
# AN ASSESSMENT OF PROEJCT MANAGEMNT COMPETENCY: THE CASE OF ETHIO TELECOM

**BY**

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***June, 2017***

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**Approved By Board of Examiners**

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# LETTER of CERTIFICATIN

This is to certify that Kalkidan Abebe Ketema has carried out his thesis on the topic “Assessment of Project Management Competence: in the case of Ethio telecom”. This work is original in nature and suitable for the award of Masters of Arts in Project Management (MAPM).

**Wubishet B. (Phd)**

**Date :_____**

# DECLARATION

I hereby declare that this thesis entitled "*Assessment of Project Management Competency***:** *The Case of Ethio telecom e-CAF Project",* has been carried out by me under the guidance and supervision of Dr. Wubishet.

The thesis is my own work and that all the sources that I have been indicated and acknowledged by means of complete references.

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Kalkidan Abebe Ketema Date

## *Abstract*

*The main purpose of this study was to investigate the most significant key competencies needed to be an effective project manager in the ethio-telecom. In addition it tried to assess the core project management competencies and deficiencies in Ethio telecom. In order to answer raised research questions, both primary and secondary sources of data were used. The primary data were collected through semi-structured interview. Non probabilistic sampling procedure with a combination of purposive and judgmental sampling method was used to obtain 30 responses from selected project managers, project team members and human resource managers. Document review was used to investigate the project management practice and documentation of the company. Regarding the study findings, this study found project managers in Ethio telecom have soft competences like project communication management, stakeholder management and project human resource management and they need improvement in their skills related to conflict management, contract management and negotiation. And about the hard competencies, Ethio telecom project managers need to improve planning of schedule, documentation of each project lifecycle completion, risk management including the mitigation strategies and developing requirements. As per the result of the analysis, project managers and the company were not conscious and focused related to technology transfer from the vendor to the right person , preparing and documenting lesson learned, and imitating different technology from the vendor in order to handle by internal human capacity. In general the researcher found that, project managers, of Ethio telecom are experienced in managing the functional/operational area of the company and mostly the assignment of the project managers were done by the top level management of the company.*

*The researcher recommended that for better improvements of project managers' competency and achieving success in project management in the company, the company should mature the project management office which can support all projects and the company should work in the direction of imitating different technology from partners and being focused in technology and knowledge transfer to manage projects with internal capability in the near future.*



**Key words: project managers, soft and hard competency, project success**

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First and above all, I praise almighty God for providing me this opportunity and granting me the capability to proceed successfully

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## *LIST OF ABBREVIATIONS and* ACRONYMS

**PMBOK®:** Project Management Body of Knowledge

**PMCDF:** Project Managers competency Development Framework

**PMI**: Project Management Institution

***PMO:*** *Project Management Office*

***PM:*** *Project management/ manager*

***e-CAF****: Electronic customer accusation form*

***ETC:*** *Ethiopian Telecommunication Corporation*

# CHAPTER ONE: INTRODUCTION

This chapter aims to identify the research problem, questions to answer and objectives for carrying out the study. The chapter begins with introductory background information about management competence and the company, the statement of problem will follow and research questions and objectives will continue respectively. Significance of the study, Delimitation and structure of the report will end the chapter.

## 1.1. Background of the Study

As needs change and challenges grow, project management continues to evolve to meet 21st century demands. It takes expertise in Complex Project Management (CPM) for an organization to thrive, indeed to survive, in today's environment rife with uncertainty. But project failures worldwide are still significantly high, despite attempts by project management societies to provide project managers with frameworks, standards, techniques and methodologies to assist them in their activities (Smith, Bruyns, & Evans, 2011). Marnewick & Labuschagne (2009) suggest that many organizations invest resources in project management, believing that it can be used to complete all new initiatives successfully. However, several surveys have shown that many projects still fail to deliver expected results.

The Standish Group (2013) highlighted the most important reasons for failures are inappropriate project scope definition; inappropriate project communication; and lack of appropriate project management competencies.

Therefore, according to Dainty, Cheng, & Moore, (2005), Project success is dependent upon the leadership qualities of project managers and their ability to bring the best out in their team. And as Lindbergh, (2009), Limited research has examined the project manager competence effect on project performance outcomes.

Although according to Crawford and Gaynor, 1999, employers need guidance in the selection of a competent project manager they are responsible for identifying the specific competencies needed for a particular project. Shao (2006) points out those current project management

methods are mainly focused on technical tools, such as Work Breakdown Structure (WBS) and Earned Value Management (EVM), or project management software. However, so far, few methods exist for selecting the effective project manager. When seeking out people they believe have the best qualifications to successfully deliver projects, senior management frequently relies on a range of indicators, such as past performance, education and certification, to make their judgments. Similarity of circumstances, such as size of project, complexity and level of risk all contribute to the usefulness of past performance (Shepherd, 2005).

The selection of the project manager is an extremely important decision; nevertheless, traditional interviews of candidates by experts are often ambiguous, biased and lacking inaccuracy. Current selection methods carry little validity and lack efficiency. The selection process also becomes more difficult when there are several qualified candidates (Rashidi, Jazebi, and Brilakis, 2011).Therefore, pioneer organizations have a remarkable strive on increasing their personnel capabilities and competencies. As a matter of fact, in contemporary human resource management (HRM) practice, establishing competency of an individual is considered as a resourceful and robust tool (Collin, 1997). On this account, apart from technical competences, behavioral competences are also a vital prerequisite. A project manager needs strong communicative and interpersonal skills. To some extent, the deficiency of some behavioral competences is considered to be a significant obstacle for project success.

## 1.2. Background of the Organization

The introduction of telecommunication in Ethiopia dates back to 1884. Ethiopian Telecommunications Corporation is the oldest public telecommunications operator in Africa. In those years, the technological scheme contributed to the integration of the Ethiopian society when the extensive open wire line system was laid out linking the capital with all the important administrative cities of the country (Worku Bogale 2005).

After the end of the war against Italy, during which telecommunication network was destroyed, Ethiopia re-organized the Telephone, Telegraph and Postal services in 1941. In 1952 the Imperial Board of Telecommunications (IBTE) was established by proclamation No. 131/52 in 1952. The Board had full financial and administrative autonomy and was in charge of the provision and expansion of telecommunications services in Ethiopia. The Imperial Board of Telecommunications of Ethiopia, which became the Ethiopian Telecommunications Authority

in 1981, was placed in charge of both the operation and regulation of telecommunication services in the wake of the market reforms (Worku Bogale 2005).

In 1996, the Government established a separate regulatory body, the Ethiopian Telecommunication Agency (ETA) by Proclamation 49/1996, and during the same year, by regulation 10/1996, the Council of Ministers set up the Ethiopian Telecommunications Corporation (ETC). Under the supervision of the ETA, the principal duty of ETC is maintaining and expanding telecommunication services in the country and providing domestic and international telephone, telex, and other communicate on services. In this respect, currently ETC is the only operator of any telecommunication related service (Worku Bogale 2005).

In 2010 the company restructures itself and become Ethio telecom. France telecom took the management for two years and the contract was closed in 2012. According to the current structure of the company there are twelve divisions which are responsible for different major tasks of the company. Project Management Office is among those twelve divisions and is responsible for handling the projects undertaken in the company. Currently the division defines and manages the project management methodologies, required skills and tools for projects carried out in the company. The aim of the division is to achieve all of the projects goals and targets while considering the preconceived project constraints (cost, time and quality standard) and also to optimize the allocation and integration of inputs necessary to meet pre-defined objective.

## 1.3. Statement of the Problem

Despite significant investment in project management training and other project management systems and processes, organizations continue to experience projects that are less than successful (International Standish Group Inc., 2009). Projects are becoming more challenging due to complex, integrated business processes; complex organizational structures, alliances and partnerships; and political and global considerations. Thus, understanding how to improve project management capability becomes even more important for an organization to remain viable and achieve its strategic objectives (Lindbergh, 2009).

Previous studies have reported that there is high failure rate of projects. The tasks of keeping projects within scope, on schedule and within budget to satisfy customers are increasing. Despite technological advancement, the failure rates of projects can range from 18% to a high of 50%. Failure rates of this magnitude have highlighted the reason why the subject of increased effectiveness continues to be an area of research and why it is important to investigate project management competency (Gelbard and Carmeli, 2009; Nwagbogwu, 2011).

Since the formation of Ethio telecom in 2010, the company has taken many measures to improve the success rate of projects carried out to go with the dynamics of the global telecom technology, and improve the service quality and customer satisfaction.

One of the critical success factors of projects is linked to the performance, experience and competence of the people who manage these projects. In this environment, project managers are central to effective project delivery. However, currently they are asked to manage a wider range of projects that require an increasingly diverse set of skills and competencies. In most industries, these skills and competencies are listed as important for project managers on most projects.

This study is primarily observed by the fact that the empirical documentation in the area of project success factors regarding the country's sole telecom service provider, Ethio telecom, are highly focused on the project methodology, tools, process and procedures used to meet the project goal to by considering the predefined project constraints i.e cost, budget and quality.

## 1.4. Research Question

Based on the identified research problem, the research questions are formulated as follows and the study try to provide answers for the following major questions:

- ✓ What are the core project management competencies in ethio-telecom?
- ✓ What are the project management competencies deficiencies in Ethio telecom?
- ✓ What is the success level of projects in ethio-telecom?
- ✓ Is there same level of relationship between project management competencies factors (dimension) and project success?

## 1.5. Objective of the Study

### General Objective

The main objective of this study is to investigating the most significant key competencies needed to be an effective project manager in the Ethio telecom.

### Specific Objectives

- To assess the core project management competencies in Ethio telecom.
- To investigate project management success in Ethio telecom.
- To assess the project management competencies deficiencies in Ethio telecom.
- To establish the relationship between project management competencies and project success.

## 1.6. Significance of the Study

When compared to the long aged telecom service history of Ethiopia, only limited numbers of studies were undertaken up to now in relation to project success. Those studies also mainly focus on others project success factors like project management tools, technologies, process and procedures. This study will contribute to the knowledge on project management competencies and project success in Ethio telecom.

The study findings will also be relevant input to the management of Ethio telecom in identifying the existing strength or weakness of project management competencies and project success.

## 1.7. Delimitations of the Study

Currently the company is taking different measures to improve the project success; however, this study will not assess these efforts of the company in this study. Geographically, the study was limited to Ethio telecom e-CAF project only.

## 1.8. Organization of the Study

The introduction part of the study is chapter one. Back ground information, problem statement, research questions, objective of the study, operational definitions, significance and delimitation of the study will discuss in this chapter.

In the next chapter, chapter two, existing literatures related to project management competencies and project success will be assessed. Ethio telecom's brief background information with existing studies related to project management competencies and project success which focused on the company is presented and theoretical frame work on the relationship between project management competencies and project success developed.

The third chapter explains the methodology of the research. The research design and research methods will explained in this chapter starting from how the data collection instrument is prepared to how the collected data is analyzed.

The following chapter, chapter four, discusses the empirical findings and analysis of the study with interpretations. And the last chapter, chapter five, will present conclusion based on the analysis result and recommendations provided by the researcher.

# CHAPTER TWO

## 2. REVIEW OF RELATED LITERATURE

The second chapter of the study will present literatures related to the study area and provide a theoretical framework of the study. The aim of the literature review was to link the findings of these empirical researchers, frameworks and standards to current practices in project management; identify the competencies that enhance the validity and reliability of the survey instrument; evaluate significant ways these empirical researchers have helped to hone the underlying principles of project management competency.

### 2.1. Projects and Project Management

- “A temporary endeavor undertaken to create a unique product, service, or result.” (PMI - PMBOK Guide, fourth edition 2008);
- “A temporary organization that is created for the purpose of delivering one or more business products according to an agreed Business Case.” (Office of Government Commerce (OGC) – PRINCE, fifth edition 2009);
- “A time and cost constrained operation to realize a set of defined deliverables (the scope to fulfill the project's objectives) up to quality standards and requirements."(IPMA Competence Baseline Version 3.0, 2006);
- “A unique, transient endeavor undertaken to achieve a desired outcome." (APM-APM Body of Knowledge, fifth edition 2006);
- “A temporary endeavor undertaken to create a unique product, service or result in order to achieve an outcome." (AIPM: AIPM Professional Competency Standards for Project Management, 2008 edition); and
- “That ad-hoc set of activities with logical relationships that is executed by a specific team to achieve a one-off, specified goal within planned performance, time and cost targets." (Brown, 2007).

The aforementioned definitions suggest that no projects are the same. According to Nwagbogwu, 2011, they vary in terms of purpose, objectives, size and complexity, time of delivery, location, cost and customers.

Provek (2008) claims that projects bring change so project management is recognized as the most efficient way of managing such change. Project management is the process by which projects are defined, planned, monitored, controlled and delivered so that the agreed benefits are realized. Project management can be regarded as a strategic competency for an organization and can significantly improve the organization's future competitiveness (Rodriguez, 2005). General management skills provide a foundation for project management skills; however, whereas general management is ongoing and repetitive, project management is primarily concerned with the introduction and management of change and requires substantially different competencies (Birkhead et al., 2000).

As Agumba (2006:27), the definition of project management is not simply the amalgamation of the definitions of project and management, nor is it formed from the two definitions. Three important dimensions have to be added to complete the definition, i.e. time, cost and quality. These dimensions or parameters mentioned are considered to be the traditional project performance measures.

In the opinion of Van der Merwe & Bussin (2006), project management is the process of managing, allocating and timing resources in order to achieve a given objective in an expedient manner. Alternately, it could be defined as the process of achieving objectives by using the combined capabilities of project resources or assets.

Project management can be defined as "the set of management techniques applied, to enable the integrated management of the performance, time, cost and human relations frameworks pertaining to a project to achieve the goals of the project" (Brown, 2007).

Researchers Brill et al.(2006), Ingason & Jónasson (2009) and Silvius (2008) have criticized the above-mentioned definitions as focusing too strongly on implementation tools and processes. Furthermore, Brill et al. (2006) argue for an expanded definition of project management that emphasizes the importance of a broader business context and strategy, as well as the leadership of people. Whilst Silvius (2008) believes a recognized definition of project management

competences is more important than settling the discussions about the definition of project management.

## 2.2 Project Management Competence and Competencies

### 2.2.1 Definition of Competency

The subject of competency has been at forefront of discussions among researchers for over two decades. Different definitions and theories have been proposed by various academic and industrial research groups purporting to explain competency. Woodruffe (1991) defines competency as a person-related concept that refers to the dimensions of behavior underlying competent performance. According to Parry (1998), competency refers to a cluster of related knowledge, attitudes, and skills that affects a major part of one's job; that correlates with performance on the job; that can be measured against well-accepted standards; and that can be improved via training and development. The term "competency" has also been defined in the literature as the "underlying characteristics of an individual causally related to criterion-referenced effective and/or superior performance in a job or situation", and the clusters of skills, knowledge, abilities, and behaviors required for success. In this study, we have taken a broad view of competency, as have others: skills, attitudes, knowledge, and personal characteristics that can be improved with experience, education and training.

It is an evolving discipline where its participants are increasingly interested in the competency of its project managers. This project management competence is linked to project performance, and organizational performance (Crawford, 2001). Thus, in the view of Skulmoski & Hartman (2010), there is a strong case for understanding and improving the competencies of project managers.

The terms competency and competence are often used synonymously by employers, professional bodies and project managers in the selection/development of project managers (Delo& Hepworth, 2010) and, even more problematically, competency frameworks often include elements that many would consider attributes (Pellegrinelli & Garagna, 2010).

(Sewchurran et al., 2010) highlight the important conceptual and practical distinctions between these two terms that fundamentally affect their application within organizations: competences are job-focused and relate to functional tasks at which project managers need to be competent, whereas competencies are person focused and are what enable them to execute these functional tasks effectively. In this regard Pellegrinelli & Garagna (2010) state that untangling attributes (or traits), competency and competence, and decisions on other factors, such as values and motivations, is a key problem. Pellegrinelli & Garagna (2010) further confirm that:

- Attributes are inherent, or deeply ingrained, characteristics of individuals;
- Competency relates to a set of aptitudes, attitudes and/or predispositions deemed important for/or underpinning, the effective performance of a specific role; and
- Competence is the minimum standard of performance in a specific role against predetermined criteria.

APM Framework identifies technical, behavioral and contextual competence domains (APM, 2008), whereas "IPMA's ICB defines competence as: Knowledge +Experience + Personal Attitudes. Here knowledge and experience relate to function and attitudes to behaviors. This definition is very much aligned with the views held by (Crawford, 2005) that competence is not a single construct" (Alam et al. (2008).

The PMI PMCD Framework defines three dimensions of competencies, namely knowledge, performance and personal (Gokhale, 2005 and Córdoba &Piki, 2011) and also defines project management competence as that which project managers bring to a project or project-related activity through their knowledge and understanding of project management, experience in the application of this knowledge and core attitude and personality traits that affect their behaviors (Lindbergh, 2009).

Competence, according to Alam et al. (2008), encompasses the ability to predict individual performance against a specific standard and there are five characteristics of competence: motives; traits; self-concept; knowledge; and skills. The type and level of competence has practical implications for project manager development. Knowledge and skills competences tend to be visible, relatively surface characteristics of people, which are easy to develop. Self-concept, trait and motive competences are more hidden, deeper and central to personality.

Being at the bottom of the ‘‘iceberg” they are more difficult to assess and develop. Rather than train, it is more cost-effective to select candidates that already possess these competences. Self-concept, comprising attitudes and values, lies in between and can be changed through personality development experiences.

## 2.3 The Role of the Project Managers

The primary responsibility of the project manager is to ensure that all work is completed on time, within budget and scope, and at the correct performance level (Lewis J, 2007). According to the explanation of Lewis J. (2007), the role of project managers seems to be very misunderstood throughout the world. Because many project managers arrive at their position as a natural progression from their jobs as engineers, programmers, scientists, and other kinds of jobs, both they and their bosses see the job as a technical job, but it is not true. Project managers must understand the mission and vision of the organization first, then they must see how the project they are managing meshes with the organization‘s mission, and they must steer the project to ensure that the interests of the organization are met.

According to him project managers must have good people skills not only technical skills because the project manager‘s job is mostly about dealing with people, it is absolutely essential that they exercise leadership as well as management skills. The project manager is the person assigned by the performing organization to lead the team that is responsible for achieving the project objectives. The role of a project manager is distinct from a functional manager or operations manager. Typically the functional manager is focused on providing management oversight for a functional or a business unit, and operations managers are responsible for ensuring that business operations are efficient on the other hand depending on the organizational structure, a project manager may report to a functional manager. In other cases, a project manager may be one of several project managers who report to a program or portfolio manager who is ultimately responsible for enterprise-wide projects. In this type of structure, the project manager works closely with the program or portfolio manager to achieve the project objectives and to ensure the project management plan aligns with the overarching program plan. The project manager also works closely and in collaboration with other roles, such as a business analyst, quality assurance manager, and subject matter experts (PMI, 2013).

According to Guide to the Project Management Body of Knowledge (PMBOK® Guide) – Fifth Edition (PMI, 2013), project managers have the responsibility to satisfy the needs: task needs, team needs, and individual needs. As project management is a critical strategic discipline, the project manager becomes the link between the strategy and the team. The project manager‘s role therefore becomes increasingly strategic. However, understanding and applying the knowledge, tools, and techniques that are recognized as good practice are not sufficient for effective project management. According to this Guide (PMBOK® Guide), plus to area-specific skills and general management proficiencies required for the project, effective project management requires that the project manager possess knowledge, performance and personal competencies.

**Knowledge**—Refers to what the project manager knows about project management.
**Performance**—Refers to what the project manager is able to do or accomplish while applying his or her project management knowledge.
**Personal**—Refers to how the project manager behaves when performing the project or related activity. Personal effectiveness encompasses attitudes, core personality characteristics, and leadership, which provides the ability to guide the project team while achieving project objectives and balancing the project constraints.

Project managers accomplish work through the project team and other stakeholders. Effective project managers require a balance of ethical, interpersonal, and conceptual skills that help them analyze situations and interact appropriately (PMI, 2013). Based on the PMI (2013), the important sets of interpersonal skills of project managers include leadership, team building, motivation, communication, influencing, decision making, political and cultural awareness, Negotiation, trust building, conflict management, and Coaching.

## 2.4. Core Competencies of Project Managers

According to Prray (1998) sited by PMI (2002), competency is a cluster of related knowledge, attitudes, skills, and other personal characteristics that can affects a major part of one‘s job (i.e., one or more key roles or responsibilities), Correlates with performance on the job, Can be measured against well-accepted standards, can be improved via training and development and can be broken down into dimensions of competence.

Miranda and Ghimire (2008) as project managers take on a more important role in the business world the interest in which competences are necessary to successfully manage projects grows. This growth in interest has sparked the creation of standards and certification programs that describe the discipline‘s practices, offer definitions of the main terms and process, explain the main techniques and serves as the basis for assessing Project managers competences.

Based on the research conducted by Ghimire and Miranda 2008) on their intensive analysis of 50 online job advertisement in USA, Canada, UK, Germany and Australia posted for project managers positions they found the following sets of hard and soft competencies. According to the authors the desired sets of soft competencies include; communication, leadership, problem solving, team building and working with others, organizing, flexibility and alertness, creativity and innovation, human resource management , negotiation and conflict management and positive work attitude whereas the desired hard competencies for project managers position involves project integration management, project scope management, project time management, project cost management, project quality management, project risk management, project procurement management and project management software competences. The authors also clearly stated the criteria used for both soft and hard competencies with detailed explanations of what was considered under each competence on the advertisement as follows:

### 2.4.1. Soft Competences

**(1) Communication** – Sentences that clearly stated communication as well as things such as building or managing relationships, third parties or stakeholders, dealing with information, presentations, reporting, documentation, and language skills, for example, were all coded under communication.

**(2) Leadership –** The sentences that were dealt under leadership included sentences that clearly mentioned the word leadership as well as the ones that included things such as mobilization, influencing people, acting strategically, direction (roadmaps), coaching and mentoring.

**(3) Problem solving –** Sentences that clearly mentioned both parts of this competence problem identification and decision making were dealt in this category.

**(4) Team working –** For team working a distinction was made between being part of a team and managing a team. When the advertisement mentioned managing a team it was classified as

human resource management competence, but when it talked about working in and being part of a team it was dealt under this category.

**(5) Organizing –** This category was limited to sentences or words that mentioned the competence of being organized or organizing. Organizing competence includes phrases like be responsible for organizing; must possess excellent organizational skills; organized; organization ability; strong organizational skills and project managers who are organized.

**(6) Flexibility & alertness** – For this category sentences that mentioned a fast paced and dynamic environment were included under flexibility. Competences which can be coded under flexibility & alertness includes fast-paced environment; experience in a multiple project environment preferred; manage multiple project plans concurrently and prioritize tasks appropriately under changing conditions; very flexible and able to work under pressure; your core task and responsibility is to manage different projects and an eye for detail.

**(7) Creativity & innovation –** This category included both the competence to act creatively and innovatively as the competence to foster such behavior within the participants of the project. It included sentences that either mentioned the word creativity and innovation or called for forward thinking and the ability to identify opportunities.

**(8) Human resource management (HRM) –** For this competence all the sentences that referred to the more formal human resource management procedures were included such as selecting, training and motivating staff.

**(9) Negotiation and conflict management –** All the sentences like manage issue resolution; Conflict resolution; good negotiation skills; act as the catalyst for any resolution; issues management; a born negotiator are mentioned under this heading.

**(10) Positive work attitude –** This category included all the sentences that referred to general competences related to positive working attitude.

### 2.4.2. Hard Competences

**(1) Project integration management –** This category is a broad category by nature. It includes general sentences about PM and words such as PM methods, processes and vague terms about PM. Also sentences that mention dependencies, the whole life-cycle of the project, monitoring and controlling progress and the adherence to deliverables and objectives were classified under this heading.

**(2) Project scope management –** The category of scope management included all the sentences that specifically mentioned scope management, required planning competence, talked about defining or understanding requirements and the ones that mentioned changes. **(3) Project time management** –Sentences that mentioned time, tracking milestones, prioritize and creating as well as monitoring schedule all were coded under this classification. The phrases dealt as project time management incorporates key work packages to be delivered on time; prepare project schedule; monitor the project's progress in terms of planned versus actual schedule; outstanding time management skills; Monitoring of project milestones and delivers the project within agreed time;

**(4) Project cost management –**All sentences that mentioned words such as budget, finance, tracking expenditure were included under project cost management. Depending on the way the sentence was formulated mentions of resource management was also included into cost

**(5) Project quality management –** This category included all mentions of words such as quality, improvements, compliance with quality procedures or regarding the quality of the end result and its usefulness to the client.

**(6) Project risk management** – The sentences classified under this competence include all sentences that mention things like risk, risk identification, risk mitigation, minimizing risk, creating contingency plan and so on.

**(7) Project procurement management –** This category included all words that related to obtaining quotes, bids or offers from suppliers, developing resource requirements and managing contracts from suppliers. Everything that was related to what would be procured and when fell under this category. Project procurement management includes phrases like develop project resource requirements; obtaining quotes from suppliers; develop and manage vendor contracts / agreements; including Procurement, RFP and Contract Management; responsible for advising on the validity of the quotation document information and evaluate, test, specify and procure novel process technologies.

**(8) PM software competence –** The last hard competence that was analyzed dealt with PM related software. General software such windows or Microsoft office were disregarded. The same with industry specific software competence such as specific applications related to programming, in the case of IT advertisements, or graphic designing for marketing positions. Only PM related software was considered. Some examples of PM related software that appeared in the advertisements include MS Project, Visio and Suretrack.

## 2.5. Importance of Project Manager Competence

A project manager's competence is a key factor influencing the eventual outcome of the project and Aitken and Crawford (2008) were able to isolate a consistent group of behavioral competencies associated with successful project managers (Stevenson & Starkweather, 2010). Dainty, Cheng, & Moore (2003) argue that while project management competence represents only one of many criteria upon which project performance is contingent, it is also arguably the most significant as it is people, and not processes and systems, that deliver projects (Cooke-Davies, 2001).

Cheng et al. (2005) explain that finding the right project managers rests in how a company defines the role and, more importantly, how a company defines its project management processes. Most often companies look for project experience when evaluating new project managers, followed by communication skills. Technical skills are assumed for job market entrants. However, the key behavioral competencies involved in the performance domain are dynamic and difficult to identify. Performance measures have been conceptualized based on the iron triangle of time, cost and quality, as well as key traits such as leadership, ambition and aggressiveness (Ahadzie et al., 2008 and Kaklauskas, Amaratunga, &Lill, 2010).

According to Hölzle (2010), the generally described project manager competencies, such as project-specific expertise, problem-solving competence, leadership and social competence have to be complemented with entrepreneurial and project management competence. Depending on the type and scope of the project, the competencies vary in their depth and breadth. Gillard & Price (2005) consider specific attitudes, behaviors and competencies as characteristic of results-oriented, effective project managers. Professional project management competencies are thus achieved by the combination of education and knowledge acquired during training and skills developed through experience and application of such knowledge and experience through effective behaviors (Alam et al., 2008; Alam, Gale, Brown, &Kahn, 2010).

The need for project management competence is well documented. Kaklauskas, Amaratunga and Lill (2010:17) contend that "there is a growing awareness of the relationship between achieving project success and construction project managers' competences". According to Crawford (2000:1), "the competence of the project manager is in itself a factor in successful

delivery of projects". This view is endorsed by Patanakul and Milosevic (2009) and also by Stevenson and Starkweather (2010). Whilst employers need guidance in the selection of a competent project manager (Crawford, 1997), they are responsible for identifying the specific competencies needed for a particular project (Crawford and Gaynor, 1999).

## 2.6. The Competency Standards Approach

Aitken (2011) describes the Competency Standards Approach as being based on the performance-based competency standards used by a number of national qualifications bodies. The following project management professional associations and independent bodies have also created and/or adopted performance-based standards:

- IPMA: International Competence Baseline (ICB) Version 3.0 published by the International Project Management Association (IPMA) in 2006.
- GAPPS: Framework for Performance-Based Competency Standards for Global Level 1 and 2 Project managers published by the Global Alliance for Project Management Performance Standards (GAPPS) in 2007.
- PMI: Project Manager Competency Development Framework (PMCDF) published by the Project Management Institute (PMI) in 2007.
- AIPM: Professional competency standards for project management developed by the Australian Institute of Project Management (AIPM) in 2008.
- APM: Competence Framework developed by the Association for Project Management (APM) in 2008.

The aforementioned are based on the collective opinions of experienced project management practitioners and their understanding of competencies required for effective project managers (Omidvar, et al., 2011).

There are two common criticisms of the competence standards approach, i.e.: (1) the definition of competences and (2) assessment of competences (Aitken, 2011). The primary criticism that has been raised against competency standards is that they are performance-based and they define competencies as measurable behaviors that are demonstrated in a specific environment. This approach excludes intangible qualities that are difficult to observe and measure directly (Birkhead et al., 2000).

Although the existing project management competency standards are trying to propose a comprehensive model that can be used widely to cover most projects, they fail to do so. For instance, the AIPM standard and PMCD framework fail to cover all competency requirements, such as contextual competencies, and, in the IPMA and APM standards, competency requirements in different project phases are neglected. Other models also fail in that some are industry specific or do not cover all required competencies (Omidvar, Jaryani, Samad, Zafarghandi, &Nasab, 2011). The above mentioned focus on the aspects those are common to any kind of project, regardless of its product or industry. Certification, which relies on past experience and theoretical tests, may guarantee success if it is a priority for tasks to be repeatable and known. Research is increasingly scrutinizing the standards' representativeness of what is really required in the field and have raised doubts as to whether these standards do really suffice to explain the success factors of project
managers (Kosaroglu& Hunt, 2009).

As Pellegrinelli and Garagna (2010) state: "Competency models strive to identify what might lead to superior performance and may offer some guidance to potential effectiveness in a role. Important caveats should be noted; competency may not lead to better performance – a base level may suffice". In competence management approaches, the concepts of competences and competence levels are very narrow. The size and the complexity of projects on which a person has worked are checked in a very limited way. It is important for future competence management in projects to improve the links to competence management in human resource management (HRM) (Reusch et al., 2011).

## I. Knowledge-based standards

A body of knowledge (BOK) can be defined as a domain of essential information, mastery of which is required for success in a field or profession. The PMI defines a BOK as generally recognized good practice (PMI, 2008). It publishes a guide to the Project Management body of knowledge (PMBOK Guide) – 4th edition (PMI, 2008) and the APM publishes the United Kingdom's equivalent called the APM body of knowledge APMBOK– 5th edition (Morris, Jamieson & Shepherd, 2006; Marnewick & Labuschagne, 2009).

Aitken (2011) describes the very influential PMBOK Guide (PMI, 2008) as the primary project management knowledge based standard and it documents the key knowledge areas that project managers are expected to know and be assessed against. The guide is structured around nine (project) knowledge areas: Integration, Scope, Time, Cost, Quality, Human Resource, Communications, Risk Management and Procurement Management. Across and within each of these knowledge areas are the process groups: Initiating, Planning, Executing, Monitoring and Controlling, and Closing.

### II. Performance-based standards

Crawford concludes: "Performance-based competence standards describe what people can be expected to do in their working roles, as well as the knowledge and understanding of their occupation that is needed to underpin these roles at a specific level of competence" (Crawford, 2000:9). A valuable aspect of such standards is that they are specifically designed for assessment purposes (ECITB, 2010).

### III. Hybrid standards

Aitken (2011) describes project management standards that do not conform to the formal structure of performance-based standards or go beyond the description of commonly accepted knowledge of project management practice as hybrid standards. The International Competency Baseline (ICB) (IPMA, 2006) and the Project Manager Competency Development Framework (PMI, 2007) are the major internationally accepted standards in this category (Aitken, 2011). Hudson & Moussa (2006) say that while there are other competency standards, these two are the most referred to in literature and commonly accepted across the world of project management practice.

#### a) PMI - Project Manager Competency Development (PMCD) Framework

The PMCD Framework provides an overall view of the skills and behaviors in which one would need to develop competence as a project manager. It provides a framework for the definition, assessment and development of project management competence, defines the key dimensions of competence and identifies those competencies that are most likely to impact on project management performance (PMI, 2007). The PMCD Framework provides general

context for the definition, assessment and development of competency. It also outlines the key dimensions of competency and identifies those competencies that are most likely to impact performance (Pellegrinelli & Garagna, 2010).

### b) IPMA – International Competency Baseline (ICB)

The IPMA's ICB shows the knowledge, experience and personal attitudes expected of project managers (Song & Gale, 2008) and the inclusion of specific behaviors into the primary section of the standard is one of the key differentiators that lead to the classification of the ICB as a hybrid standard (Aitken, 2011). Furthermore, the ICB deals with a mix of knowledge about project management concepts, demonstrable performance against each knowledge topic and specific behaviors that are deemed to be associated with good project management (Aitken, 2011).

In the third version of the ICB, it was decided to describe competent project management in three different ranges:

- The technical competence range - to describe the fundamental project management competence elements. This range covers the project management content, sometimes referred to as the solid elements. The ICB contains 20 technical competence elements.it covers:
  - The whole project, program or portfolio to meet interested parties' requirements;
  - The integration of work in a temporary project, program or portfolio organization;
  - The production of single project deliverables in the project organization;
  - The progress through all phases of the project, all stages of a program, all periods of the portfolio considered.
- The behavioral competence range - to describe the personal project management competence elements. This range covers the project manager's attitudes and skills. The ICB contains 15 behavioral competence elements. It covers:
  - The elements that are merely related to the project manager himself;
  - Followed by the competence elements most related to his direct contacts in and around the project;

- Followed by the competence elements most commonly used in relation to the whole project and parties involved including its context;
- To finish with the elements that has their origins in the economy, society, culture, history.

- The contextual competence range - to describe the project management competence elements related to the context of the project. This range covers the project manager's competence in managing relations with the line management organization and the ability to function in a project focused organization. The ICB contains 11 contextual competence elements. It grouped in terms of:
  - The role of project management in permanent organizations;
  - Inter-relations of project management and the organization's business administration.

However, some aspects of competence, such as self-concept and value, are not included in the ICB (Song & Gale, 2008). The ICB describes competent project management in three different ranges, represented below in figure 2.1

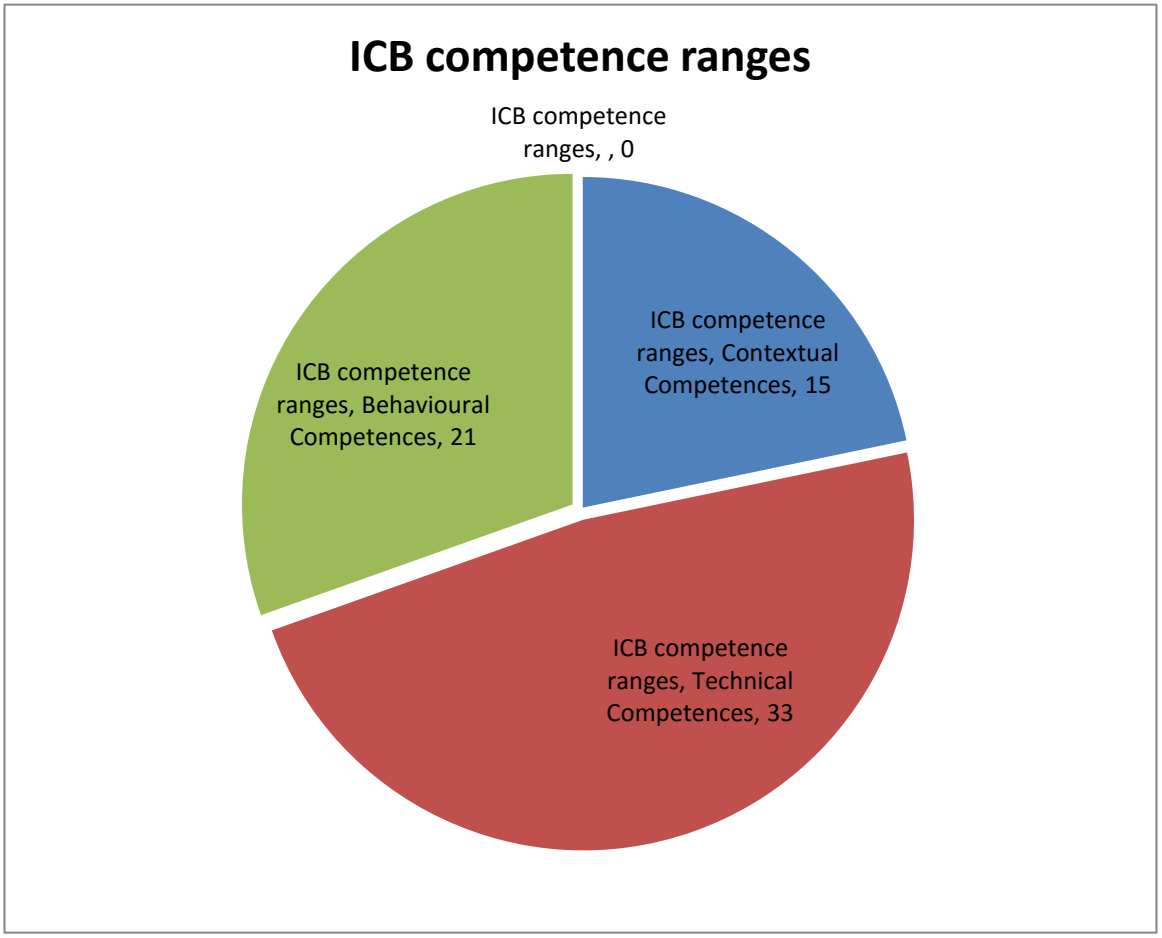

**Figure 2.1: The ICB Eye of Competence (IPMA, 2006)**
Source: Adapted from IPMA (2006:37)

### 2.6.1 Competence element

Every competence element in each range is described in terms of the knowledge and experience required. After a general description, stating the meaning and the importance of the competence element, it is broken down into possible process steps to help the candidate as well as the assessor to understand how the competence element can be applied in a project and Topics addressed to aid further reading and internet searching. The knowledge and experience required at each IPMA Level is described in Key competence at Level statements. There is finally a Main relation section which lists related competence elements. The behavioral competence elements are, for the sake of assessment, also supported by pairs of statements related to adequate behaviors versus Behaviors requiring improvement.

For the purpose of this study the research take IPMA – International Competency Baseline (ICB) to develop a question to assess the project management competency in the company.

## 2.7 Critical Success Factors for Projects (CSFS)

According to Pinto and Slevin (1987), as a project comprise a defined time frame to completion, a limited budget, and a specified set of performance characteristics, a project is generally considered to be successfully implemented if it Comes in on-schedule (time criterion); Comes in on-budget (monetary criterion); achieves basically all the goals originally set for it (effectiveness criterion) and is accepted and used by the clients for whom the project is intended (client satisfaction criterion). The authors also identified 10 project success factors which are defined below.

1. **Project mission**-Initial clearly defined goals and general directions.

2. T**op management Support-**Willingness of top management to provide the necessary resources and authority power for project success.

**3. Project Schedule/Plan**-A detailed specification of the individual actions steps for project implementation.

4. **Client Consultation**-Communication, consultation, and active listening to all impacted parties.

5. **Personnel-Recruitment**, selection, and training of the necessary personnel for the project team.

6. **Technical Tasks**-Availability of the required technology and expertise to accomplish the specific technical action steps.

7. Client Acceptance-The act of "selling" the final project to its ultimate intended users.

8. **Monitoring and Feedback-**Timely provision of comprehensive control information at each stage in the implementation process.

9. **Communication**-The provision of an appropriate network and necessary data to all key actors in the project implementation.

10. **Troubleshooting-**Ability to handle unexpected crises and deviations from plan.

Cooke-Davies,(2001;2002) describes twelve project success factors as:

1. Adequacy of company-wide education on the concepts of risk management.
2. Maturity of an organization’s processes for assigning ownership of risks.
3. Adequacy with which a visible risk registers is maintained.
4. Adequacy of an up-to-date risk management plan.
5. Adequacy of documentation of organizational responsibilities on the project.
6. Keep project (or project stage duration) as far below 3 years as possible (1 year is better). Those that correlate to on-cost performance are:
7. Allow changes to scope only through a mature scope change control process.
8. Maintain the integrity of the performance measurement baseline. In terms of individual projects he identified a ninth factor:

9. The existence of an effective benefits delivery and management process that involves the mutual co-operation of project management and line management functions. His work also considered how projects fit into programs that allow us to better understand project success in its broader context rather than an individual project:
10. Portfolio and program management practices that allow the enterprise to resource fully a suite of projects that are thoughtfully and dynamically matched to the corporate strategy and business objectives.
11. A suite of project, program and portfolio metrics that provides direct 'line of sight' feedback on current project performance, and anticipated future success, so that project, portfolio and corporate decisions can be aligned. Since corporations are increasingly recognizing the need for 'upstream' measures of 'downstream' financial success through the adoption of reporting against such devices as the 'balanced scorecard'.
12. An effective means of 'learning from experience' on projects, that combines explicit knowledge with tacit knowledge in a way that encourages people to learn and to embed that learning into continuous improvement of project management processes and practices.

According to the research conducted by Antencio (2013) the success of the project is determined by four critical factors; project managers 'competency dimensions, project team factors, project factors and organizational factors.

## 2.8 Conceptual Framework of the Study

According to the Project manager competency development framework revised edition published by PMI (2002), a competent‖ project manager alone does not guarantee project success. PMI believes that project success requires project manager competence, as well as organizational project management maturity and capability cannot be ignored. In other words, having a project manager who possesses the right‖ competencies cannot ensure project success (PMI, 2002).

In other word there are too many organizational maturity factors and other contingencies that influence the outcome of the project as well. And it is possible to have a competent project

manager working within an immature organization, which could result in an unsuccessful project, or vice versa.

The below diagram showed the stated purpose of the study.

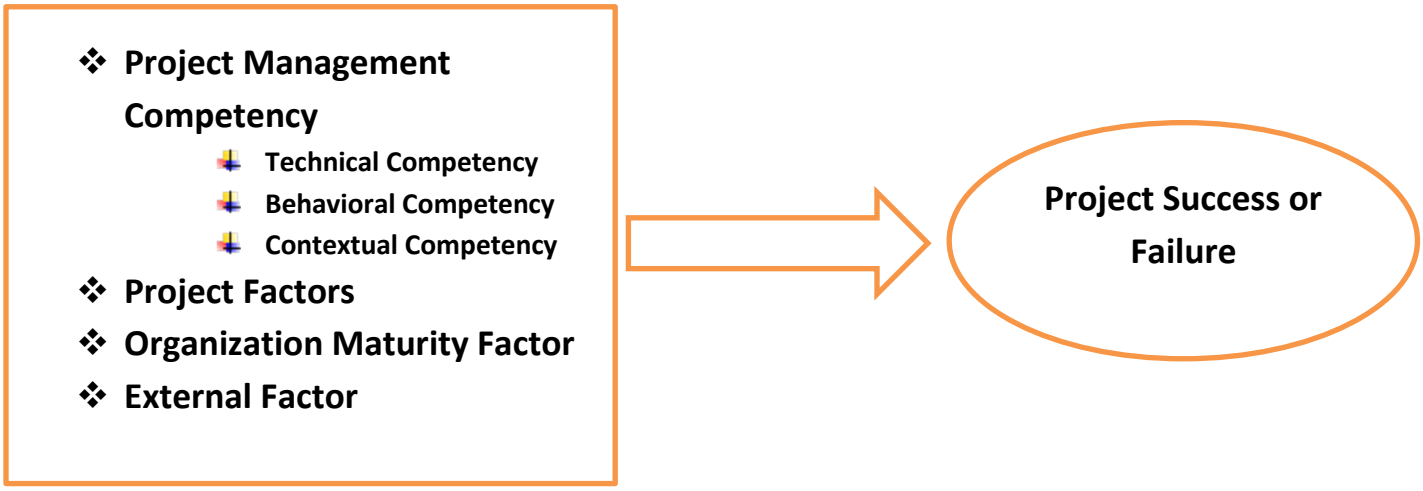


**Figure 2.2.Conceptual Frame Work**

# CHAPTER THREE: RSEARCH DESIGN AND METHODOLOGY

## 3.1. Research Design and Approach

To accomplish the study objective and to answer the stated research questions, the study will use descriptive method so as it would be more suitable to assess the current project management competences of the company. And the choice of the study design is made due to the researcher's experience helped to find it easier applying descriptive statistics to assess the existing project management competency in the company.

## 3.2. Sample and Sampling Technique

In this study the researcher used non-probability sampling technique. According to Saunders (2009); non probability sampling provides a range of alternative techniques to select samples based on your subjective judgment. From non-probability sampling techniques the researcher used purposive sampling technique. Purposive or judgmental sampling enables you to use your judgment to select cases that will best enable you to answer your research question(s) and to meet your objectives (Saunders, 2009).

The population of the study consisted from Project team: 4 of staffs who has a managerial position on handling of e-CAF project activities in different dimension and 12 project staffs who are fully involved on the project and its implementation process who are selected judgmentally based on their participation on the project, Human resource division: 3 staffs who has a managerial position and selected judgmentally based on their responsibility, 11 staffs from user departments who are participated on the pilot test of the project and selected judgmentally based on their knowledge about the project.

## 3.3. Source and Instrument of data collection

In order to answer raised research questions, both Primary and secondary data sources are used in this study. The primary data collection method is performed using semi-structured interview and document review related with e-CAF project. In addition to primary data sources,

secondary data sources like past studies are collected in order to obtain some reliable literature and empirical findings that can be applied in order to have a better understanding on the area.

## Participants

All 30 participants who are invited and entered the study completed the interview session. The interviews were conducted separately for participant 1, 2, 3 and 4 in order to avoid the position influent. It conducted during the working hours of the participants and the research took the data in written form. The experience among participants ranged from five to ten years.

## Procedure

All judgmentally selected staffs from the respective division were invited to participate for the interview through email and telephone, and schedule the interview time and place based on their convenience. A day before the given appointment date, the researcher were sent a reminder to all participants for conformation. They were briefed on the study orally by a researcher at the beginning of the interview. Participants were informed about the voluntary character of participation and the possibility to skip the question if they have no clear information about the issues raised by the researcher. The participants were guaranteed anonymity. In addition to the oral briefing, participants obtained written information about the problem statement of the study. All participates were interviewed within 4days, and all the relevant documents gathered and reviewed within two weeks.

# CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION

## 4.1 General Information about the participant

In this study the researcher used non-probability sampling technique. Because according to Saunders (2009); non probability sampling provides a range of alternative techniques to select samples based on your subjective judgment. From non-probability sampling techniques the researcher used purposive sampling technique. Purposive or judgmental sampling enables you to use your judgment to select cases that will best enable you to answer your research question(s) and to meet your objectives (Saunders, 2009).

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For the analysis purpose of the respondents response the researcher categorized 4 staffs who has a managerial position on the project as participant one, 12 project staffs as participant two, 3 staffs who has a managerial position in human resource division as participant three and 11 staffs from the project user departments who are participated in pilot test of the project as participant four.

## 4.2. Analysis of Semi-Structured Interview

The question that should be analyzed discussed as follows:

**Competence involves technical, behavioral and contextual. The participants requested which competences can be considered most important for a project manager and the reasons.**

Concerning this point, which can be considered as most important from technical, behavioral and contextual competencies for project manager, three respondents from participant one, believes that since the technical competency address more critical activities like risk management, requirement management, estimating the project budget and time, scope management and other activities which is directly related with the project lifecycle, a project manager better to have technical competency for effective project handling and implementation. And also they didn't discard the importance of the behavioral and contextual competency but the highest wait should be given to the technical competencies. The remaining one respondent from participant one, all three competencies are equally important to have for successful handling and implementation of the project.

About participant two are the project team member's views, a project manager should have project management knowledge, skills and the necessary personality to implement projects as planned. But eight of them give emphasize having project management knowledge is the key for the project success.

Regarding participant three, they believe all competencies are important for project manager in order to achieve the project goal but the key one is having the project management knowledge and skill.

Finally from participant four, seven of them believed that project management knowledge and skill are the key competency for any project manager but it is also important to have behavioral competency to manage and coordinate the project team towards the project goal but the remaining participants from participant four said that both technical and behavioral competencies are equally important for a project manager i.e a project manager should have both competencies in order to achieve a project goal.

**Actions the project managers have done to develop knowledge, skills and personalities that may impact the project success and the reason discussed as below.**

All interview participant agreed on a project manager should develop his/her knowledge related with the project work, skills and personalities in order to go with dynamic business world.

Related with this, one from participant one, four from participant two and seven from participant four strongly believed that project managers should get short-term certification or long-term education to get knowledge about tools and techniques of project management,

contemporary issues about the project and project lifecycle then which leads to complete more of their projects on time, on budget and meeting original goals.

The remaining participants believed that like official certification an experience which one has develop through the process and reading has equivalent value for project manager to complete the project successfully but it not assure the success.

**Regarding the competence that project managers wish to have or further develop and that would significantly improve ability to manage projects with internal capability**

Two of participant one, all of participant two, and nine of participant four agreed on to develop a leadership skill is more important to increase the ability of managing the projects. And the reasons that they pointed out are leaders can influence the project team towards the project goal, also if a project manager has a leadership skill in one or other way he/she has commitment, cooperation the team to have a team sprit against the project goal, act with sincerity and ethics, empowered to act and take accountability for the action taken, foresighted to challenge the status quo, and customer focused behavior.

Also they pointed out competences relate to stakeholder and sponsor relationship management is very important because projects are not implemented in the vacuum; they are implemented in the open system which is characterized by many interactions. The responses indicated that the project manager should develop stakeholder and sponsor relationship management to get the attention and participation from stakeholders.

The reaming participants from participant one believed that having strong problem solving skill with leadership skill can change the project level of success and makes the project manager more capable.

All participant three and the remaining participants from participant four agreed on a project manager with good leadership, problem solving and, creativity and innovation skills are more important because most of other soft competencies included in this three basic competencies and which makes significant difference with the one who has not this abilities. Also participants pointed out the contribution of professional experience has critical role to achieve superior performance with internal capability.

**The project management competence (core competencies) that if lacking could compromise project performance**

When answering this question all participant one, three participants from participant two are kept focused on soft competences. They said that projects are implemented by people and with people. If one can‘t manage the human side of the project the result is predicted earlier which is failure. But they also didn‘t ignore the importance of hard competences too.

Eight participants from participant two, all participant three and five participants from participant four are argued that both sets of competence should be balanced. One participant from Participant two is highly focused on hard competences must be prioritized in technological related projects like e-CAF projects. But six participants from participant four clearly draw the importance of both sets of competence dependence on the situations in the project. Different situation required different sets of competence and they clarify the situation like the complexity, size, nature and type of organization in which the project undertaken

**5. What are the sets of competencies used as criteria for recruiting someone or assigned to work on projects? What do you pay more attention to the hard or the soft competences? Why?**

Concerning this question all participants have agreed on the company has a human resource policy to hire a potential project manager and in the process first the human resource department set a selection criteria which related with the knowledge required for the specific project for which they are looking a manager.

These criteria included annual evaluation of the applicant, educational background, project management experience and other abilities like working with others, team work and working under complex and stress situation. The company set the annual evaluation result of the applicant must be SER (significantly exceeding from requirement) and FMR (fully meeting requirement). Applicants who have annual evaluation below FMR are not eligible for the position.

Therefore based on the above requirements preliminary section completed and candidates who passed to interview identified. And the company believed that through interview the participant’s competencies can be evaluated. But two participants from participant one, nine

participants from participant two and six participants from participant four strongly argue that it is difficult to evaluate the candidate competency level through interview also the interview questions are used for most position more or less similar and used with only a minor adjustments for the position, using this it is difficult to evaluate the hard competencies of the participants. Because of this these participants also pointed out, the selection process vulnerable for personal judgments.

But all participants from participant three argue that the hard and the soft competencies are equally relevant for the project manager and the company used education level as a criteria to select candidates passed to interview even though there are a question which can evaluate a hard competencies on the interview.

**Regarding Measure should be taken to fill the gap of project team based on an assessment of their competences in typical related to project management activities**

All participants one and three agreed on the company should create an awareness why gap analysis is important because most of the time the employees consider it as their weakness and it may bring a backfire on their current position. After the gap assessment has been completed the company human resource development section should prioritize the gaps and include on their training and workshop plan based on their urgency also the company should arrange a knowledge transfer plan from successful project managers.

The remaining participants, all participant two and four, add on the above points that the company PMO department should document the lesson learned, and how the issues and changes managed on closed projects and communicate it to the employees related with handling project activities. In addition they emphasized that company should change the training methodology, it must use more a practical assignments while conducting the training then it helps to see their changes on the area.

**About the role of the Project Management Office (PMO) in project management process;**

All interviewed participants agreed on the project management office has no significant role in the project management process except documenting project requirements, each project phase completion report, the agreement between the company and the vendors, the project charter, the closure report and other related documents.

All participants two, and three participants from participant four stated that the project office not working as expected but if it works as expected, it helps the project manager for successful implementation, playing an advisory role for top management for prioritizing projects and developing project management skills company wide. On the other hand all participants one and the remaining participants from participant four added POM of the company was not have a significant role on the e-CAF project implementation. It was generally out of the project circle and even the office not takes over the documents. And they strongly recommend the company should have well organized and matured PMO for successful project implementation.

Regarding factors that affect the project failure and success; all participants in one or other word mentioned that the project success or failure factors are economic, social, technological and political factor.

Especially all participants of participant one, two and four pointed out that regarding social factors ethio-telecom uses distributes to distribute its products and services on behalf of the company and under the distributers there are sub distributers and retailers. This retails throughout the country are the user of the e-CAF system through android technology when they are selling the SIM cards. So, the ability and academic background of the retailers to internalize the system highly affect the project success.

Regarding the political factors the participants agreed on the government interest on the project to handle all customers profile on system to retrieve the customer's agreement whenever required by the company and legal entities also it helps minimize the fraudsters activities by taking a SIM cards without a profile so the government has high attention on the company projects.

Based on the above explanation the external factors contribute a huge roll on the project success.

Generally all participants agreed on the projects taken by the company are not as successful as expected. And the reasons mentioned by participant one and two focused on since most of Ethio telecom projects are technological advancement and/or expansion and adopted from international organization, it is highly vendors dependent so the knowledge transferred from the vendors are limited and affect the success rate of the projects when they are in use.

The remaining participants pointed out the reasons as the project managers may have additional functional/operational duties on the company which may lead the project manager not to use his/her time and effort fully to the project only, and the government imposed its interest over the project purpose.

But all participants one, two and four agreed the e-CAF project is relatively successful because the project completed on predetermined budget, with justifiable schedule difference, and meet the intended purpose with minor limitation. To do so, the project manager and team were very committed to the purpose of project, the top management including the board of director give adequate support, the project manager and the team members has a project management and implementation experience that helps them to improve the problem faced in the previous projects and generally they follow most of the project lifecycle steps.

### 4.3. Analysis of document review

On this assessment of the project management competencies in ethio-telecom – in the case of e-CAF project the researcher review contractual agreement with the vendor, low and high level design document of the system, system requirement, project release & deployment plan, project closure, many reports to stockholders and project charter which include the project success criteria & expected deliverables, risk and issue management plan, change management plan, cost & time management plan, and project meeting schedule.

In the project the team tries to identify many risks that might affect the project success. The identified risks include timely opening LC, unsafe delivery of hardware and terminals, lack of software experts on the area for integration, limited data center capacity for e-CAF hardware installation, and difficulties of roll out planning & strategy. And in the plan all risks measured their probability of occurrence, the expected impact to the project success and assigned the risk owner but the plan not include strategies for mitigation for this identified risks.

In addition, after completion of each project lifecycle, it should be approved by the authorized person and sent to PMO for documentation but the researcher can see there were no an appropriate documentation of each project lifecycle completion and approvals including the handover of the project to operation section.

Finally from different repots after the pilot test of project the research can see that there were a wrong planning in some project areas like required storage capacity and the human capacity

required for immediate approval response for the orders sent from Ethio telecom point of sales and retailers. So, since there is a PMO which established to handle the company project issues the company should advance the current activities of the department in order to minimize the failure rate of the projects and standardized the project management process of the company.

# CHAPTER FIVE

# 5. CONCLUSION AND RECOMMENDATION

## 5.1. Conclusion

The findings in this study are based on interview and document review related with e-CAF project, the analysis shows that the project managers in Ethio telecom is good at in soft competences like project communication management, stakeholder management and project human resource management. Based on the results of the analysis, the managers also need some improvements in their skills related to conflict management, contract management and negotiation.

From the document review it can be concluded that the project managers need to improve their hard/technical competences like planning of schedule, documentation of each project lifecycle completion, risk management planning including the mitigation strategies, developing requirements with intended purpose and other related skills to lead their projects with internal capability which can reduce high cost which is paid for external consultants and vendors.

Based on the findings, project managers of Ethio telecom are assigned from experienced functional level managers in the company. It means that mostly the managers have adequate experience of handling the routine telecom activities in the company and when they assigned as a project manager they need well designed trainings regarding to the unique nature of projects and required soft and hard competence for successful project completion.

In addition from the interview participants pointed out the top soft competences like leadership, team working, conflict handling, problem solving, creativity and innovation and stakeholder relationship management skills and the top hard competencies include project cost, time and scope planning, implementation management, project success management, and risk and change management.

The response from interview showed both hard and soft competences are important and some of the interviewees emphasized that lacking soft competences could compromise the project success but the remaining highlighted hard competencies are more important for technological projects like e-CAF project. The finding of this study is similar to the finding of the researchers

Miranda & Ghimire (2008) in identifying the top hard and soft competences desired by project managers for successful project implementation. Also Gillard (2008) emphasized the need for both soft and hard competence for project success and fulfilling the role of the project manager. PMI also suggested it in its PMBOK that PM organizations, academics and PM professionals all have similar opinion towards the competences required for project managers and recognize the need for both soft and hard competences.

Regarding the other project success factors in developing the framework of project success like project factors and external factors, the participants had similar view points. Based on the interview conducted, project factors like its complexity, time to market (urgency) and external factors like political, economic, socio-cultural and technological should be included in developing frameworks for successful project implementation.

Finally about the overall project success level of Ethio telecom projects, the participants have similar perspective that the projects were not as successful as expected and it is due to almost technological projects are vendor dependent, there must be a good knowledge transfer plan but in the actual scenario mostly the knowledge transfer not give to employees who are directly related to that specific area, and government imposed its interest over the project objective so, it create a conflict on the objective and it might compromise the project objective.

## 5.2. Recommendations

The researcher recommends the following points for better improvements of project managers' competency and increasing the successful project management in the company:

- The company should mature the project management office (PMO) by recruiting professionals with project management knowledge, developing standardize reporting temples, setting measurable results, and etc. then the office would contribute in supporting the human resource development section by identifying a specific skills required for specific projects that can help to give trainings that can fill their gap.

Also the office should compile and disseminate lesson learned from pervious closed projects that can aid to create project management awareness throughout the company and support the higher management to make a corrective actions for next projects.

- The company should develop ongoing and regular professional development opportunities in project management methodologies with specific attention to leadership skills since most off the participants pointed out luck of leadership skill can affect the project success.

- The company should design different work shop and trainings that could solve project managers‘ skill gaps in cost estimation, requirement development, schedule and scope planning, risk and issue management, as well as in project management‘s principles and distinct skills required for specific projects.

- Ethio telecom should include project managers required level of technical, contextual and behavioral skills in the company competency matrix for selecting the right project manager rather than giving simple assignment by the top level management of the company. In addition the company should take the competency matrix into consideration when selecting project team members who will take knowledge retransfer training which is mostly given by the vendors that can minimize the failure rate of the projects after it passes to operation and it can assure the company to manage projects by its internal human capacity.

- Also the company should take into consideration the external factors; economic, socio-cultural, political and technological which have a great implication on the project success.

- Since ethio telcom assign project manager for a specific project from the operation managers, it should develop a set of self-assessment tools, such as surveys and questionnaires, for project managers to determine their own competency strengths and weaknesses and do a continuous assessment to enable them based on the assessment result.

## 5.2. Further area of Study

From the findings of the study it was confirmed that both hard and soft competencies are important to the project success and identified the most important hard and soft competencies for the project success. However the study has some limitations. First it was limited to the e-CAF project participants. Time was the other major constraint to gather more information in the specific area and consider more projects in the company. Further studies should be conducted in this specific area by considering more projects conducted in the company in continual bases.

REFERENCE


AIPM.(2005). *Transferability of project management skills & competencies.AIPM*.Management Skills and Competencies.pdf (Accessed 10 April 2012).

AIPM.(2008). *AIPM Professional Competency Standards for Project Management.Communications of the ACM* (Vol. 10). Sydney, Australia: Australian Institute ofProject Management.

APM.(2008). *APM Competence Framework.Communications of the ACM* (Vol. 10).High Wycombe, Buckinghamshire, United Kingdom: Association for ProjectManagement.

Ahadzie, D. K., Proverbs, D. G., &Olomolaiye, P. O. (2008a). Towards developingcompetency-based measures for construction project managers : Should contextualbehaviours be distinguished from task behaviours ? *International Journal of ProjectManagement*, *26*, 631–645.

Ahadzie, D. K., Proverbs, D. G., &Olomolaiye, P. O. (2008b). Model for predictingthe performance of project managers at the construction phase of mass housebuilding projects.*Journal of Construction Engineering and Management*, (August),618–630.

Aitken, A. (2011). *Coping strategies of project managers in stressful situations.*Doctoral dissertation - Bond University. Brisbane, Australia.

Aitken, A., & Crawford, L. (2008).*Senior management perceptions of effectiveproject manager behavior: An exploration of a core set of behaviors for superiorproject managers.*

Alam, M., Gale, A., Brown, M., & Kahn, A. I. (2010). The importance of human skillsin project management professional development.*International Journal of ManagingProjects in Business*, *3*(3), 495–516.

Alam, M., Gale, A., Brown, M., & Kidd, C. (2008). The development and delivery ofan industry led project management professional development programme: A casestudy in project management education and success management. *InternationalJournal of Project Management*, *26*, 223–237.

Birkhead, M., Sutherland, M., & Maxwell, T. (2000). Core competencies required ofproject managers. *31*(3), 99–105.

Brill, J. M., Bishop, M. J., & Walker, A. E. (2006). The competencies andcharacteristics required of an effective project manager: a Web-based Delphi Study.*Educational Technology Research and Development*, *54*(2), 115–140.

Canada, B. S. (2009). *The role of leadership and management skills in the successof construction project managers.*Masters dissertation - Arizona State University.Arizona, United States.

Cheng, M., Dainty, A., & Moore, D. (2005). What makes a good project manager?*Human Resource Management Journal*, *15*(1), 25–37.

Cooke-Davies, T. J., &Arzymanow, A. (2003). The maturity of project managementin different industries: An investigation into variations between project managementmodels. *International Journal of Project Management, 21*, 471–478.

Crawford, L. (1997). A global approach to project management competence. In:*Proceedings of the 1997 AIPM National Conference.* Gold Coast, Brisbane:AIPM, 220–228.

Crawford, L. (1998). Project management competence for strategy realisation. In:*Proceedings 14th World Congress on Project Management.* Edited by A. Hauc,R. Kovac, B. Rozman, A. Semolic and A. Skarabot. Ljubljana, Slovenia: InternationalProject Management Association and Slovenian Project Management Association,10–21.

Crawford, L. (1999). PM Competence: People and Organisations. In: *Proceedingsfor NORDNET'99: Managing Business by Projects.* Edited by K.A. Artto,K. Kahkonen and K. Koskinen. Helsinki, Finland: Project Management Association,Finland and NORDNET, 1–18.

Crawford, L. (2000). Profiling the competent project manager. In: *ProjectManagement Research at the Turn of the Millennium: Proceedings of PMI ResearchConference,* 21 - 24 June, 2000. Paris, France. Sylva, NC: Project ManagementInstitute, 3–15.

Crawford, L. (2001). *Project management competence: workplace assessment anddevelopment.*

Crawford, L. (2005). Senior management perceptions of project managementcompetence.*International Journal of Project Management*

Crawford, L., & Gaynor, F. (1999). Assessing and developing project managementcompetence. In: *Proceedings of the 30th Annual Project Management Institute 1999Seminars & Symposium.* Sylva, NC: Project Management Institute,

Crawford, L., Hobbs, B., & Turner, R. (2005).*Project categorization systems:Aligning capability with strategy for better results*. *Communications of the ACM* (1st ed., Vol. 10). Newtown Square: Project Management Institute, Inc.

Crawford, L., &Nahmias, A. H. (2010). Competencies for managing change.*International Journal of Project Management*, 405–412.

Dainty, A. R. J., Cheng, M.-I., & Moore, D. R. (2005).Competency-based model forpredicting construction project managers' performance.*Journal of management inengineering*

Dainty, A.R.J., Cheng, M.-I., & Moore, D. R. (2003). Redefining performancemeasures for construction project managers: an empirical evaluation. *ConstructionManagement and Economics*, 209–218.

Delo, A., & Hepworth, A. (2010).Assessing the competent project manager.*ProjectManager Today*, (March 2010)

Din, S., et al. (2010). ISO 9000 certification and construction project performance:The Malaysian experience. *International Journal of Project Management*, *14*, 206–208.

Ethio telecom (2013), Ethio telecom Company Profile Draft,Addis Ababa

Ghimire,B. and Miranda, T.(2008). Desired Competences for Project Managers, Master Thesis

GAPPS.(2007*). A framework for performance-based competency standards forGlobal level 1 and 2 project managers.Assessment.*Global Alliance for ProjectPerformance Standards.

GAPPS.(2011). *A framework for performance-based competency standards forprogram managers.Program.*Global Alliance for Project Performance Standards.

Gillard, S. (2009), *Soft Skills and Technical Expertise of Effective Project Managers*, *Issues inInforming Science and Information Technology*, Vol.6, 2009, 723-729,USA

Gelbard, R., &Carmeli, A. (2009).The interactive effect of team dynamics andorganizational support on ICT project success.*International Journal of ProjectManagement*, *27*(2), 464 –470.

Gillard, S., & Price, J. (2005). The competencies of effective project managers: aconceptual analysis. *International Journal of Management*, *22*(1), 48–54.

Gokhale, D. (2005). *PM Competency Mapping.* Originally published as a part of 2005PMI Global Congress Proceedings – Singapore, 1–8.

Hudson, K., & Moussa, N. (2006). The skills of an information technology projectmanager– Do project management competency standards have what it takes?*Project Perspectives 2006*, 92–95.

Hölzle, K. (2010). Designing and implementing a career path for project managers.*International Journal of Project Management*, *28*(8), 779–786.

IPMA.(2006). *ICB - IPMA Competence Baseline Version 3.0*. Netherlands:International Project Management Association.

Ingason, H. T., &Jónasson, H. I. (2009).Contemporary knowledge and skillrequirements in project management.*Project Management Journal*, *40*(2), 59–69.

International Standish Group Inc. (2009). *Extreme Chaos 2009*.Communications ofthe ACM (Vol. 10). West Yarmouth, MA: The Standish Group.

Kaklauskas, A., Amaratunga, D., &Lill, I. (2010). The life cycle process model forefficient construction manager: conceptual modelling at the level of personality andat micro, meso and macro levels. In: *Proceedings of the Construction, Building andReal Estate Research Conference of the Royal Institution of Chartered Surveyors*.Dauphine Université, Paris: RICS. 1–25.

Kosaroglu, M., & Hunt, R. A. (2009). New product development projects and projectmanager skill sets in the telecommunications industry. *International Journal ofManaging Projects in Business*, *2*(2), 308–317.

Labuschagne, L., Marnewick, C., &Jakovljevic, M. (2008).*IT project managementmaturity: A South African perspective.*

*Journal of Construction in Developing Countries*,*13*(1). Available from:http://web.usm.my/jcdc/input/JCDC Vol 13(1)/2_Kedsuda Limsila (p. 27-50)

Lindbergh, L. B. (2009*). The relationship between project manager perceivedcapability, organizational culture, and project outcomes.* Doctoral dissertation -Capella University. Minneapolis, Minnesota, United States

Lewis, J. (2007). *Fundamentals of Project Management, 3rd ed*., AMACOM, USA

Marnewick, C., &Labuschagne, L. (2006).*Factors that influence the outcome ofinformation technology projects in South Africa: an empirical investigation, 1–13.*

Nwagbogwu, D. C. (2011).*The correlation between project managementeffectiveness and project success.*Doctoral dissertation - Walden University.Minneapolis, Minnesota, United States.

Omidvar, G., Jaryani, F., Samad, Z., Zafarghandi, S., &Nasab, S. (2011a). Aproposed framework for project managers' competencies and role of e-portfolio tomeet these competencies.

Omidvar, G., Jaryani, F., Samad, Z., Zafarghandi, S., Nasab, S., &Jamshidi, J.(2011b). E-portfolio role to enhance project managers' competencies. Vol. 15, 200–204.

Omidvar, G., Jaryani, F., Zafarghandi, S., Nasab, S., &Jamshidi, J. (2011).Importance degree of technical competencies based on it project managers'perspective. In: *Proceedings of the 2011 2nd International Conference on Educationand Management Technology IPEDR*. Singapore: IACSIT Press. Vol. 13, 150–153.

Omidvar, G., Samad, Z., &Zafarghandi, S. (2011). Critical evaluation of projectmanager's competency standards for proposing a comprehensive model. In: *Proceedings of the 1er Congrès International en Management etGestion des projets.*Gatineau, (Québec), Canada, 2011, 1–26.

PMI. (2004). *Guide to the Project Management Body of Knowledge (PMBOK)*.Communications of the ACM (3rd ed), Vol. 10.

PMI.(2007). Project Manager Competency Development (PMCD) Framework(Second Edition).*Management* (pp. 1–91).

PMO Report of Ethio telecom (2015/2016), Addis Ababa, Ethiopia.

Patanakul, P., & Milosevic, D. (2009). The effectiveness in managing a group ofmultiple projects : Factors of influence and measurement criteria. *InternationalJournal of Project Management, 27*(3), 216–233.

Pellegrinelli, S., &Garagna, L. (2010). Facilitating selection and development: thecase of the "accidental professionals" - project and programme managers. Rashidi, A., Jazebi, F., &Brilakis, I. (2011).Neurofuzzy genetic system for selectionof construction project managers.*Journal of Construction Engineering andManagement*, *137*(1), 17–29.

Sewchurran, K., Namwila, M., &Rakubutu, T. (2010).*Exploring the development ofProject Management competency amongst IS Professionals.*

Shao, M. G. (2006). *Development of project manager selection tool based on projectmanager competency.*Master's thesis - Ottawa University. Ottawa, Canada.

Shepherd, M. (2005*).* Searching for effective project managers' skills, knowledgeand measurement. In: *Proceedings of the Third International Conference onConstruction in the 21st Century Advancing Engineering, Management andTechnology*, September 15-17, 2005.

Silvius, A. J. G. (2008). Project management 2027; the future of project management.In: *Proceedings of the 22nd IPMA World Congress "Project Management to Run",*9 - 11 November 2008, Rome, Italy (pp. 1–6).

Silvius, A. J. G., &Batenburg, R. (2009).Future development of ProjectManagement competences. In: *Proceedings of the 42nd Hawaii InternationalConference on System Sciences – 2009.* Hawaii. 1–10.

Skulmoski, G. J., & Hartman, F. T. (2010). Information systems project manager softcompetencies: a project-phase investigation. *Project Management Journal*, *41*(1),61–80.

Smith, D. C., Bruyns, M., & Evans, S. (2011). A project manager's optimism andstress management and IT project success. *International Journal of ManagingProjects in Business*, *4*(1), 10–27.

Slevin and Pinto, (1986).*The Project Implementation Profile: New Tool for Project Managers, Project Management Journal*, pp. 57-58, MacMillan

Song, S., & Gale, A. (2008).Investigating project managers' work values byrepertory grids interviews.*Journal of Management Development*, *27*(6), 541–553.Sonnekus, R., &Labuschagne, L. (2003).*IT project management maturity versusproject success in South Africa*. Technology (pp. 1–32).

Starkweather, J. A., & Stevenson, D. H. (2011). PMP Certification as a corecompetency: necessary but not sufficient. *Project Management Journal*, *42*(1), 31–41.

Saunders, M., Lewis, P. and Thornhill,A. (2009),*Research Methods for Business Students,5th ed*., Pearson Professional Limited, Britain.

Stevenson, D. H., &Starkweather, J. A. (2010). PM critical competency index: IT execs prefer soft skills. *International Journal of Project Management*, *28*(7), 663–671. Strbac, S. (2006).*The staffing process for product development projects: A casestudy at 3P, Volvo AB.* Masters dissertation - Chalmers University of Technology. Gothenburg , Sweden.

Turner, J. R., & Müller, R. (2005). The project manager's leadership style as a success factor on projects: a literature review. *Project Management Journal*, *36*(1), 49–62.

Van Der Merwe, S., &Bussin, M. (2006). An evaluation of a communication, facilitation and project management tool to enhance the effectiveness of project execution.*SA Journal of Human Resource Management*, *4*(3), 48–54.

Van der Westhuizen, A. I. (2008). *An assessment tool for measuring business process management as a core capability in an organization.*Doctoral dissertation -University of Pretoria. Pretoria, South Africa.

# Appendix

## Semi-Structured Interview

Dear Respondents:

I am a master‘s student in project management at Addis Ababa University School of Commerce conducting a research on the subject of project management. The specific topic of my research is: An Assessment of Project Management Competency in Ethio telecom.

Therefore, your response and participation in the interview and focus group discussion will be extremely valuable in understanding core project managers ‘competency that can impact project success and all the response is used only for this study.

Thank you in advance for your voluntary participation

1. Competence involves technical, behavioral and contextual. Which competences can be considered as most important for a project manager for project success and why?

2. What would the project manager have done to develop knowledge, skills and personalities that may impact project success and why?

3. What would be the competence that you would wish to have or further develop, that would significantly improve your ability to manage projects with internal capability? Why?

4. What is the project management competence (core competencies) that if lacking could compromise project performance?

5. What are the sets of competencies used as criteria for recruiting someone to work on projects? What do you pay more attention to the hard or the soft competences?

6. What measure should be taken to fill the gap of project team based on an assessment of their competences in typical related to project management activities? Why?

7. What is the role of the Project Management Office (PMO) in your project management process? Do you think the company PMO is working as expected for successful project implementation? Why?

8. What are other factors which contribute for project success /failure in the company?

9. Overall how you evaluate the company projects success level?