ADDIS ABABA UNIVERSITY COLLEGE OF BUSINESS AND ECONOMICS

SCHOOL OF COMMERCE

ASSESSMENT OF PROJECT MANAGEMENT MATURITY LEVEL, THE CASE OF INTERNATIONAL ORTHODOX CHRISTIAN CHARITIES

In Partial Fulfillment of the Requirements for the Degree of

Master of Arts in Project Management

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Declaration

I, the undersigned, declare that this thesis on the topic entitled "Assessment of the Level of Project Management Maturity, the case of International Orthodox Christian Charities" in partial fulfillment of the requirement for the degree of Masters of art in project manage is my original work, prepared under the guidance of Wubishet Bekalu, PhD. All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

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Acronyms

ACT	Action by Churches Together
APM	Association of Project Managers
CMMI	Capability Maturity Model Integration
EOC-DICAC	Ethiopian Orthodox Church_ Development Inter Church Aid Commission
ECSA	Ethiopian Charities and Societies Agency.
IOCC	International Orthodox Christian Charities
IPMA	International Project Management Association
NGO	Non Governmental Organization
OPM3	Organizational Project Management Maturity Model
PM	Project Management
PM2	Project Management Maturity
PMBOK	Project Management Body of Knowledge
PMDPro	Project Management for Development Professionals
PMI	Project Management Institute
PRINCE 2	PRojects IN Controlled Environments
SEI	Software Engineering Institute
SPSS	Statistical Package for Social Science
WBS	Work Breakdown Structure

Abstract

Many organizations use project management maturity models to improve their project performance. This study used Project Management Institute's PM solution's Maturity model to assess the maturity level of IOCC. PM solution's standard questionnaire were used to collect data from IOCC project managers, monitoring & evaluation specialists, finance and admin staff and staffs from the leadership. Key informant interview were conducted with experts from the leadership. Data are analyzed using SPSS to compute average project management maturity level of IOCC. Results are discussed qualitatively by comparing the results against the model's standard and theoretical reviews. Based on the assessment, IOCC PM Maturity is measured at 1.65 which is identified as level 2, where structured and standard processes are used but not applied to all projects. Among the knowledge areas, cost and time management have showed better maturity level 2.26 and 1.96 respectively. On the other hand, human resource and risk management and stakeholder management showed the least value measured as 1.15, 1.39 and 1.39 respectively. Such low maturity score depicts the organization performs the knowledge areas without following structured approach or guideline, relying solely on the knowledge and experience of the project team. As a result, the paper recommended there is a need to allocate resource for capacity building, standardize project management at institutional level. There is also a need to use computerized system for centralizing information and create experience sharing mechanisms among staff to transform individual understanding to enterprise wide knowledge and reach to the next level 3 and also help for a continuous learning to reach to level 4 and 5.

Keywords: *Project management Maturity, Maturity level, Project Management Knowledge areas and IOCC Ethiopia.*

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

There are thousands of Non-Governmental Organizations (NGOs) actively working in Ethiopia both international and local. They are registered at Charities and Societies Organization/ CSO, in one of the three categories: Ethiopian Charities or Societies, Ethiopian Resident Charities or Societies, or Foreign Charities. As depicted under the CSO blog there are 3,260 registered NGOs in Ethiopia currently (CSO, 2017). Their presence to contribute to the needs of the society is increasingly dependent on project based funding. Lack of private financial resources and government support highly contributed to this dependency on project-based funding. Despite that the emphasis given to project management is highly questionable.

Strategic management determines the long-run performance of an organization. Project management is a strategic competency that enables entities to link project success to business goals (Project Management Institute, 2014). Business organizations are embracing project management practices as a core competence and achieving organization's strategic goal. Project management follows a specific sequence of phases which define the work to be done, the person to do the job, the milestones, and the person to approve and review the milestones as well as the control and monitoring of the milestones (Project Management Institute, 2013).

Budget life cycles and finance management are usually less predictable because NGOs depend on donations and grants. Restricted funds, constraints, and legal regulations pose another layer of complexity in non-profit project management making risk management highly crucial. NGOs have to adopt different project life cycles to

accommodate for special needs related to funding which might be dependent on grant or donations.

The heterogeneous nature, surrounded by organization with diverse scope, requirement, and interest make NGOs to face lots of challenges. This coupled with absence of proper PM methodology; usually cause poor project planning, lack of accountability and stakeholder management, lack of risk management strategies, unmotivated project team and eventually leading to project failure.

The most widely used PM methodologies are the Project Management Body of Knowledge (PMBOK), IPMA Competence Baseline (ICB), ISO 9000 and PRINCE2. Furthermore, due to the special needs of NGOs, Logical Framework (Log-frame), PMDPro (developed by PM4NGO) and PM4DEV guidelines have been created. In 2003, the Log-frame, a requirement from many international fund agencies was one of the most used among nongovernmental organization. Later on, in 2007, the initiative of PM4NGOs was born. After a few years, PM4DEV was introduced to society. (Golini et al., 2014).

Nevertheless, as depicted under the PM4NGOs (2013) Project management (PM) is rarely identified as a strategic priority for these organizations. In general there is no evidence showing wide application of project management tools and methodologies.

Project management is being regarded as mandatory for the survival and success of project based organizations. Project management is mandatory not only for project based organizations but also for any firm in order to survive in rapidly changing technological and market environment. Nowadays, most firms are realizing that project

management and productivity are related and businesses should be managed as a series of projects (Kerzner, 2009).

Thus to stay competitive and efficiently and effectively manage projects through lessons learnt, regular assessment of project management maturity level is of high important. It will give how the organization is managing projects and indicate areas that need improvement and also support management decision on prioritizing area of focus. Thus maturity in project management is highly important. As indicated in his paper Maru (2017) stated "Mature organizations not only create clear communication channels but they also promote a culture where new knowledge can be created and shared."

This study thus seeks to analysis a case of one international NGO project management practice by assessing its project management maturity level around project management knowledge areas listed under PMBOK 5th edition. There are 10 knowledge areas listed under PMBOK. On the other hand, about 7 are given an emphasis under PMDPro, a guide for project managers under the NGO environment. These knowledge areas include scope management, time management, cost management, procurement management, human resource, and risk and stakeholder management. There is also one additional knowledge area called justification management that is included under PMDPro guide, making the total knowledge area to be 8 which the study focuses during its study.

Finally the study will pinpoint the gap and recommend areas where improvement is required. Organizations start the assessment with a baseline assessment of their current situation. The baseline assessment enables an organization to identify areas that need immediate actions and areas that will have an impact and provide greatest return on

investment (Crawford 2002). This helps the organization prioritize its improvement actions and plan for continuous improvement.

The majority of maturity models have adapted five levels of maturity stage beginning from lower level of maturity, initial (Level 1), to the highest level of maturity (level-5). A number of maturity models are available. Capability Maturity Model (CMM) project Management Process Maturity Model-PM2, PM Solution' Maturity Model, Kerzner's PM Maturity Model-PMMM and Organizational Project Management Maturity Model-OPM3 are pertinent maturity models which will be reviewed under the literature section.

Of all project maturity models, PM Solution will be used for this study as it encompass project management knowledge areas. PM solution has typical maturity level ranging from level 1 which is considered to be initial stage up to level five which to optimized level. The description and characteristics of each level will be discussed in subsequent sessions.

Level 1: Initial Process

'Management has little awareness on the need of project management. There is no established practice and standard. Documentation and supportive management processes are loose and not well established within the organization. Organizations are not able to repeat past successes consistently mostly due to the fact that process description and lack of documentation. At level 1 maturity, organization can deliver projects successfully but these success factors are linked to key individual contributions rather than enterprise-wide knowledge and capability'. [Pennypaker, 2001, p.25] as cited under

Level 2: Structured, Process and Standard

'At this level, basic project management processes and standards are established and mainly used on large and visible projects. The standard is repeatable and is applied to basic project management process. The standard is not considered at organization level and mostly focus on projects. There exists proper documentation to the basic processes. Management supports and encourages the implementation of project management processes though it lacks consistency and involvement to comply for all projects. Functional management get involved in key projects and executed in a systematic approach. Some basic tools and techniques are applied for example in tracking project cost, estimates; schedules are based on expert knowledge and generic tools'. [Pennypaker, 2001, p.25]

Level 3: Organizational Standard and Institutionalized Process

'Project management processes are well established and exist at organizational level. At this level, stakeholders are actively involved and considered as integral members of the project team. All processes and standards are institutionalized with formal documentation. Management is involved in key project issues and decisions. Each project is evaluated and managed in light of other projects'; (Pennypaker, 2001, p.25]).

Level 4– Managed Process:

'Project management processes and standards are well established, matured and quantitatively managed. It is also integrated with other corporate processes and systems. All projects and changes are evaluated based on different efficiency and effectiveness metrics from cost estimates, baselines estimates and earned value. Projects are managed from past experience and future expectations. Project information is available to optimize the business decisions and integrated with the other corporate systems. At this level, there is holistic view and considering projects as organization

entity' (Pennypaker, 2001, p.25) Project portfolio management is integrated into the organizational business strategy.

Level 5 – Optimizing Process:

'Processes are well institutionalized approach to continuously improve the project management processes and project performance. There is continuous examination of lessons learned and this is used for improvement of project management processes, standards and documentation. The intention of management and the organization at this level is not only for managing projects effectively but also focused on continuous improvement.' (Pennypaker, 2001, p.25)

1.2 Organizational Profile/Background of the organization

International Orthodox Christian Charities, (IOCC), based in Baltimore, Maryland, is the official international humanitarian agency of the Assembly of Canonical Orthodox Bishops of the United States of America. Through its US headquarters and project offices around the world (Banja Luka, Bosnia-Herzegovina; Addis Ababa, Ethiopia; Tbilisi, Georgia; Jerusalem/West Bank/Gaza; Amman, Jordan; Beirut, Lebanon; Minneapolis, Minnesota; Belgrade, Serbia) IOCC assists people living in some of the most volatile places in the world, including Gaza, Kosovo, and in Syria.

IOCC's Country Office for Ethiopia was established in 2004 to improve the health and well-being of vulnerable families and communities by improving access to food, water, education and job opportunities, and responding to natural disasters. IOCC Ethiopia is a project based organization with revenue being dependent from doing projects.

Since opening its office in Addis Ababa, IOCC has worked in close collaboration with the Ethiopian Orthodox Church Development and Inter Church Aid Commission

(EOC-DICAC). Among its major donors are USAID, USDA, ACT Alliance, TOMS Shoe and UMCOR and other private donors are of the lists. IOCC is registered with the Ethiopian Charities and Societies Agency.

Since 2004, IOCC-Ethiopia had been implementing a comprehensive HIV/AIDS awareness and training program in partnership with the Ethiopian Orthodox Church Development and Inter Church Aid Commission (EOC-DICAC) with funding from USAID. The USAID-funded program has reached over 7 million Ethiopians in thirty dioceses. IOCC Ethiopia also participates with the Action by Churches Together (ACT) Ethiopia Forum, an alliance of churches and related agencies working to save lives and support communities in emergencies both for refugees and Ethiopian residents.

The Ethiopia office is represented by the country director based in Addis Ababa. There is a senior program manager, finance and admin head, emergency program manager and Monitoring and Evaluation Specialist who are directly accountable to the country representative. The senior program manager oversees works of all project managers of development projects except the emergency project coordinator. Emergency project coordinator is directly is accountable to the country director to ease decision process as emergency project requires urgent decision. IOCC mission is offering emergency relief and development programs to those in need worldwide, without discrimination, and strengthens the capacity of the Orthodox Church to so respond.

The preliminary investigation done on the organization under the study shows the organization implements a sequence of activities that are unique, one time that must be completed with specified time, budget and specification. Thus, it is undertaking project based works. Besides the entire funding source is project based.

International Orthodox Christian Charities
Ethiopia Program Organizational Chart
October 1, 2017

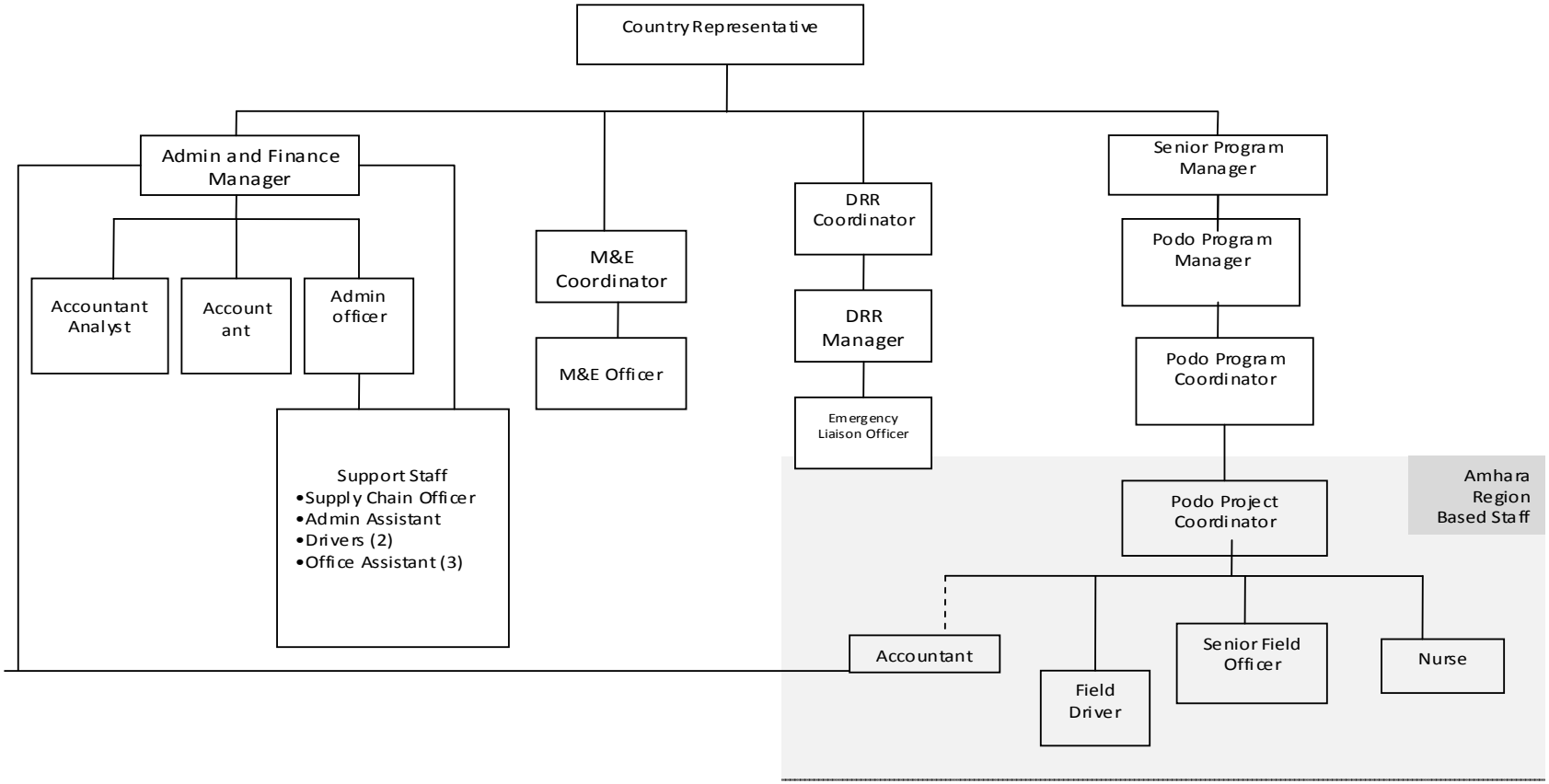

Figure 1- Organizational Structure of the Company

1.3 Statement of the problem

A project is a sequence of unique, complex, and connected activities having one goal or purpose that must be completed by a specific time, within budget, and according to specification. (Wysocki, 2009)

Project management disciplines have been developed to ensure success of a project and project efficiency and effectiveness. Conducting project based activities without its principles may lead to loss project objective. The meaning of project management can differ among different people. Quite often, people misunderstand the concept because they have ongoing projects within their company and feel that they are using project management to control these activities (Kerzner, 2009). According to Kerzner, undertaking project activities does not necessarily indicate the presence of project-management practice in the organization.

As has been evidenced by different writers including Diaz (2010) project management gives you repeatable processes, guidelines and techniques to help in managing the people and the work involved in your projects. It can increase chances of success and help to deliver projects consistently, efficiently, on time and budget. Challenges in project management have an impact on the overall quality and success of projects.

Thus it can be concluded that for NGOs, which normally face financial and human resources constraints, a PM methodology could help to meet the challenges by improving communication among project team members, developing work performance, better controlling of resources and most importantly – by simplifying PM processes to reach project results in the most efficient way.

As per the review of unpublished office document and preliminary interview made with the few project managers, some problems were identified on the area of project design, scoping, monitoring and evaluation leading to cost, schedule overrun and scope creep. In addition, the projects being implemented by the project office generally lack a centralized documentation system/data base system, which could have been used as institutional memory banks. These together with fragmented management system prohibit stakeholders from easily locating and referring project specific standards whenever needed. The above problems can be directly related to lack of practicing project management effectively.

Thus, this study is aimed to assess the project management practice by assessing the level of project management maturity of the organization and the level of maturity of each project management knowledge area emphasized under PMDPro guide.

Knowledge management is of high importance under management discipline in general and project management in particular. Thus by measuring the maturity under distinct knowledge area, one could identify the existing gap and strength and try to improve the gap and maintain the strength. Another concern of the researcher is many of the studies on maturity assessment are dedicated to construction, information technology and textile industries; and there is a gap of knowledge in others such as the NGO sector. Besides no study has been conducted so far on measuring the level of maturity in general which could have shown the existing gap and enable to improve some of the current organization concerns such as fund security.

1.4 Research Question

- What is the level of project management maturity of IOCC with respect to each knowledge areas?
- Which knowledge areas of IOCC are doing relatively better?
- Which knowledge areas of IOCC are doing relatively weak?

1.5 Research Objective

General Objective

The general objective of the study is to assess the quality of project management practice and examine its maturity level for the 8 project management knowledge areas and recommend solutions on major gaps identified.

Specific Objectives

- To assess the level of project management maturity of IOCC across 8 knowledge areas?
- To identify knowledge areas where project management maturity show strength
- To identify knowledge areas where project management maturity level shows weakness

1.6 Scope of the study

This study focuses on assessing the maturity level of one NGO due to time and financial constraint. The focus will solely be on knowledge areas not on process management groups. In addition, due to time constraint, the information used in this study was collected solely from employees of IOCC Ethiopia office, but no one from donor, implementing partner, beneficiaries and staffs at headquarters were possible to be included.

1.7 Significance of the study

As stated earlier the organization under the study implements projects having high socio-economic value that their successful implementation concerns many, including the implementer, the sponsor and the society at large. Thus looking the project management practice will have a considerable effect by giving a clear picture of the current status and forecast the future. It will also enable to identify the gap and provide a roadmap for organizational change, motivate the project team to grow and develop current skills and help decision makers to prioritize priorities. As depicted under PMBOK project performance increases with the better understanding of the project management knowledge areas and project management process groups which by itself is improved with better higher maturity level. Project management being a new discipline in Ethiopia in particular, assessing the level of project management maturity under the NGO sector is worth considering as many of related studies are only limited to industrial sectors. The study also enable the researcher to consolidate and expand its project management knowledge while doing an in depth literature review and looking the practical experience of the organization in question.

1.8 Limitation of the study

One of the limitations of this study is the model's heavy **reliance on knowledge areas,** at the expense of project management process groups. In addition if the entire organization culture were further analyzed using **other maturity models such as OPM3,** the research may provide additional information. Furthermore, lack of empirical evidences on assessment of **maturity level conducted under the NGO sector** was another limitation. Project management is a recent area of discipline and respondents, as has been anticipated have lower level of understanding, necessitating the presence of the researcher during data collection for clarification purpose.

CHAPTER TWO

LITERATURE REVIEW

According to Crawford, 2007, project management maturity refers to the progressive development of an enterprise-wide project management approach, methodology, strategy and decision-making process. Before dealing with the maturity assessment it is important to understand the project management terminology definitions and concepts as described below. The theoretical and conceptual review includes definition of terms and concepts, while the empirical review assesses studies conducted under project maturity, while the third part will show the proposed conceptual frame work by linking the knowledge areas and maturity levels.

2.1 Theoretical and Conceptual Review

2.1.1 Project and Project Oriented Organization

PMBOK defined a Project as "a temporary endeavor undertaken to create a unique product, service or result" (PMI2013a, p.553). On the other hand PRINCE2 defined a project as "a management environment that is created for the purpose of delivering one or more business products according to specified business need"

A project is a sequence of unique, complex, and connected activities that have one goal or purpose and that must be completed by a specific time, within budget, and according to specification. (Wyscocky, 2014)

As depicted under PMBOK, (2004), project-based organizations are those whose revenue is dependent from performing projects or those who have adopted management by projects. In a project based organization, team members are often collocated and project managers have a great deal of independence and authority.

2.1.2 Project Management

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. PMBOK 5th edition. Project management deals mainly with coordinating resources and managing people and change. Generally "Managing a project includes: Identifying requirements, Establishing clear and achievable objectives, balancing the competing demands for quality, scope, time and cost; Adapting specifications, plans, and approach to the different concerns and expectations of the various stakeholders" (Project Management Institute (PMI, 2004).

Morris, 2014 also strengthened the definition by stating, the key factor in a successful PM is the combination of knowledge, skills, and abilities of practicing project managers that enables them to efficiently implement and execute projects in an increasingly complex project-based environment.

Project is considered as achievement of a specific objective while; project management is a process of planning, scheduling and controlling of a project to meet the objectives. This doesn't include the critical human relations and project evaluation performed after project completion. Project brings about change and the management of change in an efficient way is realized as project management. (APM, 2006, p.2).

Project management system is the set of tools, techniques, methodologies, resources, and procedures used to manage a project. It can be formal or informal and aids a project manager in effectively guiding a project to completion. The system is a set of processes and the related control functions that are consolidated and combined into a functioning, unified whole. (PMBOK, 2004).

2.1.3 Program Management

Program management is managing projects for larger benefit. According to PMBOK (2013), Program Management is defined as: the application of knowledge, skills, tools, and techniques to a program in order to meet the program requirements and to obtain and control benefits that is not available by managing projects individually." On the other hand APM Body of Knowledge (2012) defines Program Management as: a coordinated management of projects and change management activities to achieve beneficial change."

2.1.4 Portfolio Management

Portfolio management is management of projects and program being aligned to the strategic objective of the organization at large. According to PMBOK (2013), Portfolio Management is defined as: "the centralized management of one or more portfolios (projects, programs and sub-portfolios managed as group) to achieve strategic objectives." APM Body of Knowledge (2012) defines Portfolio Management as: "selection, prioritization and control of an organization's projects and programs in line with its strategic objectives and capacity to deliver."

2.1.5 Project Management in an NGO sector

The management of projects in an NGO sector has differences from the management of other projects in other organizations. The differences mainly are originated from the source of funding, a changing, competitive, demanding and highly vulnerable environment that NGOs have been facing.

As Nwaiwu (2013) indicates, the most significant challenges under the NGO sector are inadequate finances, lack of expertise (especially in risk and stakeholder management, stringent and multi-donor reporting requirements, and paucity of baseline data. In the earlier research, Diaz (2010) explains that insufficient infrastructure, limited resources, and

a changing environment can also put a strain on NGOs project managers who need to deliver the project outcomes. A result of an unstable number of employees and uncertain financial situation is usually a poor, inconsistent project management discipline.

Despite different project management methodologies are developed including those that are tailored to NGOs such as "PMDPro guide" their wider application is highly under question. Therefore for NGOs, which do not have enough financial and human resources, a project management(PM) methodology could help to meet the challenges by improving communication among project team members, developing work performance, controlling of resources better and simplifying PM processes to reach project results in the most efficient way.

2.1.6 Project Management Knowledge areas

The PM body of knowledge is a standard in managing projects. It describes the overall knowledge under the project management discipline. It includes proven tools and techniques used to manage project management processes towards successful project outcome (PMBOK, 2008 p.13). The Body of knowledge is evolving from the PMI's PMBOK guide which identifies and recognizes good practices. The body of knowledge identifies key knowledge areas of project management skills and activities that every practitioners need to know and master in order to become fully trained in the discipline. This knowledge area encompasses a broader overview of the project management processes. There are 10 knowledge areas according to PMBOK guide, of which 8 of them that are given a great emphasis under the PMDPro guide that are related to the NGO set up are considered under this study.

I. Project Scope Management

It is the way of how to define the project scope. The project scope management includes four critical activities; Scope Definition, Work Break-down Structure (WBS), Project Delivery Plan and Scope Change Control. A good scope management ensures that the scope is well defined and communicated clearly with all stakeholders.

II. Project Justification Management

Project to be undertaken need to give potential value to the stakeholders involved. Thus convincing stakeholders on its benefit towards contributing to the business goals is important. Project justification management thus includes identifying the justification of projects and communicating it to the larger audience. This includes steps such as developing problem, objective and alternative trees.

Problem Tree - identifying the core problem to be addressed, the effects of the core problem, and the underlying issues and root causes that contribute to the current state.

Objective Tree - identifying the potential interventions that could take place to "fix" what is broken in the problem tree.

Alternative Tree - analyzing the needs that were identified under the problem tree and determine which elements of the objectives tree will be included in the project intervention (project scope) and which will not.

III. Project Time Management

The key activities under time management are defining the activity, estimating the resource requirements, estimating the duration of project work packages, project scheduling development and time change control.

Activity Definition – identifying the specific schedule activities that need to be performed to produce the various project deliverables.

Activity Sequencing – identifying and documenting dependencies among schedule activities.

Activity Resource Estimating – estimating the type and quantities of resources required to perform each schedule activity.

Activity Duration Estimating – estimating the number of work periods that will be needed to complete individual schedule activities.

Schedule Development – analyzing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule.

Schedule Control – controlling changes to the project schedule.

IV. Project Cost Management

Project cost management includes processes to plan, cost estimation of work packages, project cost plan (budgeting) and cost change control.

Cost Estimating – developing an approximation of the costs of the resources needed to complete project activities.

Cost Budgeting – aggregating the estimated costs of individual activities or work packages to establish a cost baseline.

Cost Control – influencing the factors that create cost variances and controlling changes to the project budget.

V. Project Human Resource Management/HRM

It is the process required to make the most effective use of the people competence for a project. According to PMBOK, 2004 HRM includes:

Human Resource Planning- identifying and documenting project roles, responsibilities, and reporting relationships, as well as creating the staffing management plan;

Acquire Project Team- obtaining the human resources needed to complete the project.

Develop Project Team- Improving the competencies and interaction of team members to enhance performance.

Manage Project Team- Tracking team member performance, providing feedback, resolving issues, and coordinating changes to enhance project performance

VI. Project Risk Management

Project risk management is the process concerned with identifying and responding to project risk. Risk management maintains a balance of focus on threats and opportunities and with proper management actions the likelihood of identified risks can be reduced or eliminated. The project risk management includes risk identification, risk analysis (qualitatively and quantitatively, risk response and Monitoring and control. Contingency plans and assigning risk owner are important under risk management.

VII. Project Procurement Management

Project procurement management also known as Contract Management. It involves processes required to acquire goods and services or results needed from outside the project team to perform the work. It is also concerned with procurement planning, soliciting of bids for products and services, selecting potential vendors, contract administration and contract close-out.

VIII. Project Stakeholder Management

Stakeholder management involves managerial process used to identify stakeholders, communicate and engage them, manage expectations and focus on satisfaction. Project stakeholder management includes the processes required to identify the people, groups or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management

strategies for effectively engaging stakeholders in project decisions and execution. It thus involves managerial process used to identify stakeholders, communicate and engage them, manage expectations and focus on satisfaction.

2.1.7 Project Management Maturity

Maturity is a comparative level of advancement an organization has achieved with regard to any given process or set of activities (PMI, 2008). A matured process is well understood through-out a mature organization; usually through documentation and training, and the process is continually being monitored and improved by its users. The capability of a mature process is known. Chrissis, Konrad, &Shrum, 2003), as has been cited by Tewoddros, (2017) a mature organization is capable of managing initiatives based on standardized and defined management processes.

Project Maturity is the degree to which an organization practices project management measured by the ability of an organization to successfully complete individual projects. (PMI, 2003).

Organizational Maturity is "the extent to which an organization has explicitly and consistently deployed processes that are documented, managed, measured, controlled, and continually improved." [(CMMI Product Team, 2002, p. 582).cited by (Maru Endale, 2017)]

Project Management Maturity "The degree to which an organization practices project management measured by the ability of an organization to successfully initiate, plan, execute, monitor and control individual projects." (Project Management Institute (PMI), 2003). Project management maturity signifies the radical approach to the development, methodology, tactics and making of decisions (Crowford, 2007). According to (Kerzner

2013) Project management maturity represents implementation of standardized processes and methodologies that can increase the probability of repeated project successes.

It is important to know an organization's level of maturity in project management so that to deal with and handle potential factors hindering the effective management of a project.

Maturity Models: are process models (measurement tools) that are used as a framework to guide improvement efforts (Jugdev & Thomas, 2002; Cleland & Ireland, 2002).

Project Management Maturity Model (PM3) describes how organizations mature as they improve their project management processes. Thus PM3 enables to prescribe how an organization can reach its desired level of project management maturity. According to Mullaly (2014), framework provided by maturity model enables organizations to access and improve its processes. Rad et al. (2006) argues that project maturity provides a path and framework which enables firms to achieve excellence in project management. Project management maturity models (PMMM) provides best practices and road map to improve project portfolio practices.

The use of maturity model helps organizations gain competitive edge by enabling them delivers predictable results and quality products [(Jugdev & Thomas, 2002)]. Successful use and the resulting benefit from the use of such models have been reported by many researchers in the field. For example, (Sarshar, et al., 2000) reported an improvement of productivity and return on investment (ROI).

Studies showed the appropriate level of maturity will vary for each organization based on specific goals, strategies, resource capabilities, and needs. A higher maturity level mean

only the organization has the capability to selectively choose and apply the proper PM processes, practices and tools (Kwak & Ibbs, 2002).

2.1.8 Review of Project Management Maturity Models

There are number of maturity models under the discipline of project management. Each maturity model is different in terms of their characteristics, factors and ways that affect level of maturity.CMM/CMM-I, PRINCE 2, OPM3 and Kerzner PMMM (KPM3) are some of the examples of maturity models that allow assessing organization's project management strengths and weaknesses.

As has been cited under a thesis written by Temesgen (2013) a number of maturity models have been developed and none of the model has achieved acceptance across all industries and types of projects [Nicholas & Steyn 2008, p.585]. Even though, several maturity models are available to assess project management practices, each organization need to identify a suitable model to assess the maturity of the project management practices.

Some models have been emerged from a particular sector such as software industry, though they can be applied generically to any industry sector. They converge on a conceptual framework, comprising well-established processes through which an organization develops itself in a systemic and planned way to achieve a desired future state. It is usually divided into five linear steps, ranging from initial steps to repeatable, refined, and managed and optimized ones. Maturity models are categorized under three domains:

Technical Delivery Process: focuses assesses project management practices against the standard criteria and five levels of maturity. One example of this domain is Capability Maturity Model Integration (CMMI) developed by the software engineering institute.

Project Management Process Models: focuses mainly on project management Body of knowledge from PMBOK®Guide of Project Management Institute (PMI) and the level of

maturity in each knowledge area is assessed by standardized criteria and relevant maturity levels and PM solutions maturity model one of the examples.

Total Organization Models: considers the entire organization instead of projects. Organizational project management maturity model (OPM3) is developed by linking the two models, CMMI and Project management knowledge areas.

Some of the commonly used maturity models including CMMI, OPM3 and P3M3, and will be discussed below.

I. Capability Maturity Model-CMM

Capability maturity model is the first maturity model to be developed. The model was developed by the Software Engineering Institute (SEI) at Carnegie Mellon University. The model was initially developed for use in improvement of software development processes. Later it was extended for use in other areas of systems, and software engineering and procurement. The model served as a basis for the development of other maturity models in different fields. The CMM model has five maturity levels beginning from the initial stage (level 1) to the most matured level of optimizing (Level-5). However, as the model is descriptive in nature, it does not tell an organization how to improve; rather it describes essential attributes that would be expected to characterize an organization at a particular maturity level (Paulk et al, 1993). It is descriptive showing essential features expected to characterize a particular maturity but doesn't give on how an organization can improve.

II. Project Management Process Maturity Model-PM2

The PM2 model is one of the pioneer PM maturity models developed. The model was developed by (Ibbs and Kwak 1997). Like the CMM model, the PM2 model has five levels of maturity with slight difference in its use of terminologies. The model divides PM processes and practices into eight PM knowledge areas and six phases of PM processes

adopting PMBOK s division. The model evaluates organization's PM maturity through the assessment of these knowledge areas and phases.

III. Kerzner's Project Management Maturity Model/KPM3

Similar to other maturity models KPM3 has also five levels of maturity; however, the naming and the attributes of the levels slightly differ from the others. Unlike the other models, this model emphasis benchmarking and make benchmarking the forth level on its maturity model.

IV. PM Solutions Maturity Model

This model is developed by Crawford (2002). It reflects with PMBOK's knowledge areas with that of CMM's five level maturity stage. The model examines an organization's PM implementation across the PM knowledge areas, which are in turn broken down in to components (Crawford, 2002). It has also five levels of maturity; however, the naming and the attributes of the levels slightly differ from the others. Unlike the other models, this model emphasis benchmarking and make benchmarking the forth level on its maturity model.

V. Organizational Project Management Maturity Model-OPM3

This model is developed by PMI through worldwide volunteer contribution of PM practitioners and consultants in diverse industries. The model defines knowledge, assessment, and improvement processes for organization project, program and portfolio management practices.

2.2 Review of Empirical Researches

The research mainly reviewed articles and thesis's conducted under the area of assessing level of project management maturity at different universities including AAU, but few are tailored to the NGO environment.

Authors such as Saiedia $ Kuzra (1995) demonstrated the capacity of maturity model to measure the correlation between an organization's project management level and project performance. They also indicated maturity models can also be used by external procuring organizations as an evaluation tool to assess the capability of providers (contractors) and their risk profile.

A paper by Maru (2017) on the assessment of project management Maturity level of Ethiopian Road Authority on 46 selected employees revealed, the strong positive relationship between project management maturity level and project success. It also showed project maturity level being determined by assessing activities of each project management knowledge areas. Also as has been cited in his paper "a major study of project management maturity at a global level was conducted by Price Water House Coopers (2004) in which two hundred responses were gathered from a balanced group of companies from thirty different countries across the globe. Some of the relevant key findings for the study were as follows: That there was a positive correlation between project maturity and project performance. A higher project management level would most likely deliver superior performance in terms of overall project delivery and business benefits; that the current level of maturity is 2.5 indicating that the current state of project management in organizations is at the level of informal processes; that many of the project failures are due to an imbalanced organization; Organizational structure has a big influence in overall project performance. Organization structure influences the performance and outcome of projects."

A study on assessment of project management maturity level in the Malaysia's IT industry by Wong et al (2016) showed assessment of project management maturity level is a key ingredient to project performance.

An online questioner survey made on 46 selected IT companies using Kerzner's Project Management Maturity Model revealed that the culture of an organization play an important role for successful implementation of project management as organizations matured and excellent in project management create an environment in which there exists a continuous stream of successfully managed projects.

Kerzner (2001) also indicated as the foundation for achieving excellence in project management can best be described by the project management maturity model (PMMM), which is comprised of five levels. In addition PM solution (2014), showed maturity models have benefits which allow looking into the organization's strength and weakness, Identify the links between needs and real education requirements, set realistic targets for improvement, provide a roadmap for strategic improvement.

Many are benefiting from using the project maturity model to measure the level where the organization is placed at managing projects and take measures to improve efficiency. Seweryn Spalek, 2014 in an article entitled "Assessing project management maturity in the area of knowledge management" conducted a study on maturity level of 447 selected companies from manufacturing, construction and IT industries have confirmed the model to be an initial step for the next activity to be followed in taking measures to improve project management efficiency.

On the contrary writers such as Abadir (2011) on a thesis entitled "Project management Maturity in the construction industry of developing country, the case of Ethiopian contractors" made a descriptive study by reviewing existing literatures and interviewing 40 grade-1 contractors come up with the following two major deficiencies on the existing project maturity models:

1st.The tendency of clustering PM "Practice Maturity" with PM "Process maturity" by the majority of PM maturity models that were developed based on the concept of CMM's staged maturity representation.

2nd. Lack of consideration or paying little attention to "Practice maturity" dimension by models that were developed on a concept similar to that of CMMI's continuous maturity representation. Thus considering these drawbacks the paper proposed a new maturity model.

Pasian (2011) on a paper entitled "Project management maturity: a critical analysis of existing and emergent contributing factors; raised a point of concern on the applicability of the existing model in assessing project management capabilities for poorly defined projects. He showed as existing models rather insist on the demonstration of definable, repeatable and predictable processes to determine the maturity of their project management function, while there are projects that are undefined which require flexible process and practice that can accommodate factors other than project management practices. The paper also contributes to highlight areas such as organizational specific factors, non-process factors affecting project management maturity, which needs considerations.

A study conducted by Grober,P.J and Steyn,H (2006) asking if a model really fits to all project kinds on a paper entitled "Project management maturity models: Does one size fit all?" come up with an result of "No" response. Based on literature review the research revealed, despite nearly 30 project management maturity models have been developed so far due to difference in projects they require different processes and characteristics such as outsourced project may require a better procurement maturity level than those executed in-house.

A comprehensive model has been developed based on the existing PM models Hoonkwak (2014). For instance Young Hoonkwak, Ph.1 and C. Williams Ibbs, Ph.2 2014, in a paper entitled "Project Management Process maturity model" have developed a PM^2 model that breaks PM processes and practices into nine pm knowledge areas and five PM processes to allow an organization determine the strengthen and weakness of current PM practice and focus on the weakness of PM practice to achieve higher PM maturity.

In search of process improvement to construction industry Salford University in UK, Sarshar et al (1999) has designed a research project called SPICE (Standardized Process Improvement for Construction Enterprises) to investigate if Capability Maturity Model CMM) is applicable in the construction industry. The research used three approaches questionnaire, case study and expert opinion workshop and come up with the result that except the need for some formation change, the basic process improvement concept of capability Maturity model applies to the construction industry. The need for some formation change is proposed due to the concerns raised during the study paper such as the high expense in using CMM in construction industries and its focus to single organization as opposed to the complex supply chain arrangements in construction projects.

Yazici (2009) on a paper entitled "Does Project Maturity Matter for Organizational Success?" cited points of concern raised by Ibbs and Kwak, Jugdev and Thomas, and Mullaly on asking if there exist a correlation between project maturity level and project success. In answering this query Yazici's in his study made on an online survey and received 86 valid responses from project, programs managers and executives of the 75 IT companies in USA. The study questioned, if not to project success it asked if there is a positive relationship between maturity level and organizational performance. A questioner consisting of 46

project management maturity questions, and another 10 projects/organizational performance questions were used. The result showed a statistically significant relationship between maturity level and organizational performance with organizational performance being measured by internal and external indicators. The internal indicators include savings, sales growth and overall business performance while external indicators are market share and competitive position.

2.3 Conceptual Framework

Project management is becoming today's voice in many organizations in general and NGO's in particular whose livelihood is highly been dependent on projects. Project management disciplines thus have been developed to ensure success of a project and project efficiency and effectiveness. Many of the studies reviewed showed though, maturity models are not meant to provide a quick fix for projects in trouble they are guides to improve project management capability. Therefore considering "The Project Management Body of Knowledge" (PMBOK® Guide) being an excellent point of reference to measure project management capability, the researcher used a five-level maturity model adopted from Project Management Solutions which encompass 10 project management bodies of knowledge areas listed under PMBOK. Considering the problems encountered during piloting the questionnaire though only 8 of the knowledge areas that are tailored to the NGO sector emphasized under PMDPro were considered for the study. The following thus is the conceptual framework proposed seen in figure 2 below.

Figure 2- Conceptual Framework

The following key characteristics of the five level maturity models under the PM solution model were used as an indicator to evaluate each component of knowledge areas based on the qualitative data result obtained from conducted interviews.

PM Solution Project Management Maturity Levels

Level 1: Initial Process

"There is recognition on project management processes but there are not established practices and standards, and individual project managers are not held to specific accountability by any process standards. Documentation is loose and ad hoc and metrics are informally collected on an ad hoc basis.

Management understands the definition of a project, that there are accepted processes and is aware of the need for project management" (Pennypacker, 2001).

Key characteristics

- Project are handled differently (i.e. informal approach),
- Projects are highly dependent on the project manager,
- Little management support for project management,
- No formal way to gather lessons learned and used to other projects,
- Project outcomes are unpredictable,

Level 2: Structured Process and Standards

"Many project management processes exist in the organization, but they are not considered organizational standards. Documentation exists on these basic processes and management supports the implementation of project management, but there is neither consistent understanding and involvement, nor organizational mandate to comply for all projects. Functional management is involved in the project management of larger, more visible projects and these are typically executed in a systematic fashion.

There are basic metrics to track project cost, schedule, and technical performance, although data may be collected or correlated manually. Information available for managing the project is often a mix between summary level data and detailed level data" (Pennypacker, 2001).

Key characteristics

- Managed support for project management,
- Repeatable processes are adopted to basic project management process,
- Use of common tools and techniques to key processes,
- Predictable project outcomes are predictable,
- Project management processes tools and techniques are applied,

Level 3: Organizational Standards and Institutionalized Process

"All project management processes are in place and established as organizational standards. Nearly all projects use this process with minimal exception – management has institutionalized the processes and standards with formal documentation existing on all process and standards. Project management processes are typically automated and management is regularly involved in input and decision making.Each project is evaluated and managed in light of other projects" (Pennypacker, 2001).

Key characteristics

- Management support for project management processes,
- Efficiently plan, organize, manage, integrate and control each projects,
- Project team members are well trained in project management,
- Consistent use of tools and techniques for project management process,
- Lessons learned and previous project experiences are well organized and utilized, for other projects,

Level 4: Managed Process

"Project is managed by considering the past performed and future expectation. Management uses efficiency and effectiveness metrics to make decisions and understands the impacts on other projects and to evaluate all projects, changes and issues from cost estimates, baseline estimates, and earned value.

Project information, project management processes and standards are integrated with other corporate systems and processes. Processes and standards are documented. Management clearly understands its role in project management process and execute it well, managing at right level. Management styles and project management requirements for different sizes/complexities of projects are clearly differentiated" (Pennypacker, 2001).

Key characteristics

- Active Management support for integration of business strategy and project execution,
- Efficiently plan, organize, manage, integrate and control several projects ,
- Database of previous project data is well maintained and utilized,

Level 5: Optimizing Process

"Processes are in place and actively used to improve project management activities. Lessons learned are regularly examined and used to improve project management processes, standards, and documentation.

Management and organization are not only focused on effectively managing projects but also on continuous improvement. The metrics collected during execution are used to understand performance of projects and for making organizational management decision for the future" (Pennypacker, 2001). "Project is managed by considering the past performed and future expectation. Management uses efficiency and effectiveness metrics to make decisions and understands the impacts on other projects and to evaluate all projects, changes and issues from cost estimates, baseline estimates, and earned value.

Project information, project management processes and standards are integrated with other corporate systems and processes. Processes and standards are documented. Management clearly understands its role in project management process and executes it well, managing at right level. Management styles and project management requirements for different sizes/complexities of projects are clearly differentiated" (Pennypacker, 2001).

Key characteristics

- Actively encouraged of project management improvement,
- Flexible, project-centered organization structure,
- Adopted career program for project managers,
- Project management training is key and crucial in staff development,
- Continuous improvement of PM processes while its major organizational characteristic is project driven organization, dynamic energetic with continuous improvement of PM processes and practices.

CHAPTER THREE
METHODOLOGY

3.1 Research Design

The research is a descriptive study that describes the current PM practice of IOCC Ethiopia which is one of the project offices of IOCC and be able to measure the maturity level based on. The Research problem and objective determines the type of design to use,

- A **mixed type** (**Quantitative & Qualitative)**
    - To better underand the problem
    - To validate the survey result
    - To offset the weakness inherited in using each approach separately

3.2 Research Approach

To better understand the problem, validate the survey result and to offset the weakness inherited when using each approach separately a mixed type of approach both quantitative and qualitative methods were used.

3.3 Sample Population and Sample Design

The population of the study is all employees of IOCC Ethiopia. Sampling is required when asking the whole population is costly and time taking otherwise if manageable using census is rather advisable. Therefore since the existing numbers of employees are very small, and to get comprehensive feelings of all project affiliated staffs, no sampling method were used, rather all that are eligible were considered as target respondents except staffs such as drivers, janitor and security guards whose relevance in managing the project is almost nil.

3.4 Data Source and Data collection Method

Both primary and secondary data source were used. The primary data is obtained using survey questionnaire and interview method. On the other hand, the secondary data were obtained using document and literature review method. The data sources for The organization runs 2 major health related development projects and another 2-3 emergency response projects on yearly basis.

As depicted under the organizational structure IOCC Ethiopia there are four departments including finance & admin units, emergency unit, Podoconiosis unit and Monitoring & Evaluation units with each consisting of 11, 3, 7 and 2 employees respectively. Of this number all eligible 20 respondents are targeted 7 from admin, 3 from emergency project, 8 from Podo project and 2 from M and E.Literature review were undertaken to identify the knowledge areas to be included and identify activities existing under each knowledge areas. A standard questionnaire maturity level frame was used to assess the maturity level of the organization in question asking project managers, monitoring and evaluation, procurement and finance staffs from the organization.

Key informant interview were conducted targeting few senior staffs at leadership level. The objective of conducting this interview is to triangulate and substantiate the information gathered from the questioner. Besides it helped the researcher to get full-fledged information about the project management practice of the organization, identify obstacles on project management practice and forward recommendation for better organizational performance through improving the maturity level steps further. A total of 3 key informant interviews were thus conducted.

3.3 Data Source and Data Collection Instruments

The aim of this thesis is to find out project management practices in selected organization by performing maturity assessment and provide improvement recommendations. To achieve the objective of the study both primary and secondary data source were used. For this purpose, a preliminary relevant literature study is done. Literature review provided a base for compiling the questionnaire to collect data in selected organization.

The primary data is obtained from eligible employees of IOCC Ethiopia. The data collection method used is survey questionnaire due to the lower cost and lesser time it take. As the use of one data collection method may not give in-depth information, to enrich the information and for triangulation purpose key informant interview were used targeting the executive leaders specifically the country director, the senior program manager, the admin and finance manager and admin head. Beside document review technique were used to see how well the responses are aligned with the actual documentation process and to better level and interpret the project management practice of the organization in question.

The questionnaire was piloted using 2 volunteer project experts who have an exposure in managing project management in another NGO. Problem of being unfamiliar with the language of project management were observed during the piloting. Besides the respondents also refrain from responding to the questions on some of the knowledge areas, as they said they are not aware of them, such as project integration management and project quality management etc. As a result the researcher readjusted the questionnaire to focus on selected 8 knowledge areas tailored and relevant for the NGO environment as proposed under the Project Management for Development Professionals (PMDPro guide) which is a guide developed by PM4NGO which is an organization devoted to training and disseminating project management knowledge among NGOs. Thus comments of these

experts helped the researcher in modifying the questionnaire used during the actual research.

A standard close-ended questioner assessing the maturity level of all project knowledge areas were used for the survey data. The survey questionnaire was given to target respondents. The researcher though was present with each participant while filling out the questioner to instantly clarify issues raised by respondents considering issues faced while piloting the questioner. On the other hand a semi-structured interview method was used for the key informant interview.

After reviewing data obtained from the questionnaire to reinforce the data and triangulation purpose the researcher also modified the key informant interview guide originally developed. The researcher thus was able to conduct interview with 3 top level executives though could not get their consent to take voice record of the interview. Notes were taken to capture main ideas from both interview sessions.

The questionnaire had two parts: the general information part and the project management part. All questions are close-ended questions. In the first part, questions like the current position of the respondents, years of stay in the organization, educational background and respondent's source of project management competency were the focus. The second part contained standard PM Solution model questions which is frame worked using the project management knowledge areas and the maturity level scaled from 1 to 5 on Likert type of scale. A total of 47 questions were sent to assess project management maturity level. At each knowledge area 3-7 questions were incorporated.

International orthodox Christian Charities is selected for two reasons one it is an NGO established both as a direct implementer and as an organization providing capacity

building to its sub-grantees. One of its recipient organizations is a faith based NGO named, Ethiopian Orthodox Church, Development of Interchurch Aid Commission/EOC-DICAC; with many of its work being volunteer based reaching the community at large through its existing office structure from regional dioceses to kebele level parishes, which requires an intensive project management skill. In both direct implementation and sub-grant management IOCC faced number of challenges including project delay, cost overrun and funding shortage; which the researcher believes could have been dealt with good project management practice.

Besides it is an organization the researcher had been working as a project coordinator, thus getting information would be easy considering the time and cost constraint.

3.4 Method of Data Analysis

The quantitative data gathered were analyzed using descriptive statistics. Mean and percentage were used to calculate the project management maturity level of the organization. Calculating the response rank of each knowledge area for all respondents will be done after calculating the mean of component activities beneath each knowledge area. The average mean responses among the knowledge areas of all respondents will finally indicate the maturity level of the organization. All the knowledge areas were given equal weight. The process maturity level of the organization will be assessed as per the recognized standard proposed under PMBOK guides. The data were analyzed by comparing the observed maturity level with standard maturity level and see the strength and weakness of across each knowledge area included under the study. The qualitative analysis on the other hand will be computed by comparing the study finding of the survey data and the theoretical and empirical finding of the interview responses which all indicates where the organization currently stands.

SPSS were used as tool of analysis and descriptive statistics will be applied to take the average leveling of the project management maturity level. Data were be analyzed both qualitatively and quantitatively.

3.5 Ethical Issues

The ethical issues needed to be considered in research were also considered in this study. It was assured to all the respondents who took part in the research that their privacy was kept intact at all times during and after the research. In addition, the researcher followed ethically and morally acceptable processes throughout the research process. The data were collected with the full permission of the participants and confidentially without disclosing the respondents' identity.

CHAPTER FOUR

RESULTS AND DISCUSSION

An empirical approach using a semi-structured questionnaire and key informant interview was used to measure project management maturity of the organization. The questionnaire was mainly designed to assess the level of project management capability using PM-Solution project management maturity model.

4.1 General Information

4.1.1 Current Position of Respondents

20 of the target respondents have been successfully involved in the response of the prepared questionnaires. As described under the pie chart below, from the total of 20 respondents, 50% are project managers and project coordinators, 35 % are finance and admin officers, 15% are monitoring and evaluation experts and head of the organization.

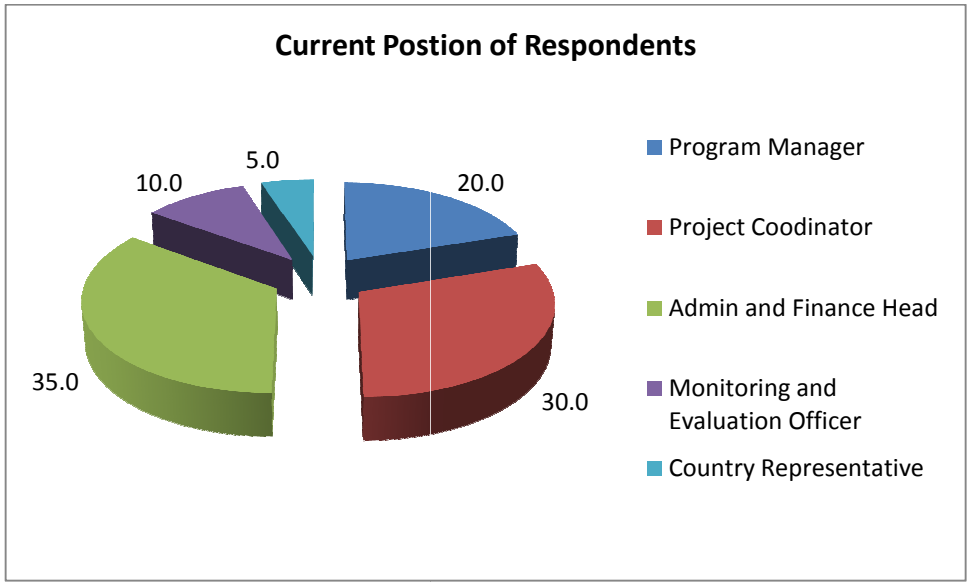

Figure 3- Current Position of Respondents

4.1.2 Profession of Respondents

As seen in table 1 below, respondents are from variety education both from natural science and social science field.

Table 1- Profession of Respondents

Profession	Percentage
Engineering	5
Agriculture Specialist	5
Public Health Specialist	15
Business Administration	5
Sociologist	5
Accountant	20
Economist	10
Management	20
Development Specialist	5
Health Officer	10
Total Percentage	100

1.3 Respondent's Education Level

As shown in the Pie Chart below 85% of the respondents are with education level of degree and above, and only 10% have diploma.

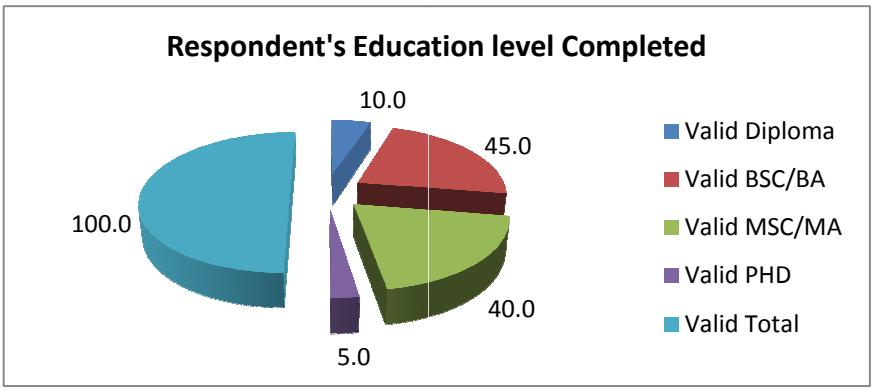

Figure 4- Respondents Completed Education Level

4.1.4 Respondents year of stay at the Organization

As shown in table 2 below, about 60% of the respondents have stayed at the organization for 5 and more years.

Table 2- Year of Stay

Years	Valid Percent
1-3	15.0
3-5	25.0
5-10	45.0
Above 10	15.0
Total	100.0

4.1.5 Project Management Skill

As seen in table 3 below 70% of respondents got their project management competency from experience and informal discussion, only 25% got from training and schooling. On the

other hand about 70% get no project management training access since they have joined IOCC despite they believe on the importance of project management skill towards efficiency and effectiveness.

Table 3- Project Management Competency

Source where the respondents get project management competency	Valid Percent	Belief on the importance of Project Management	Valid Percent	Project Management training Access Since Joining IOCC	Valid Percent
From Experience	35.0	Yes	70.0	Have access	30.0
School	5.0	No	30.0	No access	70.0
Trainings/Certifications	25.0	Total	100	Total	100
Informal Discussion	35.0				
Total	100.0				

4.2 Result and Discussion

4.2.1 Assessment Result of Project Management Maturity Level

The analysis will going to be presented using graph, tables and corresponding analysis will be carried out. The average mean of project management maturity level for each knowledge area, computed will be presented, and then a discussion on weakness and strengths will be followed.

The maturity assessment has been performed for the 8 Project management body of knowledge areas proposed under PMDPro. The knowledge areas covered under the research are Scope Management, Justification Management, Time Management, Human Resource, Cost Management, Procurement Management, Risk Management and Stakeholder Management.

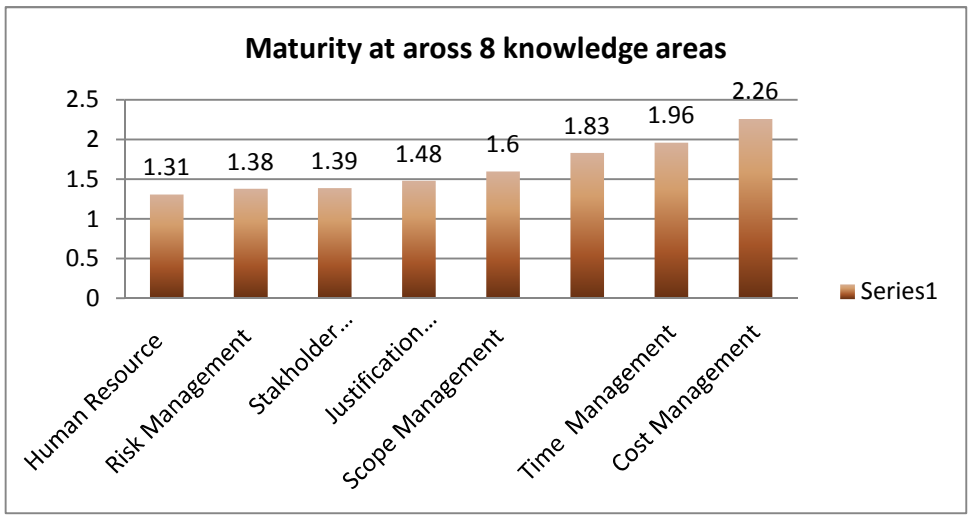

Figure 5- Project Maturity Level across knowledge Areas

The project management maturity level of the organization i.e. the average mean of all knowledge areas covered under the study is 1.65. This shows that the organization is at level 2(i.e. structured process and standard). Despite that from the result, the overall project management maturity of key project management knowledge areas indicates many PM processes exist in the organization but are not considered as organizational standards. There is documentation on basic processes and management supports the implementation of project management but there exists no organizational mandate to comply for all projects.

Knowledge areas such as Cost, Procurement, Time, Justification and Scope management have shown comparatively higher level of maturity compared to other PM knowledge areas they are valued at level 2. These knowledge areas are more or less performed in a better way using standard and structured processes. Whereas the knowledge areas of Human Resource, Risk and Stakeholder Management fall at the initial level (level 1) and are considered to be performed in an informal and adhoc manner.

4.2.2 Maturity across each Project Management Knowledge Area

4.2.2.1 Project Scope Management

Table 4- Scope Management Maturity

Knowledge Area	Number of Respondents						
Scope Management	Level 1	Level 2	Level 3	Level 4	Level 5	Mean	Number of Respondents
Plan scope management	10	9	1			1.55	20
Collect requirements	8	10	2			1.70	20
Define scope	6	11	3			1.85	20
Create WBS	12	7	1			1.45	20
Validate scope	11	8	20			1.50	20
Control scope	10	9	1			1.55	20
Average Maturity of Scope Management						**1.60**	

The PMBOK's project scope management process involves the processes: Identify Requirement, Define scope, Create WBS (Work Breakdown Structure), Verify Scope and Control scope. The major focus of the Project Scope Management is identification and documentation of client requirements. Following the requirements gathering and documentation, a WBS will be developed which defines the work to be done to deliver those requirements. This enables to project team to get informed on estimating time, cost, and resource requirements. According to the respondents scope management is mainly about defining what to do and ensuring that all the works planned are done.

The overall scope management practice maturity is found to be 1.60. The maturity survey indicates that many project management processes exist in the organization, but they are not considered organizational standards. For example to collect the requirement

stakeholder representation is one area of focus, but according to respondents such processes are usually done for large and visible projects. Management support exists but not consistent. The consistent use and understanding of work break down structure (WBS) is questionable, though the back and forth process in developing WBS benefits a lot including enabling the team to be on the same page and overcome scope creep.

Dr. Robert K.Wysocki on his book entitled "Effective Project Management, Seventh edition" demonstrated how proper planning is painful at the beginning but pays off with less pain in later time of a project. He also showed project with good planning finished 18–36 percent sooner than the poorly planned projects. A respondent from the key informant interview stated:

> *"Here things are done haphazardly where in most cases beneficiaries will not be available during the requirement gathering, at times project will distantly be developed at office level without considering the fact on the ground and the project will end up pleasing donors than the interests of the end users."KII01*

4.2.2.2 Project Justification Management

Table 5- Maturity of Justification Management

Knowledge Area	**Number of Respondents**						
Justification Management	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Mean**	**Number of Respondents**
Problem Tree Analysis	11	9				1.45	20
Objective Tree Analysis	10	10				1.50	20
Alternative Tree Analysis	11	8	1			1.50	20
Average Maturity of Justification Management						**1.48**	

According to PMDPro guide, strong project justification management helps demonstrate why a project makes solid sense to the organization, the donor and the beneficiary communities. Successful project managers need thus to have skills and competency to develop problem tree, objective tree and alternative tree. Justification management is done at the initial phase of a project cycle during identification and design phase.

Problem tree enable identifying both the core problem to be addressed, the effects of the core problem, and the underlying issues and root causes that contribute to the current state shown in a cause and effect relationship. The objective tree on the other hand identifies the potential interventions that could take place to "fix" what is broken in the problem tree it is a means to end relationship. The third step will be alternative tree which identify areas of intervention it answers questions on which elements of the objectives tree will be included in the project intervention and which elements will not be included in the scope of the project, this are all dependent on number of factors organizational capacity lessons learnt etc.

As seen in table 5 above the maturity level of justification management is 1.48 showing that the organization practice justification management in structured and standard manner at least for some projects but lacks repeatability. A key informant interview indicated:

> *"in recent past we have started exercising development of problem tree and objective tree involving relevant stakeholders, for our big project "Eradicating Podoconiosis", it really helps, I really wish if its repeatability is ensured across all other projects. "KII02*

4.2.2.3 Project Time Management

Table 6- Maturity of Time Management

Knowledge are Area	Number of Respondents						
Time Management	Level 1	Level 2	Level 3	Level 4	Level 5	Mean	# of Respondents
Plan schedule management	8	8	4			1.80	20
Activity definition	6	9	5			1.95	20
Activity sequencing	5	10	5			2.00	20
Estimate activity resource	6	8	6			2.00	20
Estimate activity duration	5	9	6			2.05	20
Schedule development	7	7	6			1.95	20
Schedule control	7	7	6			1.95	20
Average Maturity of Scope Management						**1.96**	

Time management mainly includes activity definition, sequencing, resource estimating, schedule development and control. Hence, the average maturity value of project time management of the organization is 1.96 which is leveled as level 2 (i.e. structured process and standard). Project time management maturity thus is characterized by the use of standardized and structured process on scheduling time at least for some visible projects, but lacks consistency to comply with all projects. Project activities are documented and project outcome is also predictable. However there lacks organizational standards and is not publicized for further improvement. There are basic metrics to track project schedule and technical performance though it is collected manually. And yet there is still a room for improvement in making structures be organizational standards. A senior staff from the key informant during the interview mentioned: -

> *"Standards are not followed regularly, and their repeatability is questionable but it is through individual effort on aggressively managing projects that deadlines are often met.KII02*

4.2.2.4 Project Human Resource Management

Table 7- Maturity of Human resource Management

Knowledge Area	Number of Respondents						
Human Resource Management	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Mean**	**Number of Respondents**
Human Resource Planning	16	3	1			1.25	20
Acquire Project Team	12	6	2			1.50	20
Develop Project Team	18	1	1			1.15	20
Manage Project Team	14	5	1			1.35	20
Average Maturity of Human resource Management						**1.31**	

The project human resource management involves processes: Develop Human Resource Plan, Acquire Project Team, Develop Project Team and Manage Project Team. Project human resource management is not all about acquiring the required staff it includes building the capacity of the project team and managing it. As seen in table 7 above the organization human resource management maturity is measured 1.31 and is leveled as level 1, which is the lowest of all the project management knowledge areas requiring critical leadership engagement.

Acquiring staff or staff recruitment activity receives better maturity level (1.5) compared to other activities under human resource management. This indicated the organization is careful while recruiting staffs. A key informant interview from the leadership indicated:

> *"We are highly cautious of staff recruitment; we don't only see the theoretical background of the candidate on how well he or she is acquainted with project management skill. We use different triangulation mechanisms to check if the theoretical background of the candidate matches with practical experiences. On the other hand I believe how important coaching is in*

staff development, be it spiritual, technical or even listening to one's feeling can help, but none of them are not yet practiced. KII03

On the other hand there is no standard process practiced in developing and managing the project team. As seen in the maturity level of all the activities under the human resource management, staff development gets the least value which is 1.15. The document review also indicated there is a loose and adhoc level of documentation on staff development and management plan. Development of human resource plan is expected to include roles and responsibility of staff, project organizational chart and staff management plans. Staff management plan in turn need to incorporate, recruitment criteria, training needs and recognition and reward systems. Contrary to this, project team development activities, in the form of on job training, coaching etc are almost zero in the organization. There is annual performance evaluation with the evaluation reports being filed under each employee's personnel filing, so that it would be used as criteria for annual salary increment. Otherwise following the performance evaluation, no training or coaching needs are acted upon for better performance in the future. A key informant stated

'Lack of training is our organization critical problem, need assessments were conducted sometime ago, but nothing is done following that, I don't think its importance is well thought off. KII02

In general human resource management is a core area that any organization should give a critical emphasis. Motivation is one area of team development; team should have to be motivated to exert high level of effort towards meeting organizational goal. Regarding the issue of human resource management one key informant remarked:

"Of all project management skill the human element is highly important unless you have a skill on how to manage people, technical competency alone wouldn't guarantee success" KII03

4.2.2.5 Project Cost Management

Table 9: Project Cost Management

Table 8- Maturity of Cost Management

Knowledge Area	**Number of Respondents**						
Cost Management	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Mean**	**Number of Respondents**
Plan Cost Management	8	11	1			1.90	20
Cost Estimating	3	14	3			2.60	20
Cost Budgeting	6	11	3			2.65	20
Cost Control	6	12	2			1.90	20
Average Maturity of Cost Management						**2.26**	

Project cost management is all about planning and controlling. The planning part includes estimation and budgeting process. Estimating cost is developing an approximation of the costs of the resources needed to complete each schedule activity considering various costing alternatives.

The overall cost management maturity of the organization is found to be 2.26. It is higher compared to all other knowledge areas showing, the organization uses better tools to achieve process and standards at organizational level. There is a formal development of processes and standards which is considered to be an organizational standard. Management regularly is involved in providing inputs and decision making process. There is a consistent use of this tools and techniques with some exceptions.

The legal consequences were also mentioned as reasons for better maturity level of some knowledge areas such as cost and procurement management, an informant explained his estimation on relative higher rate of cost management.

> *"I think the financial related issues are practiced better and follow some rules and regulations and use some type of metrics at least for projects that are costly; management also puts an eye on, as they will have legal consequence." KII05*

In comparison to cost controlling maturity of cost estimation and budgeting according to respondents of IOCC is higher, and is approximately leveled at level 3 i.e. at its organizational standard and institutionalized process. As per the document review tools such as analogous estimating and vendor bid analysis and reserve analysis are commonly used in estimating cost. On the other hand tools such as funding limit reconciliation and reserve analysis are regularly used during budgeting process. There exists formal documentation on all process and standards. Management is regularly involved in providing input and decision making.

The maturity level of cost control among other cost management activities got the least maturity level (1.9) indicating that basic processes are not standardized on all projects but only used on large and highly visible projects. Mostly is a project centric as opposed to organizational standard is used. A key informant interview indicated her worry:

> *"It is only variance analysis showing expense against budget that is often used; let alone utilization I don't think people have awareness on the basics of what earned value is all about."KII05*

4.2.2.6 Project Procurement Management

Table 9- Maturity of Procurement Management

Knowledge Area	Number of Respondents						
Procurement Management	Level 1	Level 2	Level 3	Level 4	Level 5	Mean	Number of Respondents
Plan procurement management	8	11	1			1.65	20
Conduct procurements	3	14	3			2.00	20
Control procurements	6	11	3			1.85	20
Close procurements	6	12	2			1.80	20
Average Maturity of Procurement Management						**1.83**	

According to PMDPro procurement includes the complete process of obtaining goods and services from preparation and processing of a requisition through to receipt and approval of the invoice for payment. Project procurement management includes the processes necessary to purchase or acquire products and services. According to PMBOK project procurement management process includes: Plan Procurements, Conduct Procurement, Administer, and Close Procurement.

The overall procurement management maturity of the organization is found to be at 1.83 which is leveled as 2, meaning the organization performs procurement management formally at least for some visible projects. Procurement standards and process are invariably used between the implementing partner and IOCC, it lacks consistency. Management support lies on huge and visible procurements; it lacks involvement to comply with all projects.

At times procurement will end up in chaos due to lack of system and procedures to conduct procurement and administering contracts. The document review for instance revealed there is no document showing information on lessons learned made on past procurement undertakings.

4.2.2.7 Project Risk Management

Knowledge Area	**Number of Respondents**						
Risk Management	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Mean**	**Number of Respondents**
Plan Risk Management	10	9	1			1.55	20
Risk Identification	6	14	20			1.70	20
Qualitative Risk Analysis	18	2	20			1.10	20
Quantitative Risk Analysis	17	2	1			1.20	20
Risk Response Planning	12	7	1			1.45	20
Risk Monitoring and Control	13	7				1.35	20
Average Maturity of Risk Management						**1.39**	

Project risk management includes the processes of conducting risk management planning, identification, analysis, response planning, and monitoring and control of project risk with the objective of increasing the probability and impact of positive events, and decreasing the probability and impact of events that are adverse to the project.

The average risk management practice maturity level is found 1.39; which is approximately leveled at level 1 (adhoc level) and is considered to be the least among all knowledge areas next to human resource management. The result shows there is no established practice and standard for risk management at the organization. Risk management is done on adhoc basis with tools depending on expert knowledge with no generic tools being applied.

Success of such organization mainly depends on individual effort rather than enterprise wide knowledge and capability.

This initial phase (level 1) categorization named by PM Solution Model is very much similar with Hillson's risk management maturity at level 2 (i.e. ignoring stage). Where at "ignoring stage" organization is characterized by:

- Project risks are not being dealt systematically rather done haphazardly and usually on an ad hoc basis.
- There exists lack of awareness on the risk management, resulting in poor risk management culture.
- Risk management will be reactive rather than proactive. Any mitigation action depends on individual experience and expertise.
- Almost no risk learning is available with the continuity of such organization is a matter of chance and thus luck is a reason for their success.

The following are quotes a key informant interview:

> *"Everything is done reactively, and thus it ends up doing emergency response than mitigation or preventing the risk. I remember a number of latrines constructed in a flood prone area getting totally demolished due to lack of risk assessment done prior to the implementation. Risk assessment is done based on donor's requirement it is not an organizational culture. I believe risk management could have helped to resolve the current major funding concern of the organization, which currently led the company on the verge of closing. The organization now is struggling with 2 months employment contract extension provided to employees as a painkiller."KII01*

Another informant remarked:

> *"Because security related risk assessment is usually requested by donors, majority of us understand risk as security related matters, while there are varieties of risks." KII02*

Among the risk management activities risk identification get the highest rating 1.7 as indicated by some respondent that risk identification is usually required by some donors to get filled on the log-frame though no subsequent analysis and risk response plan is prepared.

4.2.2.8 Project Stakeholder Management

Table 10- Maturity of Stakeholder Management

Knowledge Area	**Number of Respondents**						
Stakeholder Management	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Mean**	**Number of Respondents**
Stakeholders Identification	9	10	1			1.60	20
Assessment of stakeholders interest and influence	13	7				1.35	20
Develop stakeholders communication plan	15	5				1.25	20
Engaging and Influencing Stakeholder	13	7				1.35	20
Average Maturity of Stakeholder Management						**1.39**	

As seen in table 11 above maturity of stakeholder management is among the least practiced areas next to risk, it is rated as 1.39 which is still leveled at initial phase. This shows that the organization is at its initial stage where there is no established practice and standard. No proper stakeholder identification, analysis and communication plan is formally conducted. Only those who give a go ahead or be part of the memorandum of understanding are usually considered as stakeholders, such as government offices, donors and the host organization. Thus stakeholders who might have an impact or be impacted by the project

such as beneficiaries or providers (the project team) are not properly communicated to the level best.

One of the principles of project management under the development sector is participation. That is the inclusion of variety of stakeholders during the identification, design, planning, implementation and monitoring of the project helps to ensure transparency, improve quality, increase human capacity and strengthen the buy-in at all levels. Neglecting stakeholder management will indirectly mean failing to identify sensitive stakeholder that might stand against on the project.

4.3 Discussion

According to PM solution (2014), maturity models have benefits which allow looking into the organization's strength and weakness, identify the links between needs and real education requirements, set realistic targets for improvement, and provide a roadmap for strategic improvement, measure progress towards enhanced capability and Assess organizations project management against agreed criteria.

The research has tried to assess the PM maturity of IOCC Ethiopia project office. From the result, the overall project management maturity of key project management knowledge areas were found below maturity level 2 (approximately 1.65) as shown in the spider web diagram below. This indicates the organizations have a basic foundation of project management practices existed but not institutionalized. Structured processes and standards are practiced in large and visible projects. Documentation exists on basic processes. Management supports the implementation of project management, but not consistently used or there is no organizational mandate to comply standards for all projects. There

existed ad-hoc processes and informal approaches in some project management knowledge areas.

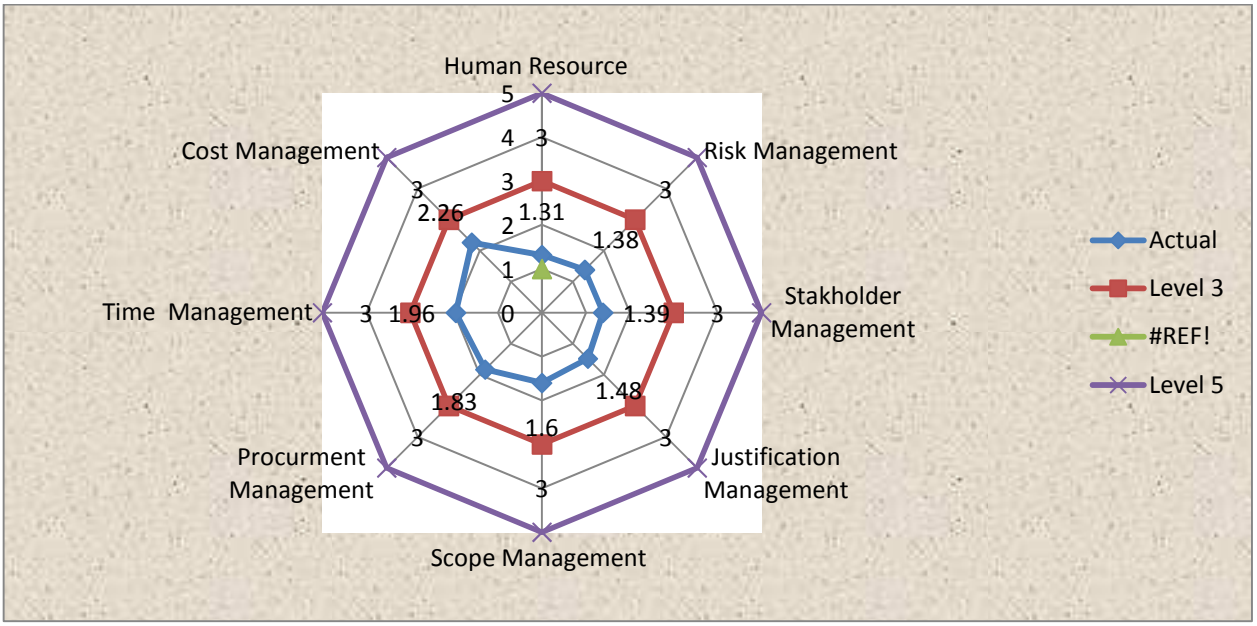

Figure 6- Actual Result of Maturity Level

Knowledge areas such as cost, procurement and time, scope and justification managements get relatively higher maturity level compared to other knowledge area. It was indicated by some respondents that, these are areas that project managers aggressively monitor, for accountability reason; especially procurement and cost are highly tied up by number of regulations. Thus fulfilling requirement is an obligation than enthusiasm.

On the other hand knowledge areas such as human resource management, risk and stakeholder management get the least maturity level and are practiced on an informal and adhoc basis. This might be due to low awareness on their importance. Failure to comply practicing these knowledge areas may not have immediate penalty though, it might lead to layers of effects as time goes. For example failure on team development may not make one organization liable by any regulatory body, but it will highly impact productivity. Similarly

lack of proper risk management may not have legal consequence but failure to do so may ultimately jeopardize the project and organizational success.

Risk for instance should have to better be anticipated, analyzed, and proactively managed. As the review of literature showed management of projects in developing countries is highly constrained by scarcity of resources and high uncertainty thus focusing on management of risk and resource would help. Otherwise in such risky era where funding limits are paramount, failing to manage risk means continuing with financial instability. Risk register, or risk knowledge database should exist and selected risk occurrences will be used as learning experiences for improvements. Studies indicate one of the reason for challenged projects (i.e. those projects completed but fail to meet original scope, time and cost projects) is lack of contingency planning for managing risks and failure to learn from mistakes.

Stakeholder management is another area where the organization as an NGO should give a critical emphasis if maintaining competitive position of the organization is of high importance. The organization's sustainability ultimately depends on how well it manages its stakeholders, in meeting beneficiaries' expectation and fulfilling donors and other influential stakeholders' interest. It is to be noted that finishing a project with in time and cost while compromising interest of stakeholder is highly dangerous especially for the NGO setup whose sustainability is dependent highly on funding availability. Though some activities under stakeholder management such as stakeholder identification get better maturity result unless stakeholder analysis on the interest and influence of stakeholders is conducted and proper communication plan developed, stakeholder management will not result the expected result at its fullest. NGOs are not profit makers, all their profit is

basically dependent on the reputation they build with their respective influential stakeholders, thus failing to manage stakeholder is planning to fail.

Major challenges mentioned from the interview result were funding shortages, lack of trainings, government regulations, poor coordination among partners, and leadership related problem. Funding limit though was mentioned as critical factor among others affecting the organizational survival in general and the proper use of project management methodology in particular. Figure 7 below shows the funding in cash from the year 2014 to date.

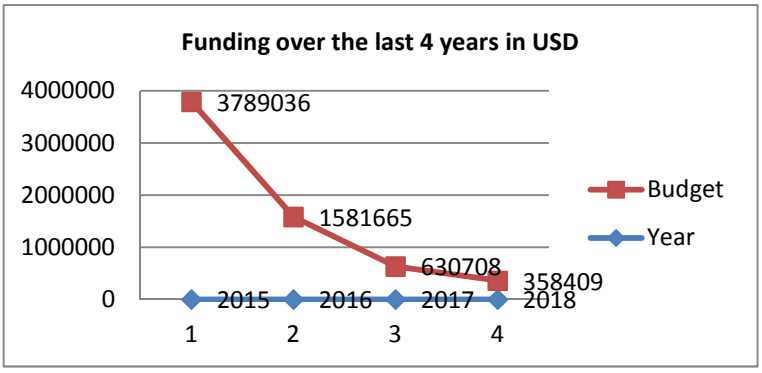

Figure 7- Funding over the last 4 years

Training access is very limited despite the fact that most respondents have stayed for more than 5 years. Lack of information sharing was also mentioned as a weakness. An interview question regarding lessons learnt also revealed, there exists no database to be used as institutional memory to easily share information. So far if information is required from past undertakings, it will mainly be based on individual memory which also depends on person's memorizing capacity and presence. "A key informant interview was also quoted saying:

"We use individual memory we don't have institutionalized database system, which is the area that we haven't yet materialized."KII03

CHAPTER FIVE

CONCLUSION and RECOMMENDATION

5.1 Conclusion

As has been revealed under the theoretical and empirical evidences, there is a direct relationship between project management maturity level and organizational success in general and project success in particular. Yazici (2009) on a paper entitled "Does Project Maturity Matter for Organizational Success?" indicated there is statistically significant relationship between maturity level and organizational performance which is determined by savings, sales growth, market share and competitive position.

There are different types of maturity models discussed most having 5 incremental levels with each having similar characteristics across different models used. The higher the level the better will be the PM maturity. Of these models PM solution model have been used for this study.

The research in general has tried to assess the extent of use (maturity) of project management processes and practices in International Orthodox Christian Charities. This will be used as a bench mark to see the current status of PM practice in the organization and be used as baseline when assessing maturity level in the future.

As per the assessment conducted, the overall project management competency of IOCC is determined at level 2 i.e. structured process and standards. This indicates that there are standards in which project managers are abide by, but most are not yet institutionalized. Both empirical result of the questionnaire, the interview and the document review showed the organization current maturity level is on its basic level showing that there is a need to

work on improving PM maturity level through employing repeatable standards and structured process across projects.

Though the organization is determined to be project based, project management practices doesn't seem to be a strategic priority. For instance as the study result indicated the professional focus is on the technical and programmatic competency of staffs. It mainly hires programmatic specialists such as economist, health professionals, development specialists etc who are then asked to manage projects which encompass variety of issues such as managing people, risk, stakeholder, procurement, time, cost etc.

In spite of this, a comprehensive project management competency model proposed under PMDPro recommends the inclusion of four areas skills including Technical, Leadership/Interpersonal skill, Personal/Self Management and Development Sector Specific skill which mainly are the ability to apply the technical, leadership/interpersonal and personal/self--management competencies in the context of development projects which the researcher believes can be harvested through a project management skill.

The study leads to the conclusion with the note that the current survey report supports the need for a method that resolves the current gap enabling to reach to the highest further levels, level 3, 4 and 5.

5.2 Recommendation

- The organization PM maturity level measured indicated the need for exerting an effort in improving the current status to make it reach to further levels to level 3, 4 and 5. Thus based on the study result, the researcher recommends the following specific actions to be undertaken.

- Cost, time, procurement, scope and justification management scored relatively higher ratings, at level 2 (i.e. structured process and standards state), but there is a room for improvement. Therefore since the PM processes are not consistently followed, there is a need to ensure PM processes to be organizational standard and transform individual understanding to institutionalized culture. Thus passing circulars and assigning a committee with a checklist to ensure fulfillment of institutional standard would enable to reach to level 3 and also help for a continuous learning to reach to level 4 and 5.

Allocating Financial and Human Resource

- Though allocating fund for capacity building seems luxury, for an organization that is struggling to secure funding, it is the competency of the human resource that contributes to secure funding and thus allocating some portion for capacity building will ultimately reward.
- Assignment of human resource manager is a benchmark if healthy human resource management is required and knowledge areas want to get healed.

Staff Motivation and Training Access

- As has been depicted under Herzberg's motivational theory, there is a need to work both on motivation and hygiene factors. Identifying training needs, creating recognition and reward system could motivate staff to perform better. On the other hand hygiene factors such as ensuring the continuity of staff for some reasonable period, even if it won't guarantee for better performance, it could help to protect staffs from poor performance resulting from its absence.
- Strategic management determines the long-run performance of an organization. Project management is a strategic competency that enables entities to link project success to business goals (Project Management Institute, 2014). Therefore creating

awareness on the importance of risk and stakeholder management which the organization get the least maturity level is highly important. Besides training on how to analyze, proactively manage risk, analyze stakeholder influence & interest and develop stakeholder communication plan would contribute to deal with problems resulting if otherwise.

Attitudinal Change

- Identifying and addressing obstacles that prevent staffs from using PM standards consistently and developing a sense of ownership and responsibility among staff to look for a solution.
- Management also needs to initiate change and start practicing project management standards to be applied on all projects. Otherwise unless there is a pushing factor, organization may not meet the expected organizational goal with fragmented experience and knowledge of individual experts have. Interview result also showed there are project managers with better project management skill who can be used as a catalyst to initiate change.

Knowledge Expansion

- There is a need to have central database system to share information existing otherwise the organization will reinvent the wheel each time a project is pursued, if information sharing remains on individual memory. Lessons learned are the organization's memory bank. Ideally, the project team will develop a lessons learned log as part of the project initiation stage to track lessons learned as they occur; but at least having them at major evaluation points or milestones throughout the project on all knowledge would help.

- Creating experience sharing mechanisms will enable individual understanding to be transformed to enterprise wide knowledge. Staff regular meetings and experience sharing forums within and out of the organization can harmonize the awareness level and contribute for consistent use of PM methodologies.

Window of Opportunity

- Appealing to different RFP that donor's release, as much as possible will allow IOCC to exercise different PM skill and build its PM competency and organizational excellence which ultimately enable the organization secure funds in a sustainable manner.
- Recognize existing staffs with knowledge and skill of project management as potential advocators on the use of project management skills. Initiate programs that will empower human resource and monitor and support the PM practice for continuity.

Note

- In all recommendations forwarded one thing to note is applying set of rigid rules should be context specific. For instance there are projects where scope change is required, or projects such as emergency response require an instant decision making processes; thus setting a restricted scope controlling method for example may not be a wise decision. However, in managing projects especially traditional projects as Dr K.Wysocki called them, complying to set of standards and structured processes would help for project and organizational success.

Further Research

- The research focuses on one international NGO thus assessing the PM maturity of other NGO would give a comprehensive and better view of PM maturity practice among NGO sector.

- The study is limited to the Ethiopia project office which might be affected by the entire organizational culture or management of IOCC headquarters, which can better be achieved using another broad maturity spectrum of model such as OPM3 model. Thus I suggest if future research is to be conducted using OPM3 model.

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Appendix 1
Questionnaire

ADDIS ABABA UNIVERSITY, COLLEGE OF BUSINESS AND ECONOMICS

SCHOOL OF COMMERCE

The research is conducted for master's thesis of project management at Addis Ababa University. Questionnaires listed below are standard questionnaire prepared by PMI and listed under PMBOK guideline to measure project management maturity levels of project driven organization and those that are emphasized under PMDPro are used for this questionnaire.

Answer all the questions and select your preference level based your project management practice in your organization. Please refer to the reference criteria's put in ascending order from level 1 to 5.

Your prompt and genuine response to each of the questionnaires helps to a legitimate leveling of IOCC project management maturity level and contributes to recommendations for further improvement in managing projects and gaining for a better project and organizational success. In addition the assessment result will be used as a baseline to measure the progress of project management practice in the future. So I would like to take a few minute of your time to fill out these questionnaires. All information you will provide is considered confidential and data will only be used for this research purpose. No need of writing your name and address on this paper

Thank you in advance for your cooperation!

Sincerely,

Frehiwot Abebe

Measuring Project Management Maturity Level based on the Project Management Practice

Level 1= Initial	Level 2= structured process and standards	**Level 3= organizational standards and institutionalized process**
• **Management:** understand project definition, has awareness on the need of project management • **Process**: No established practice and standard. • **Documentation**: loose and ad-hoc • **Metrics**: informally collected on an ad hoc basis • **Success**: Depends on individual contributions rather than enterprise-wide knowledge and capability	**Management**: supports and encourages the implementation of PM processes though there lacks consistency and involvement to comply for all projects. **Process**: PM processes and standards are established and mainly used on large and visible projects not considered as organizational standards **Documentation**: proper documentation to the basic processes **Metrics**: basic tools and techniques such as expert knowledge are applied to tracking project cost, estimates;	**Management**: management is regularly involved in input provision and decision making. **Process**: processes are typically automated and consistent use of tools and techniques for project management process. Almost all projects use this process with minimal exception. Project management processes are typically automated. **Documentation**: well established formal documentation at organizational level (i.e. for all projects). Lessons learned and previous project experiences are well organized and utilized for other projects.

	schedules **Outcome**: predictable	**Metrics**: formally collected and each project is evaluated and managed in light of other projects.

Level 4- Managed Process	**Level 5 -Optimizing Process**
Process: Processes and standards are integrated with corporate processes. **Management**: mandates compliance and takes an organizational entity view. **Documentation**: processes and standards are documented to support using metrics to make project decision. **Metrics**: efficiency and effectiveness metrics are used, all projects changes and issues are evaluated based upon metrics from cost estimates, and baseline estimated and earned value calculations.	**Management:** focused not only on effectively managing projects but also on continuous improvement. **Process**: processes are in place and actively used to improve project management activities. **Documentation**: lessons learned are regularly examined and used to improve project management processes, standards and documentation **Metrics:** metrics collected during execution are used to understand project performance and assist management decision making in the future.

Section One- Informants' General profile

1. Your Profession (field of study):----------
2. Position: ----------
3. Education level completed: Diploma-------BSC/BA-------- MSC/MA------ PHD-------
4 Year of stay at the Organization----------
5. Where do you get your PM competency (from experience, school, certification, informal discussion, higher level education?)
6. Do you think PM knowledge improve project managers efficiency and productivity? (Y, N, D/K)
7. Have you been offered project management related training since your employment with IOCC?

Section Two: - Measuring Project Management Maturity Level

	Knowledge Areas	**PM Solution Maturity Level**				
I	**Project Scope Management**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
1	Plan scope management					
2	Collect requirements					
3	Define scope					
4	Create WBS					
5	Validate scope					
6	Control scope					
II	**Project Justification Management**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
7	Problem tree analysis					
8	Objective Tree analysis					
9	Alternative Tree analysis					
III	**Project Time Management**	**Level 1**	**Level 2**	**Level 3**	**Level**	**Level 5**

					4	
10	Plan schedule management					
11	Activity definition					
12	Activity sequencing					
13	Estimate activity resource					
14	Estimate activity duration					
15	Schedule development					
16	Schedule control					
IV	**Resource Management**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
A	**Human Resource Management**					
17	Human Resource Planning					
18	Acquire Project Team					
19	Develop Project Team					
20	Manage Project Team					
B	**Project Financial Management**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
21	Plan Cost Management					
22	Processes Cost Estimating					
22	Cost Budgeting					
20	Cost Control					
C	**Project Human Resource Management**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
21	Risk Management					
22	Risk Identification					
23	Qualitative Risk Analysis					
24	Quantitative Risk Analysis					
25	Risk Response Planning					

26	Risk Monitoring and Control					
D	**Project Procurement Management**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
27	Plan procurement management					
28	Conduct procurements					
29	Control procurements					
30	Close procurements					
V	**Project Risk Management**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
31	Risk Management					
32	Risk Identification					
33	Qualitative Risk Analysis					
34	Quantitative Risk Analysis					
35	Risk Response Planning					
36	Risk Monitoring and Control					
VI	**Project Stakeholder Management**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
37	Stakeholders identification					
38	Assessment of stakeholders interest and influence/ SH analysis					
39	Develop stakeholders communication plan/ SH communication					

Appendix 2

Project Management Maturity Assessment at IOCC Ethiopia Project Office

Summary of results and sample of interview questions

I am carrying a research on assessing the level of Project Management Maturity in an NGO sector. This questionnaire is designed to collect data that will help to achieve the objectives of this study. I would be most grateful if you would kindly participate in this interview by responding to all the questions in this questionnaire as candidly and precisely as possible. Your honesty and co-operation in responding to these questions will be highly appreciated. All information provided will be treated with utmost confidentiality.

Would you be willing to get tape recorded while getting interviewed?

Yes ☐ No ☐

Section One: -

4. Position ----------
5. Qualification----------
6. Year of stay in this organization----------

Section Two

1. Where does Project Management Competency of the staff mainly come from:- (Experience, school, certification, informal discussion, higher level education)
2. How often employees access to PM training since employment (quarterly, semiannually, yearly, occasionally, no training)
3. Do you think PM knowledge improve project managers efficiency and productivity? (Y, N, D/K)
4. What is the awareness level and usage of PM METHODOLOGIES in your work area? (H, M, L, None)

#	Methodology	(A)=Awareness (Yes or No) If the answer is No, skip to the next raw	(B)=Usage Yes or No) If the answer is No, skip to the next raw	(C)=Consistency 1.Consistently used 2. Applied to some projects 3. Depends on donor requirement
1	None			
2	PMBOK			
3	Log-frame			
4	PM4NGO			
5	PM4DEV			
6	PRINCE2			
7	If others state			

5. Which of the following tools do the organization normally use in your PM practice (*RACI, Risk Register, **WBS and Issues Log, ***CPM, ****EVM)

   _____

6. How well do you use lessons learnt, do you have a documentation mechanism where staff can easily access information (Y, N), probe for thereason?

   _____

7. Challenges you have been facing as an NGO in general and as an international NGO in particular? (Probe for funding shortage, Lack of competencies and high level of bureaucracy, low salary etc).

   _____

8. How important is PM in your organization (H, M, L), do you think PM practice can resolve some of the issues raised under the challenge session?

   _____

*RACI: Responsibility, Accountability, Consult and Inform matrix
**WBS: Work Breakdown Structure
***CPM: Critical Path Method
****EVM: Earned Value Method

9. Factors affecting the usage of PM methodology and software (Excel, Ms Project and others

   _____

10. Prioritize the knowledge areas in order of your organization current practice from 1 to 7 with one being highly been practiced and 7 being the least and explain your rating on the extreme up and down stream ratings. Please explain your rating.

    _____

    _____

#	**Project Management knowledge areas**	**Rank from 1 to 7 in order of Practical importance to your organization**
1	Project Scope Management	
2	Project Time Management	
3	Project Cost Management	
4	Project Procurement Management	
5	Project Human Resource Management	
6	Project Risk Management	
7	Project Justification Management	
8	Project Stakeholder Management	

11. In general how do you rate project managers understanding of the concept of project management? Give an explanation for your rating? (High moderate low)

    _____

12. What would you recommend the solution would be?

    _____

Appendix 3

Summary of Results on Thematic Area of Interview Questions

Human resource Management
"We are highly cautious of staff recruitment; we don't only see the theoretical background of the candidate on how well he or she is acquainted with project management skill. We use different triangulation mechanisms to check if the theoretical background of the candidate matches with practical experiences. On the other hand I believe how important coaching is in staff development, be it spiritual, technical or even listening to one's feeling can help, but none of them are practiced yet. KII03
'Training need assessment were conducted sometime ago, but nothing is done following that, I don't think its importance is well thought off. KII02
Of all project management skill the human element is highly important unless you have a skill on how to manage people, technical competency alone wouldn't guarantee success" KII03.
None assignment of human resource manager has created as layers of problems. KII02
Scope Management
"Here things are done haphazardly where in most cases beneficiaries will not be available during the requirement gathering, at times project will distantly be developed at office level without considering the fact on the ground and the project will end up pleasing donors than the interests of the end users."KII01
Risk Management
"Because security related risk assessment is usually requested by donors, majority of us understand risk as security related matters, while there are varieties of risks." KII03
"Everything is done reactively, and thus it ends up doing emergency response than mitigation or preventing the risk. I remember a number of latrines constructed in a flood prone area getting totally demolished due to lack of risk assessment done prior to the implementation. Risk

assessment is done based on donor's requirement it is not an organizational culture. I believe risk management could have helped to resolve the current major funding concern of the organization, which currently led the company on the verge of closing. The organization now is struggling with 2 months employment contract extension being provided to retaining staffs like a painkiller."KII05
Justification Management
"in recent past we have started exercising development of problem tree and objective tree involving relevant stakeholders, for our big project "Eradicating Podoconiosis", it really helps, I really wish if its repeatability is ensured across all other projects. "KII02
Time Management
"Standards are not followed regularly, and their repeatability is questionable but it is through individual effort on aggressively managing projects that deadlines are often met.KII02
Cost Management
"I think the financial related issues are practiced better and follow some rules and regulations and use some type of metrics at least for projects that are costly; managements also puts an eye on, as they will have legal consequence." KII 05
Central Database system
"We use individual memory we don't have institutionalized database system, which is the area that we haven't yet materialized."KII03
Number of staffing is one of the problems we are currently facing, where we have no one assigned to do the documentation processes.
Use of PM tools and methodology
Of the methodologies the common ones are log-frame, at times I personally refer PMDPro but I don't know what others do. I don't think the staff gets difficulty of understanding skills but no effort have been exerted to make PM skills standardize.
Staffs are very much interested to get trainings, and easily cope with adopting tools and

techniques but there lacks system of standardization.
Challenges
Of all funding limits, lack of staff capacity building, poor linkage between field office and headquarters has led for lack of decision making