278	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	258.253	260.709	393.637	426.637
Saturated model	240.000	248.930	732.307	852.307
Independence model	3554.131	3555.247	3615.670	3630.670

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.579	.498	.678	.585
Saturated model	.538	.538	.538	.558
Independence model	7.969	7.542	8.412	7.971

HOELTER

Model	HOELTER	HOELTER
	.05	.01
Default model	255	280
Independence model	17	18

		MI.	Par Change
Q29 <	Q17	4.110	.075
Q29 <	Q6	7.613	.112
Q18 <	Q29	4.673	.072
Q18 <	Q25	5.998	.073
Q10 <	Q18	4.495	.065
Q10 <	Q27	4.741	.064
Q10 <	Q12	4.513	.067
Q10 <	Q13	8.037	.091
Q17 <	Q29	5.725	.082
Q17 <	Q12	5.655	088
Q17 <	Q2	4.961	.078
Q23 <	Q8	5.066	092
Q25 <	Q18	5.872	.117
Q11 <	Q29	7.245	085
Q12 <	Q29	4.032	058
Q12 <	Q17	8.714	086
Q12 <	Q11	4.902	.066
Q6 <	Q29	4.122	.061

Regression Weights: (Group number 1 - Default model)

Standardised Residual Covariances (Group number 1 - Default model)

	Q29	Q18	Q10	Q17	Q27	Q8	Q22	Q23	Q25	Q11	Q12	Q13	Q2	Q6	Q7
Q2 9	.000						C C			C C	C C		,		
Q1 8	1.464	.000													
Q1 0	.991	.735	.000												
Q1 7	1.633	1.053	.423	.000											
Q2 7	003	.597	1.03 5	082	.000										
Q8	.664	673	332	.506	124	.000									
Q2 2	384	.803	.695	.482	.175	263	.000								
Q2 3	.172	.107	500	640	.268	1.596	.515	.000							
Q2 5	598	2.384	.657	1.778	066	.121	644	.119	.000						
Q1 1	1.333	402	.807	.050	1.414	.118	.101	1.214	.477	.000					
Q1 2	832	365	.920	1.370	142	034	.079	332	1.10 9	1.00 8	.000				
Q1 3	.118	019	1.39 3	077	1.090	.222	.195	381	.659	439	.443	.000			
Q2	.236	1.285	411	1.109	.291	.580	457	1.259	041	631	.086	1.021	.000		
Q6	1.803	173	533	.392	262	175	099	968	.866	.009	.829	266	.452	.00. 0	
Q7	.630	1.279	.071	.514	885	.205	1.123	1.123	.944	521	.954	675	.240	.66 8	.00. 0

Appendix 12d: CFA Model 4

	Estimate	S.E.	C.R.	Р	Label
Q7 < TPR	1.000				
Q6 < TPR	.882	.053	16.539	***	par_1
Q2 < TPR	.895	.060	14.960	***	par_2
Q13 < OPR	1.000				
Q12 < OPR	1.059	.056	18.811	***	par_3
Q11 < OPR	1.013	.060	16.939	***	par_4
Q27 < CPR	1.000				
Q23 < CPR	.991	.079	12.617	***	par_5
Q22 < CPR	1.042	.078	13.278	***	par_6
Q8 < TPR	1.064	.058	18.380	***	par_7
Q29 < CPR	.996	.076	13.171	***	par_8
Q18 < OPR	.930	.060	15.466	***	par_12

CMIN

Model	NPAR	CMIN	DF	Р	CMIN/DF
Default model	27	90.882	51	.001	1.782
Saturated model	78	.000	0		
Independence model	12	2660.882	66	.000	40.316

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.057	.967	.950	.632
Saturated model	.000	1.000		
Independence model	.761	.302	.175	.256

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.966	.956	.985	.980	.985
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.773	.746	.761
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	39.882	17.124	70.484
Saturated model	.000	.000	.000
Independence model	2594.882	2429.848	2767.245

Model	FMIN	F0	LO 90	HI 90
Default model	.204	.089	.038	.158
Saturated model	.000	.000	.000	.000
Independence model	5.966	5.818	5.448	6.205

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.042	.027	.056	.824
Independence model	.297	.287	.307	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	144.882	146.503	255.651	282.651
Saturated model	156.000	160.684	476.000	554.000
Independence model	2684.882	2685.603	2734.113	2746.113

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.325	.274	.393	.328
Saturated model	.350	.350	.350	.360
Independence model	6.020	5.650	6.406	6.022

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	337	380
Independence model	15	17

		MI.	Par Change
Q18 <	CPR	4.132	.106
Q18 <	Q29	8.914	.103
Q18 <	Q27	4.286	.071
Q29 <	Q6	8.985	.122
Q29 <	Q7	4.127	.075
Q23 <	Q8	4.668	089
Q11 <	Q29	4.437	067
Q6 <	Q29	5.052	.067

Standardised Residual Covariances (Group num	nber I - Default model)
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	Q18	Q29	Q8	Q22	Q23	Q27	Q11	Q12	Q13	Q2	Q6	Q7
Q18	.000											
Q29	1.989	.000										
Q8	010	.914	.000									
Q22	1.276	531	068	.000								
Q23	.591	.082	-1.373	.366	.000							
Q27	1.138	064	.146	.052	.203	.000						
Q11	180	-1.034	.531	.359	934	-1.093	.000					
Q12	452	757	.091	.103	266	043	.556	.000				
Q13	.280	.488	.714	.514	037	705	468	.059	.000			
Q2	704	.462	.265	276	-1.053	.538	263	.215	588	.000		
Q6	.448	2.042	514	.087	754	008	.396	706	.190	.174	.000	
Q7	508	1.003	.050	808	783	498	.028	667	048	352	.535	.000

Assessment of normality (Group number 1)

Variable	Min	Max	Skew	C.R.	Kurtosis	C.R.
Q18	1.000	7.000	478	-4.125	271	-1.171
Q29	1.000	7.000	742	-6.403	.209	.902
Q8	1.000	7.000	606	-5.231	.001	.004
Q22	1.000	7.000	682	-5.886	022	096
Q23	1.000	7.000	475	-4.100	484	-2.089
Q27	1.000	7.000	585	-5.047	217	936
Q11	1.000	7.000	496	-4.278	462	-1.993
Q12	1.000	7.000	462	-3.990	176	760
Q13	1.000	7.000	521	-4.494	.053	.228
Q2	1.000	7.000	595	-5.131	134	580
Q6	1.000	7.000	759	-6.551	.230	.995
Q7	1.000	7.000	602	-5.197	173	745
Multivariate					36.743	21.190

Construct Validity

	CR	AVE	MSV	ASV	TPR	OPR	CPR
TPR	0.857	0.600	0.588	0.516	0.775		
OPR	0.860	0.606	0.588	0.538	0.767	0.779	
CPR	0.800	0.500	0.487	0.465	0.666	0.698	0.707

No Validity Concerns -

Appendix 12e: CFA Model 5

		Estimate	S.E.	C.R.	Р	Label
Q33 <	PMS	1.000				
Q32 <	PMS	.946	.056	16.858	***	par_1
Q31 <	PMS	1.017	.057	17.871	***	par_2
Q35 <	PS	1.088	.094	11.583	***	par_3
Q36 <	PS	1.000				
Q40 <	NGO	1.000				
Q39 <	NGO	1.006	.075	13.486	***	par_5
Q41 <	NGO	1.029	.077	13.311	***	par_8
Q34 <	PMS	.928	.061	15.103	***	par_9
Q37 <	PS	.974	.099	9.846	***	par_10
Q42 <	NGO	.890	.083	10.746	***	par_11
Q38 <	PS	1.140	.098	11.572	***	par_12

Regression Weights: (Group number 1 - Default model)

CMIN

Model	NPAR	CMIN	DF	Р	CMIN/DF
Default model	27	229.533	51	.000	4.501
Saturated model	78	.000	0		
Independence model	12	2940.670	66	.000	44.556

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.089	.919	.877	.601
Saturated model	.000	1.000		
Independence model	.768	.271	.138	.229

Baseline Comparisons

Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rhol	Delta2	rho2	
Default model	.922	.899	.938	.920	.938
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.773	.712	.725
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	178.533	135.261	229.352
Saturated model	.000	.000	.000
Independence model	2874.670	2700.878	3055.780

Model	FMIN	F0	LO 90	HI 90
Default model	.515	.400	.303	.514
Saturated model	.000	.000	.000	.000
Independence model	6.593	6.445	6.056	6.852

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.089	.077	.100	.000
Independence model	.313	.303	.322	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	283.533	285.154	394.302	421.302
Saturated model	156.000	160.684	476.000	554.000
Independence model	2964.670	2965.391	3013.901	3025.901

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.636	.539	.750	.639
Saturated model	.350	.350	.350	.360
Independence model	6.647	6.258	7.053	6.649

HOELTER

Model	HOELTER	HOELTER
Model	.05	.01
Default model	134	151
Independence model	14	15

Standardised Residual Covariances (Group number 1 - Default model)

	Q38	Q42	Q37	Q34	Q41	Q39	Q40	Q36	Q35	Q31	Q32	Q33
Q38	.000											
Q42	1.024	.000										
Q37	174	.880	.000									
Q34	-1.719	870	144	.000								
Q41	.454	1.392	.244	459	.000							
Q39	523	831	810	480	.020	.000						
Q40	.281	.318	857	1.841	781	.069	.000					
Q36	.330	.048	-1.418	2.164	-1.278	.460	4.218	.000				
Q35	.019	458	.957	.187	145	.170	618	584	.000			
Q31	163	-2.160	.264	.174	414	1.207	.053	.118	.006	.000		
Q32	.363	511	.485	-1.039	.468	.605	.035	416	204	.198	.000	
Q33	497	071	.441	1.434	261	184	-1.215	.101	.406	449	.003	.000

Appendix 12f: CFA Model 6

		Estimate	S.E.	C.R.	Р	Label
Q33 <	PMS	1.000				
Q32 <	PMS	.948	.056	16.887	***	par_1
Q31 <	PMS	1.017	.057	17.857	***	par_2
Q35 <	PS	1.109	.086	12.856	***	par_3
Q37 <	PS	1.000				
Q40 <	NGO	1.000				
Q39 <	NGO	1.029	.079	13.101	***	par_5
Q41 <	NGO	1.065	.082	13.008	***	par_8
Q34 <	PMS	.924	.062	15.023	***	par_9
Q38 <	PS	1.147	.092	12.469	***	par_10
Q42 <	NGO	.914	.087	10.548	***	par_11

Regression Weights: (Group number 1 - Default model)

CMIN

Model	NPAR	CMIN	DF	Р	CMIN/DF
Default model	25	154.705	41	.000	3.773
Saturated model	66	.000	0		
Independence model	11	2719.753	55	.000	49.450

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.061	.942	.907	.585
Saturated model	.000	1.000		
Independence model	.762	.278	.134	.232

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.943	.924	.958	.943	.957
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.745	.703	.714
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	113.705	79.319	155.670
Saturated model	.000	.000	.000
Independence model	2664.753	2497.667	2839.166

Model	FMIN	F0	LO 90	HI 90
Default model	.347	.255	.178	.349
Saturated model	.000	.000	.000	.000
Independence model	6.098	5.975	5.600	6.366

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.079	.066	.092	.000
Independence model	.330	.319	.340	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	204.705	206.088	307.269	332.269
Saturated model	132.000	135.650	402.769	468.769
Independence model	2741.753	2742.361	2786.881	2797.881

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.459	.382	.553	.462
Saturated model	.296	.296	.296	.304
Independence model	6.147	5.773	6.538	6.149

Model	HOELTER	HOELTER
WIGGET	.05	.01
Default model	165	188
Independence model	13	14

	Q42	Q38	Q34	Q41	Q39	Q40	Q37	Q35	Q31	Q32	Q33
Q42	.000										
Q38	1.127	.000									
Q34	835	-1.563	.000								
Q41	1.269	.491	494	.000							
Q39	838	358	401	091	.000						
Q40	.480	.605	2.078	651	.312	.000					
Q37	.827	381	152	.097	848	729	.000				
Q35	457	152	.246	238	.208	394	.635	.000			
Q31	-2.161	027	.222	509	1.244	.280	.213	.022	.000		
Q32	529	.473	-1.016	.353	.617	.233	.419	210	.167	.000	
Q33	071	372	1.480	347	150	-1.013	.395	.422	454	025	.000

Standardised Residual Covariances (Group number 1 - Default model)

Assessment of normality (Group number 1)

Variable	Min	Max	Skew	C.R.	Kurtosis	C.R.
Q42	1.000	7.000	525	-4.535	312	-1.348
Q38	1.000	7.000	756	-6.529	.309	1.332
Q34	1.000	7.000	555	-4.794	092	396
Q41	2.000	7.000	634	-5.474	254	-1.096
Q39	2.000	7.000	640	-5.528	076	327
Q40	1.000	7.000	467	-4.029	704	-3.037
Q37	1.000	7.000	582	-5.023	260	-1.124
Q35	1.000	7.000	860	-7.425	.558	2.407
Q31	1.000	7.000	639	-5.512	.118	.507
Q32	1.000	7.000	599	-5.174	.264	1.141
Q33	1.000	7.000	577	-4.978	185	796
Multivariate					59.237	37.028

Appendix 12g: CFA Model 7

	Estimate	S.E.	C.R.	Р	Label
Q7 < TPR	1.000				
Q6 < TPR	.888	.051	17.327	***	par_1
Q2 < TPR	.869	.057	15.186	***	par_2
Q13 < OPR	1.000				
Q12 < OPR	1.044	.055	18.890	***	par_3
Q11 < OPR	1.008	.058	17.345	***	par_4
Q27 < CPR	1.000				
Q23 < CPR	.997	.079	12.543	***	par_5
Q22 < CPR	1.068	.079	13.492	***	par_6
Q8 < TPR	1.020	.055	18.605	***	par_7
Q29 < CPR	1.023	.076	13.465	***	par_8
Q33 < PMS	1.000				
Q32 < PMS	.944	.055	17.225	***	par_9
Q31 < PMS	1.007	.055	18.336	***	par_10
Q37 < PS	1.000				
Q35 < PS	1.098	.084	13.080	***	par_11
Q39 < F6	1.019	.077	13.253	***	par_12
Q34 < PMS	.926	.061	15.095	***	par_28
Q38 < PS	1.130	.088	12.787	***	par_29
Q40 < F6	1.000				
Q18 < OPR	.945	.059	15.922	***	par_30
Q41 < F6	1.059	.079	13.327	***	par_31
Q42 < F6	.908	.085	10.693	***	par_32

Regression Weights: (Group number 1 - Default model)

CMIN

Model	NPAR	CMIN	DF	Р	CMIN/DF
Default model	61	474.662	215	.000	2.208
Saturated model	276	.000	0		
Independence model	23	6147.856	253	.000	24.300

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.061	.917	.894	.715
Saturated model	.000	1.000		
Independence model	.757	.177	.102	.162

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.923	.909	.956	.948	.956
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.850	.784	.812
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	259.662	200.455	326.604
Saturated model	.000	.000	.000
Independence model	5894.856	5642.778	6153.301

Model	FMIN	F0	LO 90	HI 90
Default model	1.064	.582	.449	.732
Saturated model	.000	.000	.000	.000
Independence model	13.784	13.217	12.652	13.797

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.052	.046	.058	.290
Independence model	.229	.224	.234	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	596.662	603.601	846.918	907.918
Saturated model	552.000	583.393	1684.306	1960.306
Independence model	6193.856	6196.472	6288.215	6311.215

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	1.338	1.205	1.488	1.353
Saturated model	1.238	1.238	1.238	1.308
Independence model	13.888	13.322	14.467	13.893

Model	HOELTER	HOELTER
Model	.05	.01
Default model	236	251
Independence model	22	23

Variable	Min	Max	Skew	C.R.	Kurtosis	C.R.
Q42	1.000	7.000	525	-4.535	312	-1.348
Q41	2.000	7.000	634	-5.474	254	-1.096
Q18	1.000	7.000	478	-4.125	271	-1.171
Q40	1.000	7.000	467	-4.029	704	-3.037
Q38	1.000	7.000	756	-6.529	.309	1.332
Q34	1.000	7.000	555	-4.794	092	396
Q39	2.000	7.000	640	-5.528	076	327
Q35	1.000	7.000	860	-7.425	.558	2.407
Q37	1.000	7.000	582	-5.023	260	-1.124
Q31	1.000	7.000	639	-5.512	.118	.507
Q32	1.000	7.000	599	-5.174	.264	1.141
Q33	1.000	7.000	577	-4.978	185	796
Q29	1.000	7.000	742	-6.403	.209	.902
Q8	1.000	7.000	606	-5.231	.001	.004
Q22	1.000	7.000	682	-5.886	022	096
Q23	1.000	7.000	475	-4.100	484	-2.089
Q27	1.000	7.000	585	-5.047	217	936
Q11	1.000	7.000	496	-4.278	462	-1.993
Q12	1.000	7.000	462	-3.990	176	760
Q13	1.000	7.000	521	-4.494	.053	.228
Q2	1.000	7.000	595	-5.131	134	580
Q6	1.000	7.000	759	-6.551	.230	.995
Q7	1.000	7.000	602	-5.197	173	745
Multivariate					146.255	45.592

Assessment of normality (Group number 1)

	Q42	Q41	Q18	Q40	Q38	Q34	Q39	Q35	Q37	Q31	Q32	Q33	Q29	Q8	Q22	Q23	Q27	Q11	Q12	Q13	Q2	Q6	Q7
Q42	.000																						
Q41	1.264	.000																					
Q18	.617	.212	.000																				
Q40	.433	721	.819	.000																			
Q38	1.174	.540	1.115	.593	.000																		
Q34	876	559	1.639	1.982	-1.573	.000																	
Q39	808	065	.004	.276	270	430	.000																
Q35	460	253	.918	455	095	.184	.235	.000															
Q37	.756	005	344	844	419	272	914	.542	.000														
Q31	-2.112	455	306	.271	.080	.222	1.343	.071	.171	.000													
Q32	528	.342	1.397	.177	.518	-1.075	.646	221	.331	.235	.000												
Q33	103	399	2.004	-1.097	367	1.378	164	.372	.279	435	070	.000											
Q29	.881	.758	1.736	162	078	208	.400	.963	.536	.181	1.096	.834	.000										
Q8	371	265	.053	.880	769	-1.009	612	764	366	059	339	631	.996	.000									
Q22	175	.386	1.040	489	099	177	.285	.702	.339	.076	.623	033	733	.030	.000								
Q23	.005	417	.502	794	188	-1.688	656	862	.051	-1.006	285	-1.558	.067	-1.143	.371	.000							
Q27	026	318	1.084	508	-1.580	.162	428	195	.686	151	1.079	334	026	.439	.111	.437	.000						
Q11	579	638	340	967	.611	.090	.868	.781	.184	756	408	.136	-1.138	.795	.268	880	995	.000					
Q12	-1.093	542	515	.694	314	.368	.360	-1.076	832	958	166	375	790	.468	.087	133	.143	.725	.000				
Q13	433	.406	.068	.056	.585	.159	076	922	.290	082	.091	.480	.342	.945	.384	014	637	464	.179	.000			
Q2	.026	470	741	.325	444	161	-1.657	110	1.500	080	777	953	.450	.672	274	931	.708	136	.436	495	.000		
Q6	676	.268	.111	1.119	1.167	315	.683	.603	.651	1.695	.238	.159	1.755	497	176	867	088	.217	803	034	.067	.000	
Q7	354	.089	794	1.383	.104	.055	.715	134	.199	.783	013	422	.762	.143	-1.026	855	532	097	706	218	395	.090	.000

Standardised Residual Covariances (Group number 1 - Default model)

Appendix 12h: SEM Model 1

		Estimate	S.E.	C.R.	Р	Label
PMS <	TPR	.272	.060	4.570	***	par_9
PMS <	OPR	.386	.069	5.588	***	par_14
PMS <	CPR	.176	.057	3.058	.002	par_15
PS <	CPR	.312	.068	4.558	***	par_16
PS <	OPR	.054	.084	.645	.519	par_17
PS <	TPR	.171	.070	2.436	.015	par_18
PS <	PMS	.462	.098	4.706	***	par_24
NGO <	PMS	.242	.104	2.333	.020	par_19
NGO <	PS	.675	.136	4.946	***	par_20
NGO <	TPR	.069	.063	1.095	.273	par_21
NGO <	CPR	.016	.072	.223	.823	par_22
NGO <	OPR	006	.071	083	.934	par_25
Q7 <	TPR	1.000				
Q6 <	TPR	.888	.051	17.327	***	par_1
Q2 <	TPR	.869	.057	15.186	***	par_2
Q13 <	OPR	1.000				
Q12 <	OPR	1.044	.055	18.890	***	par_3
Q11 <	OPR	1.008	.058	17.345	***	par_4
Q29 <	CPR	1.000				
Q27 <	CPR	.977	.073	13.465	***	par_5
Q23 <	CPR	.974	.076	12.781	***	par_6
Q22 <	CPR	1.044	.076	13.788	***	par_7
Q34 <	PMS	1.000				
Q32 <	PMS	1.020	.064	15.843	***	par_8
Q39 <	NGO	1.000				
Q8 <	TPR	1.020	.055	18.605	***	par_10
Q33 <	PMS	1.080	.072	15.095	***	par_11
Q31 <	PMS	1.088	.065	16.696	***	par_12
Q18 <	OPR	.945	.059	15.922	***	par_13
Q38 <	PS	1.000				
Q35 <	PS	.972	.059	16.525	***	par_28
Q37 <	PS	.885	.069	12.787	***	par_29
Q42 <	NGO	.890	.065	13.655	***	par_30
Q41 <	NGO	1.039	.049	21.085	***	par_31
Q40 <	NGO	.981	.074	13.253	***	par_32

CMIN

Model	NPAR	CMIN	DF	Р	CMIN/DF
Default model	61	474.662	215	.000	2.208
Saturated model	276	.000	0		
Independence model	23	6147.856	253	.000	24.300

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.061	.917	.894	.715
Saturated model	.000	1.000		
Independence model	.757	.177	.102	.162

Baseline Comparisons

Model	NFI	RFI	IFI	TLI	CFI
Model	Delta1	rho1	Delta2	rho2	CII
Default model	.923	.909	.956	.948	.956
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.850	.784	.812
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	259.662	200.455	326.604
Saturated model	.000	.000	.000
Independence model	5894.856	5642.778	6153.301

Model	FMIN	F0	LO 90	HI 90
Default model	1.064	.582	.449	.732
Saturated model	.000	.000	.000	.000
Independence model	13.784	13.217	12.652	13.797

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.052	.046	.058	.290
Independence model	.229	.224	.234	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	596.662	603.601	846.918	907.918
Saturated model	552.000	583.393	1684.306	1960.306
Independence model	6193.856	6196.472	6288.215	6311.215

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	1.338	1.205	1.488	1.353
Saturated model	1.238	1.238	1.238	1.308
Independence model	13.888	13.322	14.467	13.893

Model	HOELTER	HOELTER
Model	.05	.01
Default model	236	251
Independence model	22	23

Appendix 12i: SEM Model 2

	Estimate	S.E.	C.R.	Р	Label
PMS < TP	R .277	.059	4.652	***	par_9
PMS < OP	R .384	.069	5.581	***	par_14
PMS < CP	R .175	.057	3.051	.002	par_15
PS < CP	R .309	.063	4.899	***	par_16
PS < OP	PR .050	.075	.672	.501	par_17
PS < TP	R .200	.064	3.142	.002	par_18
PS < PM	IS .441	.093	4.752	***	par_22
NGO < PM	IS .247	.098	2.511	.012	par_19
NGO < PS	.749	.100	7.455	***	par_20
Q7 < TP	R 1.000				
Q6 < TP	R .889	.051	17.328	***	par_1
Q2 < TP	R .871	.057	15.200	***	par_2
Q13 < OP	PR 1.000				
Q12 < OP	PR 1.044	.055	18.894	***	par_3
Q11 < OP	PR 1.008	.058	17.343	***	par_4
Q29 < CP	R 1.000				
Q27 < CP	R .977	.073	13.464	***	par_5
Q23 < CP	R .974	.076	12.781	***	par_6
Q22 < CP	R 1.044	.076	13.787	***	par_7
Q34 < PM	IS 1.000				
Q32 < PM	IS 1.020	.064	15.839	***	par_8
Q39 < NC	GO 1.000				
Q8 < TP	R 1.020	.055	18.555	***	par_10
Q33 < PM	IS 1.080	.072	15.082	***	par_11
Q31 < PM	IS 1.088	.065	16.696	***	par_12
Q18 < OP	°R .945	.059	15.920	***	par_13
Q38 < PS	1.000				
Q35 < PS	.970	.059	16.449	***	par_25
Q37 < PS	.885	.069	12.759	***	par_26
Q42 < NC		.065	13.666	***	par_27
Q41 < NC	GO 1.038	.049	21.099	***	par_28
Q40 < NC	GO .978	.074	13.219	***	par_29

CMIN

Model	NPAR	CMIN	DF	Р	CMIN/DF
Default model	81	475.832	218	.000	2.183
Saturated model	299	.000	0		
Independence model	46	6147.856	253	.000	24.300

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.923	.910	.957	.949	.956
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.862	.795	.824
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	257.832	198.657	324.748
Saturated model	.000	.000	.000
Independence model	5894.856	5642.778	6153.301

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1.067	.578	.445	.728
Saturated model	.000	.000	.000	.000
Independence model	13.784	13.217	12.652	13.797

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.051	.045	.058	.340
Independence model	.229	.224	.234	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	637.832	647.046		
Saturated model	598.000	632.009		
Independence model	6239.856	6245.088		

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	1.430	1.297	1.580	1.451
Saturated model	1.341	1.341	1.341	1.417
Independence model	13.991	13.426	14.570	14.002

Model	HOELTER	HOELTER
1120 001	.05	.01
Default model	238	253
Independence model	22	23

Appendix 12j: SEM Model 3

		Estimate	S.E.	C.R.	Р	Label
PMS <	TPR	.273	.059	4.614	***	par_9
PMS <	OPR	.391	.069	5.710	***	par_14
PMS <	CPR	.171	.057	2.992	.003	par_15
PS <	CPR	.319	.062	5.173	***	par_16
PS <	TPR	.213	.061	3.484	***	par_17
PS <	PMS	.468	.084	5.566	***	par_21
NGO <	PMS	.247	.099	2.499	.012	par_18
NGO <	PS	.749	.101	7.404	***	par_19
Q7 <	TPR	1.000				
Q6 <	TPR	.889	.051	17.323	***	par_1
Q2 <	TPR	.871	.057	15.197	***	par_2
Q13 <	OPR	1.000				
Q12 <	OPR	1.044	.055	18.908	***	par_3
Q11 <	OPR	1.007	.058	17.325	***	par_4
Q29 <	CPR	1.000				
Q27 <	CPR	.977	.073	13.450	***	par_5
Q23 <	CPR	.975	.076	12.781	***	par_6
Q22 <	CPR	1.045	.076	13.788	***	par_7
Q34 <	PMS	1.000				
Q32 <	PMS	1.020	.064	15.840	***	par_8
Q39 <	NGO	1.000				
Q8 <	TPR	1.020	.055	18.553	***	par_10
Q33 <	PMS	1.080	.072	15.090	***	par_11
Q31 <	PMS	1.087	.065	16.685	***	par_12
Q18 <	OPR	.945	.059	15.931	***	par_13
Q38 <	PS	1.000				
Q35 <	PS	.971	.059	16.435	***	par_24
Q37 <	PS	.886	.069	12.759	***	par_25
Q42 <	NGO	.891	.065	13.666	***	par_26
Q41 <	NGO	1.039	.049	21.097	***	par_27
Q40 <	NGO	.979	.074	13.219	***	par_28

CMIN

Model	NPAR	CMIN	DF	Р	CMIN/DF
Default model	80	476.270	219	.000	2.175
Saturated model	299	.000	0		
Independence model	46	6147.856	253	.000	24.300

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.923	.911	.957	.950	.956
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.866	.799	.828
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	257.270	198.101	324.181
Saturated model	.000	.000	.000
Independence model	5894.856	5642.778	6153.301

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1.068	.577	.444	.727
Saturated model	.000	.000	.000	.000
Independence model	13.784	13.217	12.652	13.797

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.051	.045	.058	.356
Independence model	.229	.224	.234	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	636.270	645.370		
Saturated model	598.000	632.009		
Independence model	6239.856	6245.088		

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	1.427	1.294	1.577	1.447
Saturated model	1.341	1.341	1.341	1.417
Independence model	13.991	13.426	14.570	14.002

Model	HOELTER	HOELTER
Model	.05	.01
Default model	239	254
Independence model	22	23

		Estimate	S.E.	C.R.	Р	Label
PMS <	TPR	.240	.056	4.301	***	par_9
PMS <	OPR	.479	.072	6.650	***	par_14
PMS <	CPR	.111	.058	1.918	.055	par_15
PS <	CPR	.701	.080	8.738	***	par_16
PS <	TPR	.062	.060	1.033	.302	par_17
PS <	PMS	.427	.070	6.137	***	par_21
NGO <	PMS	.342	.047	7.361	***	par_18
NGO <	PS	.616	.039	15.726	***	par_19
Q7 <	TPR	1.000				
Q6 <	TPR	1.080	.032	34.037	***	par_1
Q2 <	TPR	.986	.033	29.788	***	par_2
Q13 <	OPR	1.000				
Q12 <	OPR	.981	.026	38.337	***	par_3
Q11 <	OPR	1.066	.031	34.755	***	par_4
Q29 <	CPR	1.000				
Q27 <	CPR	1.016	.041	24.672	***	par_5
Q23 <	CPR	.936	.041	22.889	***	par_6
Q22 <	CPR	1.143	.045	25.520	***	par_7
Q34 <	PMS	1.000				
Q32 <	PMS	1.086	.041	26.815	***	par_8
Q39 <	NGO	1.000				
Q8 <	TPR	1.106	.028	39.577	***	par_10
Q33 <	PMS	.996	.038	26.521	***	par_11
Q31 <	PMS	1.098	.037	29.753	***	par_12
Q18 <	OPR	.952	.029	33.226	***	par_13
Q38 <	PS	1.000				
Q35 <	PS	.940	.021	43.757	***	par_24
Q37 <	PS	.940	.033	28.119	***	par_25
Q42 <	NGO	.980	.033	29.822	***	par_26
Q41 <	NGO	1.027	.021	48.370	***	par_27
Q40 <	NGO	1.095	.037	29.984	***	par_28

ADF Method: Regression Weights: (Group number 1 - Default model)

	OPR	TPR	CPR	PMS	PS	NGO
PMS	.431	.322	.186	.000	.000	.000
PS	.190	.378	.410	.440	.000	.000
NGO	.245	.361	.354	.568	.756	.000
Q42	.149	.220	.215	.346	.460	.608
Q41	.206	.303	.297	.477	.635	.839
Q35	.147	.293	.318	.341	.775	.000
Q18	.717	.000	.000	.000	.000	.000
Q40	.145	.214	.210	.336	.448	.592
Q31	.364	.271	.157	.843	.000	.000
Q8	.000	.824	.000	.000	.000	.000
Q39	.204	.300	.294	.472	.629	.831
Q37	.117	.232	.252	.270	.614	.000
Q38	.143	.284	.308	.331	.751	.000
Q32	.344	.257	.149	.797	.000	.000
Q33	.327	.244	.141	.758	.000	.000
Q34	.306	.228	.132	.709	.000	.000
Q22	.000	.000	.726	.000	.000	.000
Q23	.000	.000	.669	.000	.000	.000
Q27	.000	.000	.707	.000	.000	.000
Q29	.000	.000	.724	.000	.000	.000
Q11	.768	.000	.000	.000	.000	.000
Q12	.825	.000	.000	.000	.000	.000
Q13	.802	.000	.000	.000	.000	.000
Q2	.000	.697	.000	.000	.000	.000
Q6	.000	.777	.000	.000	.000	.000
Q7	.000	.794	.000	.000	.000	.000

Standardised Total Effects (Group number 1 - Default model)

	OPR	TPR	CPR	PMS	PS	NGO
PMS	.001	.001	.004			
PS	.001	.001	.001	.002		
NGO	.001	.001	.001	.001	.001	
Q42	.001	.001	.001	.001	.001	.001
Q41	.001	.001	.001	.001	.001	.001
Q35	.001	.001	.001	.002	.001	
Q18	.001					
Q40	.001	.001	.001	.001	.001	.001
Q31	.001	.001	.004	.001		
Q8		.001				
Q39	.001	.001	.001	.001	.001	.001
Q37	.001	.001	.001	.002	.001	
Q38	.001	.001	.001	.002	.001	
Q32	.001	.001	.004	.001		
Q33	.001	.001	.004	.001		
Q34	.001	.001	.004	.001		
Q22			.001	•••		
Q23			.001			
Q27			.001	•••		
Q29			.001	•••		
Q11	.001					
Q12	.001			•••		
Q13	.001			•••		
Q2		.001	•••			
Q6		.001				
Q7		.002	•••	•••		

Standardised Total Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	OPR	TPR	CPR	PMS	PS	NGO
PMS	.431	.322	.186	.000	.000	.000
PS	.000	.236	.328	.440	.000	.000
NGO	.000	.000	.000	.235	.756	.000
Q42	.000	.000	.000	.000	.000	.608
Q41	.000	.000	.000	.000	.000	.839
Q35	.000	.000	.000	.000	.775	.000
Q18	.717	.000	.000	.000	.000	.000
Q40	.000	.000	.000	.000	.000	.592
Q31	.000	.000	.000	.843	.000	.000
Q8	.000	.824	.000	.000	.000	.000
Q39	.000	.000	.000	.000	.000	.831
Q37	.000	.000	.000	.000	.614	.000
Q38	.000	.000	.000	.000	.751	.000
Q32	.000	.000	.000	.797	.000	.000
Q33	.000	.000	.000	.758	.000	.000
Q34	.000	.000	.000	.709	.000	.000
Q22	.000	.000	.726	.000	.000	.000
Q23	.000	.000	.669	.000	.000	.000
Q27	.000	.000	.707	.000	.000	.000
Q29	.000	.000	.724	.000	.000	.000
Q11	.768	.000	.000	.000	.000	.000
Q12	.825	.000	.000	.000	.000	.000
Q13	.802	.000	.000	.000	.000	.000
Q2	.000	.697	.000	.000	.000	.000
Q6	.000	.777	.000	.000	.000	.000
Q7	.000	.794	.000	.000	.000	.000

Standardised Direct Effects (Group number 1 - Default model)

	OPR	TPR	CPR	PMS	PS	NGO
PMS	.000	.000	.000	.000	.000	.000
PS	.190	.142	.082	.000	.000	.000
NGO	.245	.361	.354	.333	.000	.000
Q42	.149	.220	.215	.346	.460	.000
Q41	.206	.303	.297	.477	.635	.000
Q35	.147	.293	.318	.341	.000	.000
Q18	.000	.000	.000	.000	.000	.000
Q40	.145	.214	.210	.336	.448	.000
Q31	.364	.271	.157	.000	.000	.000
Q8	.000	.000	.000	.000	.000	.000
Q39	.204	.300	.294	.472	.629	.000
Q37	.117	.232	.252	.270	.000	.000
Q38	.143	.284	.308	.331	.000	.000
Q32	.344	.257	.149	.000	.000	.000
Q33	.327	.244	.141	.000	.000	.000
Q34	.306	.228	.132	.000	.000	.000
Q22	.000	.000	.000	.000	.000	.000
Q23	.000	.000	.000	.000	.000	.000
Q27	.000	.000	.000	.000	.000	.000
Q29	.000	.000	.000	.000	.000	.000
Q11	.000	.000	.000	.000	.000	.000
Q12	.000	.000	.000	.000	.000	.000
Q13	.000	.000	.000	.000	.000	.000
Q2	.000	.000	.000	.000	.000	.000
Q6	.000	.000	.000	.000	.000	.000
Q7	.000	.000	.000	.000	.000	.000

Standardised Indirect Effects (Group number 1 - Default model)

	OPR	TPR	CPR	PMS	PS	NGO
PMS	.001	.001	.004			
PS		.001	.001	.002		
NGO				.043	.001	
Q42						.001
Q41						.001
Q35					.001	
Q18	.001					
Q40						.001
Q31				.001		
Q8		.001				
Q39						.001
Q37					.001	
Q38					.001	
Q32				.001		
Q33				.001		
Q34				.001		
Q22			.001			
Q23			.001			
Q27			.001			
Q29			.001			
Q11	.001					
Q12	.001					
Q13	.001					
Q2		.001				
Q6		.001				
Q7		.002		•••		

Standardised Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	OPR	TPR	CPR	PMS	PS	NGO
PMS						
PS	.001	.001	.003			
NGO	.001	.001	.001	.001		
Q42	.001	.001	.001	.001	.001	
Q41	.001	.001	.001	.001	.001	
Q35	.001	.001	.001	.002		
Q18						
Q40	.001	.001	.001	.001	.001	
Q31	.001	.001	.004			
Q8						
Q39	.001	.001	.001	.001	.001	
Q37	.001	.001	.001	.002		
Q38	.001	.001	.001	.002		
Q32	.001	.001	.004			
Q33	.001	.001	.004			
Q34	.001	.001	.004			
Q22						
Q23						
Q27						
Q29						
Q11						
Q12						
Q13						
Q2						
Q6						
Q7				•••		

Standardised Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)