AN ASSESSMENT OF PROJECT MANAGEMENT COMPETENCY:

THE CASE OF TIRET CORPORATE

BY

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By

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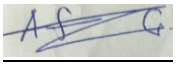
Afework Getachew (PhD)		June 25, 2020
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Letter of Certification

This is to certify that ESAYAS ZERAYAKOB ASSEFA has carried out his thesis on the topic ― Assessment of Project Management Competency: The case of TIRET CORPORATE.

This work is original in nature and suitable for the award of Masters of Arts in Project Management (MAPM).

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Date : June 25, 2020

Declaration

I hereby declare that this project work entitled ―*Assessment of Project Management Competency***:** *The Case of TIRET CORPORATE",* has been carried out by me under the guidance and supervision of Ato Teklegiorgis Assefa (Asst. Prof.)

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

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Esayas Zerayakob Assefa

Date June 24, 2020

Abstract

The project manager's competencies are essential for successful implementation of projects, those competencies are personal and performance competency. This project work assessed the competency of project manager's in TIRET Corporate through descriptive research design and quantitative research method. It investigated nine ongoing projects that are promoted by TIRET Corporate. Project managers and project team members were the target population and filled out questionnaires that consist closed-ended questions and 5 point Likert scale statements to analyze the two competency variables- the personal and performance competencies. The result indicates that there is a below-average mean score for application of performance competencies units and an above-average mean score for application of personal competencies. The majority of the respondents were bachelor degree holders with no training/ education associated with project management. It is recommended that to improve competency level the corporate office shall have a mature project support office with appropriate composition of experts, use a standardized templet, design professional development strategy in project management methodologies, and evaluating project manager's and project team's competency level using a standardized competency assessment tool. Future studies, to investigate all related variables can extend the scope and provide a complete picture of the overall project management competency of the organization under the study.

Keywords: project management, performance competency, personal competency.

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List of Acronyms and Abbreviations

ANRS- Amhara National Regional State

IPMA: International Project Management Association

PM: Project Manager/Management

PMBOK: Project Management Body of knowledge

PMI: Project Management Institutions

PMCD: Project Management Competency Development

PMO: Project Management Office

PRINCE: Project in a Controlled Environment

SPSS: Statistical Package for the Social Sciences

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CHAPTER ONE: INTRODUCTION

This chapter discusses the overall project manager's competency and its contribution to the success of the project. And also, the statement of problem will follow and research questions will be stated including the significance of the study, scope, and limitation of the study will end the chapter.

1.1. Background

A project is a set of consecutive activities with a specific intention, that focus on the creation of business value, performed to meet a certain specification, that has a predefined start and end date, done under a limited budget, utilize resources and the outcome of the project can be unique or repetitive (Kerzner, 2017).

A project manager must possess the core competencies that enable him/her to manage the project and achieve its objectives and deliverables successfully. The increasing demand for competent project managers is derived by the increasing complexity of projects (Hashim, *et.al.,* 2018).

The project manager's success as a leader is dependent on a set of capabilities. It would be a great advantage to be familiarized with the technology that is about to be involved. An excellent interpersonal skill that will be an asset to create mutual respect and loyalty among team members and stakeholders is also a key capability of a successful project manager. The project manager must know the fundamentals of the management functions of planning, organizing, motivation, direction, and control (Cleland and Ireland, 2002).

A balance of ethical, interpersonal, and conceptual skills will ensure a smooth and well-defined interaction and communication between the project manager and the project team. According to Project Managers Competency Development Framework (PMI, 2017), competency for the project managers consists of three distinct aspects: Knowledge competence, performance competence, and personal competence. And a project manager needs them all to succeed at his/her job.

TIRET: an Ethiopian conglomerate established in 1995 G.C. located in Amhara region, Ethiopia, is responsible for the economic and social development of the Amhara region and its people. It has a wide range of portfolios and is engaged in multi disciplinarily investments. It has functional companies categorized into the service sector, manufacturing, agro-processing, and construction. It has got also 9 ongoing projects with the aforementioned sectors with different stages of implementation. The projects are Maed Food Complex S.C., Blue Nile Pharmaceutical P.L.C., TZA Dairy Production and Processing S.C., Jerba Card Board Packaging P.L.C., Tana Pulp and Paper Industry S.C., Yeju Processed Honey P.L.C., Lapalma P.L.C., Himira Mining P.L.C., and Debre Brhan Pre-Engineered Solution S.C.

The difference in stages of implementation attribute to many factors; startup dates, the complexity of the projects, competency of the project managers and other reasons like budget and foreign currency availability. As an endowment organization, TIRET has been investing in profitable businesses whose profits and generated cash are to be used for the rehabilitation and socio-economic development of Amhara National Regional State and its people. It has a vision of being a leader in social business endowment in East Africa and a mission of becoming an investment institution with a considerable contribution to the growth and prosperity of the region and the country, through the creation of profitable and competitive enterprises and using part of that profit for advancing social services and development.

This study intends to explore and discusses the overall project manager competency and how the competency of project managers contributes to the success of a project. Therefore, it will investigate the competency level of the project managers assigned at the nine projects under TIRET Corporate and identify the gaps and forward a possible solution to fill the gap to enable a higher project success rate.

1.2. Statement of the Problem

Even though numerous projects have been initiated worldwide but only a small fraction of them tend to be completed according to the plan. The project management practices, skills, and competencies level are very poor in developing countries like Ethiopia when measured in terms of successful completion of projects. A lot of projects are not performed according to plan because of improper planning, implementation, and various management-related problems (Disenza & Forman, 2007).

As the demands for near to perfect execution have become mandatory, the project management and project manager's competency needs to meet the high standards (Hashim, *et.al.*, 2018). To understand the project manager's competency at TIRET Corporate level the current status and gaps need to be investigated.

The project manager's competency level is a least researched subject area comparing a large number of ongoing private and government-owned projects in Ethiopia. This study will at least contribute to narrowing the gap and try to visualize on what are the project manager's main competences in context to TIRET Corporate. The results can be utilized for decision-making, recruitment, selection, education, training and, awarding and can be integrated into the strategy of human resource management and be used for policy implication at the corporate level.

1.3. Research Questions

To address the above-mentioned problem the following research questions were formulated to be answered through the study.

- ✓ What are the main personal competencies of project managers in TIRET Corporate?
- ✓ What are the main performance competencies of project managers in TIRET Corporate?
- ✓ What are the main competency gaps of project management in TIRET Corporate?

1.4. Objectives of the Study

1.4.1. General Objective

- ✓ The general objective of this study is to assess the project management competency in TIRET Corporate.

1.4.2. Specific Objectives

- ✓ To identify the main personal competencies of project managers competencies in TIRET Corporate.
- ✓ To identify the main performance competencies of project managers competencies in TIRET Corporate.
- ✓ To identify the main project management competency gaps in TIRET Corporate.

1.5. Significance of the Study

Through the long years of striving the level of competencies of project managers hadn't been comprehensively assessed at the corporate level; the study helps identify the competencies possessed in terms of personal and performance competence, the current level of project management competency, and the gaps that are present. And possible recommendations are forwarded on how to develop the project's manager's competency for a better success of projects.

1.6. Scope of the Study

The scope of the study covers identifying the available competencies in terms of personal and professional competency and contextual knowledge and the gaps among the project managers of TIRET Corporate; geographically it will cover projects of TIRET that are currently under progress in Amhara National Regional State.

1.7. Limitation of the Study

- ✓ This research only considered the personal and professional competencies of project managers. Including more variables will help to know the effect better.
- ✓ Lack of organized competency related data within the corporate office.
- ✓ The inability to travel to the project sites due to the COVID 19 pandemic.
- ✓ Limited opportunity to conduct detailed face to face interviews with respondents due to the COVID 19 pandemic.

1.8. Structural Organization of the Study

This thesis has five main chapters. In the first chapter, there is a general the introductory part of the study that contains background and context of the study, statement of the problem, research questions, significance of the study, the scope of the study, limitation of the study; and structural organization of the study.

The second chapter is the literature review part, stating to the readers the known facts of the subject, and discussing different concepts on competency elements and project success.

The third part discusses consists of the methodology employed in the study, including, research design, the study population and sample unit, data type, source and collection method, method of data analysis, ethics of the research, and reliability.

Chapter four entails the presentation, analysis, and interpretation of the collected data through the proposed instrument.

The fifth chapter presents a summary, conclusions and recommendations along with future research directions based on observations and results from the study.

CHAPTER TWO: LITERATURE REVIEW

The second chapter of the study presents a comprehensive review of literature related to the study area and provides a theoretical framework of the study. The basic aim was to link the theories, framework, and knowledge to current practices in project management. Therefore, Project Managers' competency related literature are reviewed to analyze existing research and to clearly show the research gap to justify the significance of this study. It tries to brief the concept of project and project management, the role of the project manager and the personal and, performance dimensions that are required.

2.1. Conceptualization of Project

A project is a temporary activity performed with the intention of creating a unique product, service, or results. Projects enable business value creation (PMBOK, 2017). Project Management Institute (PMI) expresses business value as the net measureable gain obtained from a business. The gain may be tangible, intangible, or both (PMBOK, 2017). In business, the business value is considered the yield, in the form of features such as time, money, goods, or intangibles in return for something exchanged. Business value in projects refers to the gain that the results of a specific project providing to its partners (PMBOK, 2017).

A project is a set of uninterrupted tasks with a specific aim, with a focus on the creation of business value, conducted to bring a predefined requirement, have a defined start and end date, done under a limited budget, utilize resources and the outcome of the project can be unique or repetitive (Kerzner, 2017).

A project collectively deploys organizational resources to create a new product/service to achieve and add value to designing and executing organizational strategy. These are the cost of the project, the time it consumes, it's technical performance capability it provides, and determining whether the result fits the organizational strategies (Cleland and Ireland, 2002).

Projects are usually applied as a means of achieving goals within an organization's long term plan. They are applied as a result of one or more of the following strategic reasons: exceeding market demand, upcoming chance/business need, public need, environmental concern, customer request, technological advancement, and/or mandatory legal demands (PMBOK, 2013).

Mankind has conducted projects as long as they have been present on earth. All things that seem to be wonders of the world are a onetime project; some of them are completed without the current project management knowledge. The pyramids of Giza, the Great Wall of China, and the Coliseum of Rome all are living proofs of ancient projects. All of these extraordinary structures show that as early as ancient time's people were able to realize great projects, with a different naming of course. There are some documentations like the "book of change" that is found in China that postulated the project management methodology of that time (Lacko, *et,al*. 2014). Even the routine daily activities are a small type of projects which has a unique product (Miranda & Ghimire, 2007).

According to Verzuh (as cited in Miranda & Ghimire, 2007) Project management (PM) as a formal discipline is relatively new, having evolved within the last 60 years from military use during the Cold War defense programs (Miranda & Ghimire, 2007).

The Gantt' chart and the network analysis diagram as a project management tool were very much functional and were created in the first world war and the cold war times, during the rush between the United States and the Soviet Union to create a different type of weapons (Lacko *et, al*. 2014).

Project management developed as a social practice after World War II for the improvement of technology and infrastructure. The development of project management is described in detail by Morris (1997) and Engwall (1995), emphasizing its development actually through several major projects that can be traced back to the Manhattan Project in the early 1940s. Additional scenarios such as the Apollo space program and the growth of the U.S. oil and chemicals industry played a major role (Cicmil and Hodgson**,** 2006).

The years after the 1950s mankind was on the verge of huge projects and project managers (a newly emerged profession now), were charged with understanding and leading these projects. The neutron bombs, space rockets, man's orbits around the Earth and the landing on the moon's surface, nuclear power stations, huge dams, the realization of supercomputers and supersonic airplane were the turning points and the launching of the new era of project management (Lacko *et, al*. 2014).
During the 1960s and 1970s, the practical methodology was disapproved and the theoretical foundations of the field expanded (Packendorff, 1995) to include traces of organizational research

and theories mainly concerned with project organization structures, project leadership, the task of human resource management in assisting project work and engage on project team formation (Cicmil and Hodgson**,** 2006).

The 1990's project management field grew and became applicable to multidisciplinary subject areas other than construction and government-owned weapon development projects, significantly conducted in the field of business and management researches (Winch, 1996). This scenario corresponded with the application and recognition of project-based work, establishing, and managing across different disciplines, as a universal institutional response to the challenges of managing in sophisticated growing world conditions. As Clarke (1999) stated; "The unlimited need for change, newly emerged discipline such as project management if applied efficiently, can provide a useful way for institutions to implement that change efficiently." It is usually based on the application of a set of processes, or on a new management model to enhance competitiveness through a more effective intra-institutional cooperation and efficient exploitation of resources (Cleland, 1997).

The paradigm that has arisen due to some failures of projects like the crushing of the supersonic aircraft and the destruction of the nuclear plants was quickly transferred from the weapon development industry field to business competition. To succeed in business, the businessman had to initiate and inject a new product/service in the market before his opponent, be first to apply a discount in selling price and thus gain a competitive advantage. The time aspect also showed up in normal national-economic overviews when it was learned that not only the amount of capital mattered but also its effectiveness and productivity in terms of time (Lacko *et, al*., 2014).

As a result, this concept attempts to explain the growing application of project-associated thinking, rules, techniques, and procedures, aspiring to form a new "iron cage" of project perspective (Cicmil & Hodgson, 2006). As more and more job disciplines are being redefined as project workers and project managers across industrial sectors, both academic and practitioner groups are reflecting upon the implications of this shift for employees and organizations (Hodgson, 2002; Packendorff, 1995), particularly in terms of the effect on place of work identity, redesigned inter-subjective relationship,

and improved control over the individual through ideologies of effectiveness and performativity (Cicmil and Hodgson**,** 2006).

The advancement of projects and project management continues to grow as knowledge-based organizations progressively based on project models have been accepted by many as the organization of the future (Frame, 1999). The studies since the 90s have considered the significance of project-based organizing and project working in the processes of information dissemination and knowledge management in organizations (Cicmil and Hodgson, 2006).

2.2. Project Management

Project management is the use of knowledge, skills, tools, and techniques to project activities to fulfill the predefined set of success criteria. Project management is practiced by applying the five distinct but interrelated processes namely initiating, planning, executing, monitoring and controlling, and closing (PMBOK, 2013).

The project initiation phase includes a selection of the best project given resource limits, recognizing the benefits of the project, preparation of the documents to sanction the project and assigning of the project manager. The second process is the project planning step that has steps of defining the work requirements, stating the quality and quantity of work, identifying resources needed, scheduling the activities, and identifying the various risks. The third process that comes after the planning is executing the project; establishing the project team, managing the task, and in the meantime developing the capacity of the project team. The fourth process is monitoring and controlling the project activities that include tasks like following up the progress, comparing performed task against the initial plan, checking for variation, and taking corrective action to keep on track. The fifth and the final process in closing the project which includes confirming that all planned activities are executed, closing the contract and the financial conditions, and finalizing the paper to complete the hand over (PMBOK, 2017).

Implementing an efficient project management process brings a great deal of advantages including

- Helps in clearly delegating responsibility for all tasks
- Establish reasonable reporting structure

- Establish a reasonable time limit
- Measure actual performance against plan
- Provide early warning signal against potential deviation from plan for appropriate corrective action
- Ensure appropriate method for capturing lesson learned for future projects
- Indicate when there is difficulty to obtain the objective (Kerzner, 2017).

2.3. Project Manager

The project manager has a critical part in the leadership of a project and project team to accomplish the project's objectives. Level of engagement of project managers varies in different projects and conditions, in some case the project manager will be involved from the initiation up to the closing stage, whereas in some cases project manager may be involved in evaluation and analysis activities before project initiation (PMBOK, 2017).

Project managers must be both managers and leaders. Project leadership should be appropriate to the project condition because leadership is a nonstop and flexible process. There are no consistent features of leadership to point to and flatly state: "That's what makes a leader." Decisiveness is often cited as a desirable leadership characteristic, bearing in mind that all the decisions need to be correct to prevent the organization from difficult situations. Leadership seems to be contextual; management situation faced, the staffs engaged, the times, the features of the followers, the urgency of the condition, and so on, all have a significant impact on how the leader and the follower respond to the situation (Cleland and Ireland, 2002).

Project leadership is an interactive and cautious process, which encourages the project stakeholders to work toward closure of the project purposes. Project leadership takes place through communication, not in a vacuum. Project managers, like most managers in present organizations, are both leaders and followers, performing where both formal and informal networking relationships almost work equally and both have influence. In such relationships networking goes beyond the project manager's formal power, often leading to the use of influence over peers and superiors to affect the result of the project. A project manager's leadership position includes three important

roles: an interpersonal role, a decision-maker role, and an informational role. The interpersonal role the project manager is expected to act as figurehead and leader in liaison functions, practically he/she is the face of the project. An informational role, which includes providing information and acting as a representative, almost all information that needed to be disseminated to the stakeholders need to be through the project manager; and a decision-maker role, in which the project manager acts as a businessperson, resource allocator, and negotiator where he/she balances scarce resource and put priority to the activities (Cleland and Ireland, 2002).

2.4. Project Manager's Competency

Competency is the "ability to deploy, integrate and transfer knowledge, skills, and resources to reach planned targets in work assignments, adding economic and social value to the organization and the individual" (Takey & Carvalho, 2015). Competencies require both action and intent. Three known groups of competencies distinguish high performers from regular performers (Boyazis, 2008; PMI, 2017).

According to Project Managers Competency Development Framework (PMI, 2017), competency for the project managers consists of three distinct aspects:

- ✓ Knowledge competence- This competency is all about what the project manager knows about the application of process, tools, and techniques for the project activities.
- ✓ Performance competence represents how the project manager applies project management knowledge to meet the project requirement.
- ✓ Personal competence is about how project managers act when doing tasks within the project surroundings, their attitude, and core personal characteristics (PMI, 2017).

Knowledge and Performance competencies are categorized in the nine project management knowledge areas described in the Guide to the Project Management Book of Knowledge (PMBOK Guide). Whereas the personal competencies are broken up into 6 areas: achievement and action, helping and human service, impact, and influence, managerial, cognitive ability, and personal effectiveness (PMBOK, 2017).

2.4.1. Personal Competency

Personal competencies are those behaviors, attitudes, cultural influences, and core personality characteristics that contribute to a person's ability to manage projects. Project management is people–oriented profession and accordingly, a project manager need to possess skills that enable effective interaction with others (PMI, 2017).

The requirement of the project manager's soft skill thus becomes important to manage people (team, sponsors, stakeholders, etc.) who are participants in all projects. It is the team managed by a project manager that performs the processes to initiate, plan, execute, monitor, control, and conclude the specific project. But there are no comprehensive agreements as to what a project manager should comply with regarding the soft skills requirements in managing a project team (Marnewick, *et. al*., 2016). It essentially includes requirements such as interpersonal communication, commitment to success, negotiation, decision making, consensus, problem-solving, leadership, motivation, and ability to influence people (Miranda & Ghimire, 2007).

According to PMCD Framework (PMI, 2017), Personal competencies are grouped into the following six units:

Communicating- involves sharing of accurate and relevant information with stakeholders using appropriate media.

Leading- It involves guiding, inspiring, and motivating stakeholders and team members to effectively solve issues to attain the planned objective of the project.

Managing- is administering the project through effectively allocating and using human, financial, material, intellectual, and intangible resources.

Cognitive ability- It involves the application of an appropriate depth of insight and judgment to effectively manage a project in a dynamic environment.

Effectiveness- it involves providing the desired results by applying relevant resources, tools, and techniques in all project management processes.

Professionalism- Follows ethical behavior that is guided by responsibility, respect, fairness, and trustworthiness in the application of project management practices.

2.4.2. Performance Competency

Performance competency represents how the project manager applies their knowledge to obtain the planned objectives of the project. Technical skills such as the application of tools and techniques and understanding business methods can be obtained through education and continuous professional development. One such method to attain these skills is by being certified in PMI's Project. Management Professional (PMP) certification (Marnewick., *et.al.,* 2016).

According to the PMCD Framework, the structure of the units of performance competence is defined as:

Project Integration Management- concerned with tasks of identifying, defining, and coordinating project management activities that are executed among the stakeholders.

Project scope management- it involves defining and conducting all the work required, for the successful completion of a project.

Project Time Management- efficient use of time in accordance to the schedule baseline for timely completion of the project.

Project Cost Management- efficient use of the allocated budget in accordance with the cost baseline with basic activities of planning, estimating, budgeting, financing, funding, managing, and controlling project cost.

Project Quality Management- It involves executing tasks by following up the quality assurance parameter to meet a predetermined quality standard.

Project Human Resource Management- human resource management in the project context is all about organizing, managing, leading, and developing the project team.

Project Risk Management- it involves identifying and characterizing risks, developing risk response, and controlling plans for all risks based on their level of impact and probability of occurrence.

Project Procurement Management- is the establishment of a relationship with outside suppliers for materials and services needed for the completion of a project. It has got distinct but mutually exclusive parts including initiating and planning procurement, selecting, contract development, monitoring procurement activities, and closing and finalizing.

Project Stakeholder Management- Involves identification and ranking stakeholders based on their level of influence and interest in the project, analyzing their expectations, and develop suitable strategies to work with them and execute project tasks.

CHAPTER THREE: RESEARCH DESIGN AND METHODS

This chapter clarifies the methodology used in surveying project managers and project team members from the projects chosen as the sample for this research. It contains the overall research design and methodology in particular: Data collection instruments, sampling techniques, data analysis as follows;

3.1. Research Design

A research design is the preparation of conditions for collecting and evaluating data to obtain the purpose of the research in the most cost-effective way. The research design is the conceptual structure within which research is performed; it constitutes the plan for gathering, measuring, and analyzing the data (Kothari, 2004).

According to Robson (2002), the three reasons for performing research are stated as the following: exploratory, descriptive and explanatory. Explorative research is defined as the searching of new perceptions, the looking around, and the asking of questions or the bringing of some phenomenon into new light. Explanative research aims at obtaining a reason for a particular situation or condition, generally in the form of cause and effect manner.

Research design is a master plan of research that marks direction on how the research is to be done. It indicated the basic steps of the research– the samples or groups, measures, treatments or programs, etc. work interactively with an effort to answer the research questions. According to Mouton (1996) research design is done to "plan, structure and execute" the research to obtain maximum validity. It gives directions from existing philosophical expectations to research design and data gathering.

The purpose of this research is to assess project managers' competencies of the organization under study. A descriptive research design is conducted to describe what the current project management practice looks like in the study organization. The researcher has chosen this design because the basic reason for conducting descriptive research is it enables to describe the state of affairs as it is at present state (Kothari, 1990). For such type objective, the recommended research design is the descriptive research design.

3.2. Research Methods

The research method is a procedure applied to identify, select, and analyze, which moves from the underlying assumptions to research design, and data collection (Myers, 2009). Even though there are other categories in the research modes, the most common categories of research methods are qualitative and quantitative. The categorization attribute to distinctions about the nature of knowledge: how one understands the world and the ultimate purpose of the research, how data are gathered and computed, and the type of conclusion and representations derived from the data.

Quantitative research methods were applied to study natural phenomena in the discipline of natural science. Whereas qualitative researches were conducted in the social sciences discipline to allow researchers to study social and cultural phenomena. Both these methods have their and strength and limitation, applicability and selection mostly depend on the context, purpose, and nature of the research study in question; sometimes there are conditions both could be conducted alternatively depending on the kind of study. A mixed-methods approach could be applied by exploiting from both and develop a mixed type serving the specific purpose depending on the kind of study and its methodological foundation (Bryman and Burgess, 1999).

Quantitative research makes use of questionnaires, surveys, and experiments to gather data that is arranged and coded in numbers of a given representative value for the sake of convenience, that will be computed a specific statistical analytic tool (Hittleman and Simon, 1997).

To sum up this section, Quantitative research approach is used in this study. The research design for this study is descriptive and that is analyzed largely through quantitative methods.

3.3. Study Population, Sample and Unit of Analysis

For this study all 9 project managers and 40 project team members from the 9 projects of TIRET Corporate that are actually under progress in Amhara National Regional State (ANRS), Ethiopia were considered as a target population and the study used the census as the number of populations is small. This technique was done to identify and select information with rich samples and to maximize the efficiency and validity of the study.

Table 3.1. List of Projects

S.No.	Name of the project	Industry category
1	Maed Food Complex S.C.	Agro industry
2	Blue Nile Pharmaceutical	Manufacturing
3	TZA Dairy Production and Processing S.C.	Agro industry
4	Jerba Card Board Packaging P.L.C.	Manufacturing
5	Tana Pulp and Paper Industry S.C.	Manufacturing
6	Yeju Processed Honey Factory P.L.C.	Agro industry
7	Debre Brhan Pre-Engineered Solution S.C.	Manufacturing
8	Lapalma P.L.C.	Manufacturing
9	Himira Mining P.L.C.	Mining

Source: Own Survey, 2020.

3.3.1 Participants in the Study

To conduct this research census was applied. The sampling unit includes projects, project managers, and project team members within the 9 projects. Census method follows an approach of investigating the entire population within the sampling frame. This approach gives more accurate and exact information as no unit is left out. It is believed, when all items are covered, no element of chance is left, and the highest accuracy is obtained (Kothari, 2004). Therefore, Census is applied for projects, project managers and project team members. A total of 49 respondents will be included in the survey, out of which 9 are project managers and the rest 40 will be project team members.

3.4. Data Type and Source

To actualize the current study, two types of data have been used: primary and secondary. Primary data are those data that are collected for the very purpose of a particular study by a researcher (Kohtari, 2004). The primary data is collected from the respondents based on a structurally designed questionnaire. It included closed-ended questions and 75 statements to be judged on a five-point Likert scale**.**

Secondary data has been collected from literature such as books, journals, thesis, dissertations, annual reports and strategic plan of TIRET Corporate; and the internet.

3.5. Tools of Data Collection

To achieve the purpose of this study, a semi-structured questionnaire was used as the main tool to collect the data. The questionnaire was built based on the literature review and the Project Manager Competency Development Framework (PMCDF).

The variables of the questionnaire is composed of two parts: First, the demographic part, which includes the following dimensions: gender, age, education level, presence of formal education/training of project management subject area, years of experience, approved budget of the current project, industrial category of the project and the current position of the respondents were assessed with a closed and open-ended type of questions.

The Second, independent variables (Project manager's competencies) which include three sub-variables (performance competency, personal competency and knowledge); the performance inclusive of knowledge competency has 9 components each with five statements and the personal competency has six components each with five statements.

All variables and components are measured for an agreement level of a specific statement by a five-point Likert-type scale to tap into the project managers' and the project team member's perceptions, the value ranges from 1 (strongly disagree) to value 5 (strongly agree) used throughout the questionnaire.

3.6. Data Collection and Statistical Analysis

3.6.1 Data Collection Procedure

To conduct the study, a questionnaire was administered to all the project managers and project team members within the nine projects through email. The email was selected to deliver the questionnaires due to its cost-effectiveness, fast transmission, and response turnaround. Due to the COVID-19 pandemic, the chance of obtaining a face to face interview with all respondents was impossible for the fact of fearing the risk of exposure and limiting the number of office guests. An email seems appropriate to exploit all the relevant information through a semi-structured questionnaire.

Potential respondents received an email explaining the purpose of the study and invited recipients will fill by reading the purpose and general condition to participate and ticking the consent to fill the questionnaire. And after filling it they will send it back and the questionnaire will be coded randomly with an identification number to be filled on SPSS.

3.6.2. Methods of Data Analysis

Data analysis consists of inspecting, sorting, organizing, or otherwise rearranging the acquired information, to address the initial proposition of a study (Yin, 1989). The data collected via questionnaires were analyzed with descriptive statistics using Statistical Package for Social Science (SPSS) software version 23.

3.7. Ethics of Research

This research has been conducted in ethically and morally acceptable standards. The respondents were informed about the purpose of the study and asked their permission in the questionnaire. The data collected will only be used for this study purpose and it is not accessible for any other purposes. Also, the study used appropriate citation, follow legitimate data collection and analysis process, maintain confidentiality, obtain the consent of the case organization, and staff, and keep respondent's identity unanimous.

However, the study result will be presented and be accessible both for the graduating school and the organization.

3.8. Reliability and Validity

According to Zikmund (2003) reliability is defined as the degree to which measures are free from errors and therefore provide consistent results.

Cronbach's alpha a reliability measure designed by Lee Cronbach in 1951 is a coefficient of reliability used to measure the internal consistency of a scale; it has a maximum value of 1. Values closer to 1 reflect a stronger relationship between the test items. Tests with low Alpha's would indicate that there was a little similarity of responses (Tavakol and Dennick, 2011).

To fulfill the purpose of the current research 49 questionnaires were distributed, and only 43 were returned, leading to an 87.75 % response rate. Out of the total 43 questionnaires, 8 were filled by project managers, and 35 were filled by project team members. After checking the filled questionnaires to evaluate the suitability, it was coded with SPSS 23 for further analysis. The reliability of the data has been checked with Cronbach alpha and the result is indicated in table 4.8. of the discussion part.

To insure validity of the study appropriate and acceptable standards were applied, to make the questioner understandable by the respondents the researcher tried to modify it in accordance to the corporate context after an interview with project director of the organization so that the intended information can be collected and reflect the actual findings. The competency units and the statements used are derived from the Project Management Competency Development Framework which makes the work acceptable.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION

The survey was conducted among project management related practitioners working in nine projects owned by TIRET Corporate with a semi-structured questioner. The questionnaire has two parts; Part 1 sought details of the background, academic development, and experience of practicing respondents. Part 2 sought the presence and applicability of each of a list of 75 project management competence components identified from the literature. The respondents were requested to evaluate the competence on a five-point scale.

A total of 49 questionnaires were sent an email during April 2020 and out of which 43 were received that were filled and valid. Therefore, the response rate for the questionnaire was 87.7%. According to Mugenda (2003), a 50 % response rate of questionnaires is adequate for analysis and reporting; a 60% return rate is good and, 70% and over is excellent.

4.1. **Demographic Characteristics of Respondents**

Below is a presentation of the general demographics that cover gender, educational level, approved budget of the projects, category of the industry, the experience of the respondents, and presence of formal training/education and the current position of the respondents.

4.1.1. General Information on Respondents

Table 4.1. Demographic characteristics of respondents

	Description	Frequency	Percent
Gender	Male	37	86.4
	Female	6	14
Education level	Bachelor degree	33	76.7
	Master's Degree	10	23.3
Project management training/education status	Yes	18	41.9
	No	25	58.1
Current Position	Project manager	8	18.6
	Project team member	35	81.3
Work Experience	Below 5 years	33	76.7
	5 years and above	10	23.2

Source: Own Survey, 2020.

Majority of the respondents are male (n=37, %=86.0%) and 14.0 % (n=6) are female. As to the education level Bachelor's degree covers 33(76.6%) of the total sample size and 10 (23.3%) of respondents have Master's degree.

As shown in the table, only 18 (41.9%) of respondents have some type of formal training/education related to project management whereas the remaining 25 (58.1%) do not have any kind of training/education related to project management discipline. The majority of the respondents are project team members (n=35, 81.3%) and 18.6% (8) are project managers.

In terms of work experience 33 (76.7 %) of respondent's experience level falls under the category of five years and below category and the rest of the respondents, 10 (23.2%) have more than five years' experience. The total result is shown in Table 4.1.

4.1.2. General information of projects

Table 4.2. General information of projects

	Description	Frequency	Percent
Approved budget	BELOW 100,000,000	3	33.3
	100,000,001-250,000,000	1	11.1
	250,000,001-500,000,000	1	11.1
	500,000,001-1,000,000,000	1	11.1
	Greater than 1,000,000,001	3	33.3
Industry category	Manufacturing	5	55.6
	Agroindustry	3	33.3
	Others	1	11.1

Source: Own Survey, 2020.

The questionnaire also investigated the approved budget amount of the projects. It was found 3 (33.3%) projects have a budget below hundred million birr, 3 projects each have a budget ranging from 100,000,001-250,000,000; 250,000,001-500,000,000; and 500,000,001-1,000,000,000 respectively and 3 (33.3%) projects have a budget that is greater than one billion birr.

There were three types of industries encountered where the projects were categorized. The majority of projects are manufacturing that covers 6 (66.7%) of the nine projects. Second major category of belongs to agro processing projects which are 2 (22.2%) of total. 1 (11.1%) belongs to other type of projects as mentioned in Table 4.2.

4.2 Reliability Analysis

Cronbach’s alpha is a technique used for this study to access the reliability for the measurement of each competency component. Cronbach's alpha is a coefficient that is used to measure reliability

or internal consistency of items; it indicates how closely the items are related to each other, and how free they are from bias (Tavakol and Dennick, 2011). If Cronbach's alpha value is more than 70% for all variables, then reliability is assumed. (Samuel, 2019). The reliability test results are reflected in Table 4.3.

Table 4.3: Reliability Statistics Cronbach's Alpha coefficient

S.N.	Component of competency	Cronbach's alpha	Item numbers
1	Performance Competency	.839	45
2	Personal Competency	.725	30
Total		.855	75

Source: Own Survey, 2020

Table 4.3 shows that Cronbach's Alpha coefficients for all variables are more than 70%, therefore reliability is assumed.

4.3. **Descriptive Analysis of Project Management Competency**

As indicated in table 4.3, the Cronbach's Alpha test reveals that the instrument's internal consistency as 86. 9 % which is well above the acceptable value (i.e. 70%). Therefore, the research instrument is reliable, and the forthcoming findings & conclusions are acceptable and concrete. This section deals with the analysis and interpretation of data collected from the questionnaires. Responses are summarized and presented using tables and charts to facilitate easy understanding.

Generally, Respondents were asked to rate 75 project management competence variables identified from the literature for their agreement on the components of an effective project management practice. This involved the use of a five-point scale, spanning 1 for strongly disagree, to 5 for strongly agree. A Mean (average) item score was used to rank the personal and professional competency in order of value perceived level of agreement/disagreement

For generalization and reporting purposes, the author used the sum of frequencies of two successive rating scales strongly disagree & disagree as ‘’disagreement’’. Similarly, strongly agree & agree are generally reported as ’’agreement’’.

Table 4.4. Overall mean value of competency

S.N.	Component of competency	Item numbers	Number of unit	Mean score
1	Performance competency	45	9	2.59
2	Personal competency	30	6	3.18

Source: Own Survey, 2020.

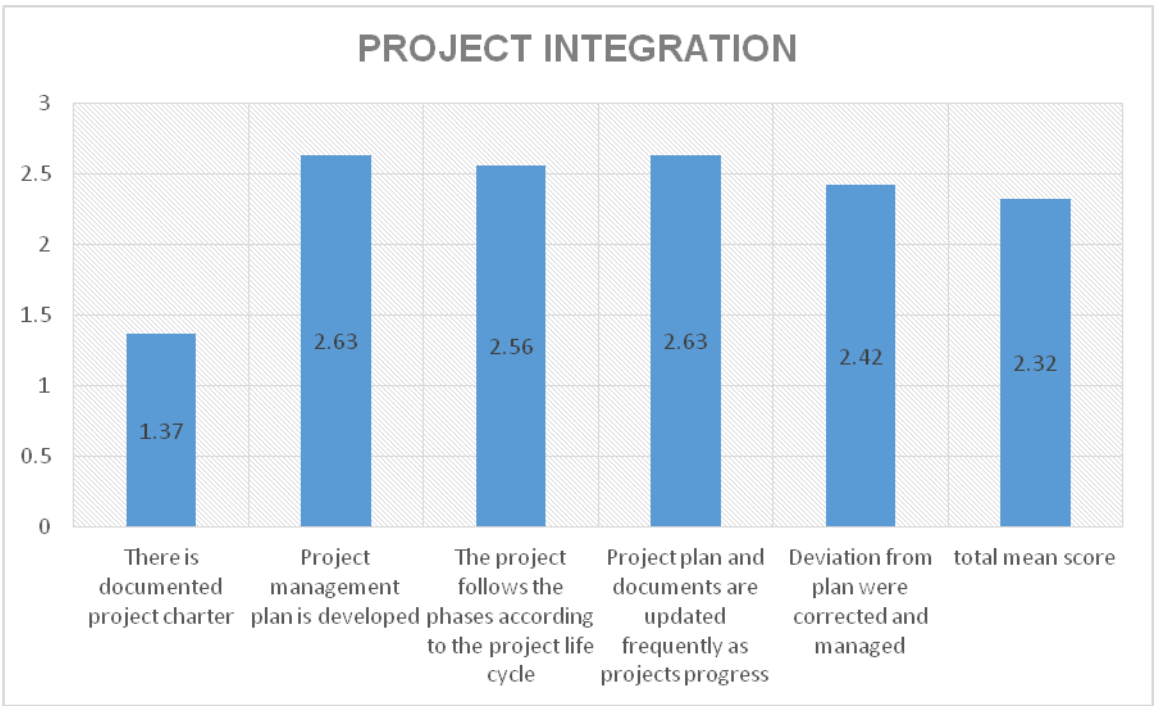
According to the above analysis, competencies are divided into 2 distinct groups based on their importance in countering the overall competency in a project. The mean value for Performance competency scored is 2.59. The mean value for Personal competency is 3.18. The detailed list of competency assessment values is discussed in the tables and graphs below.

4.3.1. Performance Competency

Performance competencies are how the project manager applies project management knowledge to meet the project requirement. According to PMCD framework it has 9 (nine) units that are discussed individually below.

4.3.1.1. Project Integration

Figure 4.1. Mean Score of Project Integration



Source: Own Survey, 2020.

As to the project integration section, the first statement on the presence of project charter all respondents indicated that there is none, on the second statement high level of disagreement on the presence of comprehensive with a mean value of 2.63 which is below average. The third statement indicates that projects follow phases according to the project lifecycle has also a high level of disagreement with a mean value of 2.56. On the fourth statement, it was stated that the project documents are updated as the project progresses had a disagreement response with mean value 2.63. The fifth indicates that there is correction and management when there is a deviation from the plan; having a mean value of 2.42. The project integration management as one of the performance competency units, according to the above five statements has a mean value of 2.32 that is below average and indicating that it is poorly exercised.

4.3.1.2**. Project Scope Management**

Table 4.5. Project Scope Management Unit's Mean Value

Project Scope Management	**Mean**		**1**	**2**	**3**	**4**	**5**
The scope of the project is clearly defined		N	2	14	5	12	10
	3.33	%	4.65	32.56	11.63	27.91	23.26
Project activities and tasks are well-defined		N	3	16	8	11	5
	2.98	%	6.98	37.21	18.60	25.58	11.63
Mile stone reviews were conducted and recorded		N	10	6	13	14	0
	2.72	%	23.26	13.89	30.23	32.56	0.00
Scope is frequently monitored to identify changes.		N	5	15	10	13	0
	2.72	%	11.63	34.88	23.26	30.23	0.00
The project deliverable is decomposed to its level of planned work		N	2	21	3	13	4
	2.91	%	4.56	48.84	6.89	30.23	9.30
Overall mean	2.92						

Source: Own Survey, 2020.

The second performance competency unit is project scope management; Performing the work required to ensure that the project includes all the work required, and only the work required, to complete a project successfully. The first statement on this unit states that the project scope is clearly defined, it has a slightly above neutral response rate with a mean value of 3.33. The second statement is about the presence of clearly defined tasks and activities that has a near to neutral response rate with a mean value of 2.98. The third and the fourth statements are about presence of milestone review and whether scope is frequently monitored; both have a response near to neutral with mean 2.72. The fifth statement states that the project deliverable is decomposed to the planned work level had also a neutral response; the overall mean is computed to be 2.92 for project scope management, indicating a relatively poor performance of implementation of the competency unit.

4.3.1.3. Project Time Management

Table 4.6. Project Time Management Unit's Mean Value

Project Time Management	Mean		1	2	3	4	5
There is estimate of duration for every detailed activity	2.16	N	14	16	5	8	0
		%	32.56	37.21	11.63	18.60	0.00
Relationship and dependencies among project activity are identified and documented	2.37	N	13	13	5	12	0
		%	30.23	30.23	11.63	27.91	0.00
Change is managed into the schedule baseline	1.86	N	17	17	8	12	0
		%	39.53	39.53	18.60	0.00	2.33
The project manager monitor status of project activities to update project progress	2.30	N	11	18	8	2	4
		%	25.58	41.86	18.60	4.65	9.30
The project process meets time deadlines	1.98	N	18	14	5	6	0
		%	41.86	32.56	11.63	13.95	0.00
Overall mean	2.13						

Source: Own Survey, 2020.

Project time management is all about ensuring that all project activities are performed and completed according to schedule. The first statement is about the presence of duration estimate for every detailed activity in which the majority of the respondents disagreed and the mean value is 2.16. The second statement is about the presence of documented relationship and dependency among project activities to which the majority of the respondents disagreed and has a mean of 2.37. The third and fifth states that changed is managed into schedule baseline and the project meets time deadlines respectively have both scored mean value below average; 1.86 & 1.98. The overall mean is computed to be 2.13 indicating that time management has serious limitations and projects are falling behind schedule.

4.3.1.4. Project Cost Management

Table 4.7. Project Cost Management Unit's Mean Value

Project Cost Management	mean		1	2	3	4	5
The project is going according to the budget plan	2.40	N	5	22	10	6	0
		%	11.63	51.16	23.26	13.95	0.00
project resource are well planned and secured	1.88	N	19	14	6	4	0
		%	44.19	32.56	13.95	9.30	0.00
The project manager monitor status of project activities to update project costs	2.93	N	1	20	4	17	1
		%	2.33	46.51	9.30	39.53	2.33
There is an authorized project cost baseline	2.51	N	10	13	8	12	0
		%	23.26	30.23	18.60	27.91	0.00
There is cost over-run indicative approach	2.02	N	18	10	11	4	0
		%	41.86	23.26	25.58	9.30	0.00
Overall mean	2.35						

Source: Own Survey, 2020.

Project Cost Management involves all the tasks that are done to ensure the project is done under the approved budget, it goes from planning and securing the estimated budget up to controlling cost overruns. The total mean for this competency unit is 2.35 and it shows that the cost management task is somewhat a failure in terms of the 5 selected statements of investigation. On issues of having a cost indicative approach and planning and securing the project budget the majority of the respondents answer with disagreement with a mean value of 2.02 and 1.88 respectively. The first statement stating whether the project is going according to a budget plan has a mean value of 2.40. The third statement is about if the project manager monitors the status of the project activities to update project cost; the respondents have a close to the average response.

4.3.1.5. Project Quality Management

Table 4.8. Project Quality Management Unit's Mean Value

Project Quality Management	Mean		1	2	3	4	5
Quality standards are maintained.	2.37	N	15	12	5	7	4
		%	34.88	27.91	11.63	16.28	9.30
Quality requirements are audited and resulted from quality control measurement	2.51	N	7	21	2	12	1
		%	16.28	48.84	4.56	27.91	2.33
There is assessment to identify causes of poor quality and take action to eliminate	2.60	N	10	15	5	8	5
		%	23.26	34.88	11.63	18.60	11.63
The project deliverable is validated to check if the work meets the requirements	2.60	N	5	17	11	10	0
		%	11.36	39.53	25.58	23.26	0.00
There is documentation on how the project will demonstrate quality compliance	2.86	N	5	13	8	17	0
		%	11.63	30.23	18.60	39.53	0.00
Overall mean	2.56						

Source: Own Survey, 2020.

Project quality management is the process through which quality is managed and maintained throughout a project. It consists of three major processes; the quality management plan, the quality assurance and the quality control process. The overall mean has a score of 2.56 slightly close to neutral but rising from the rate of disagreement percentage scored the project quality management is not exercised adequately.

4.3.1.6. Project Human Resource Management

Table 4.9. Project Human Resource Management Unit's Mean Value

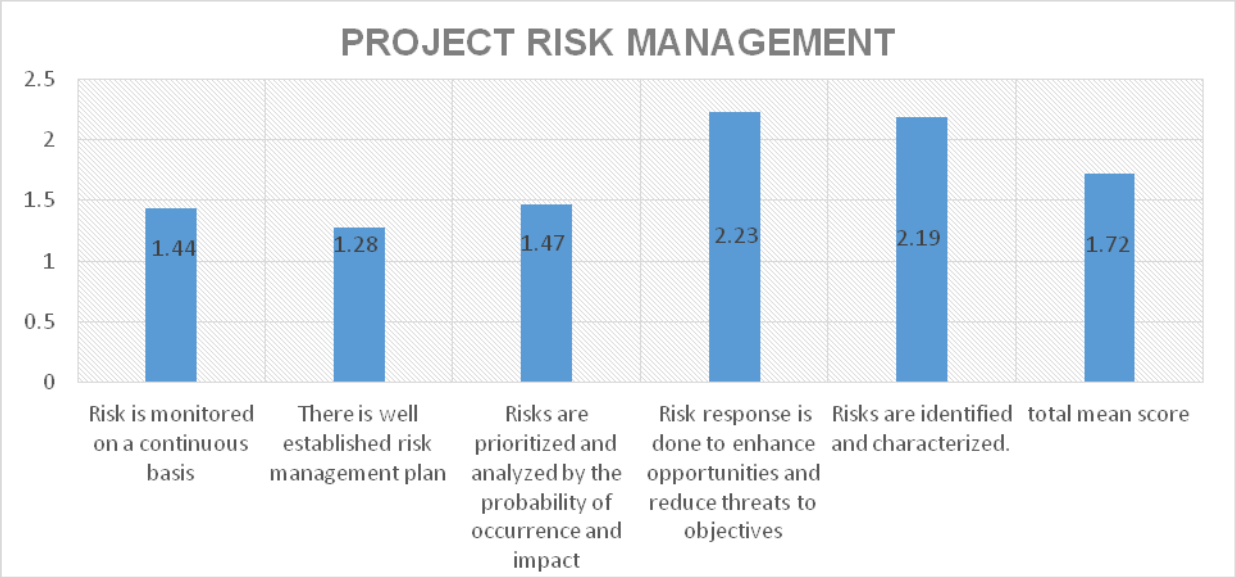
Project Human Resource Management	Mean		1	2	3	4	5
Needs for experience, knowledge and skill are well defined	3.33	N	14	16	5	8	0
		%	32.56	37.21	11.63	18.60	0.00
There is a good relationship among the team members	2.98	N	13	13	5	12	0
		%	30.23	30.23	11.63	27.91	0.00
Conflict within teams are recognized and dealt with	2.72	N	17	17	8	12	0
		%	39.53	39.53	18.60	0.00	2.33
Team members are allowed to take initiative in problem solving	2.72	N	11	18	8	2	4
		%	25.58	41.86	18.60	4.65	9.30
There is a clear guideline to manage human resource.	2.91	N	18	14	5	6	0
		%	41.86	32.56	11.63	13.95	0.00
Overall mean	2.93						

Source: Own Survey, 2020.

Project human resource management involves organizing and managing the project team. It has got processes including human resource planning, acquiring, developing, and managing the project team. According to respondents the five statements the survey; needs for experience, knowledge, and skill are well defined, there is a good relationship amongst the team members, conflict within teams are recognized and dealt with, team members are allowed to take initiative in problem-solving and there is a clear guideline to manage human resource scored a mean value of 3.33, 2.98, 2.72, 2.72 and 2.91 respectively. The overall project human resource management competency unit has scored 2.93, close to an average score indicating that it has a loosely implemented component among the projects.

4.3.1.7. Project Risk Management

Figure 4.2. Mean Score of Project Risk Management

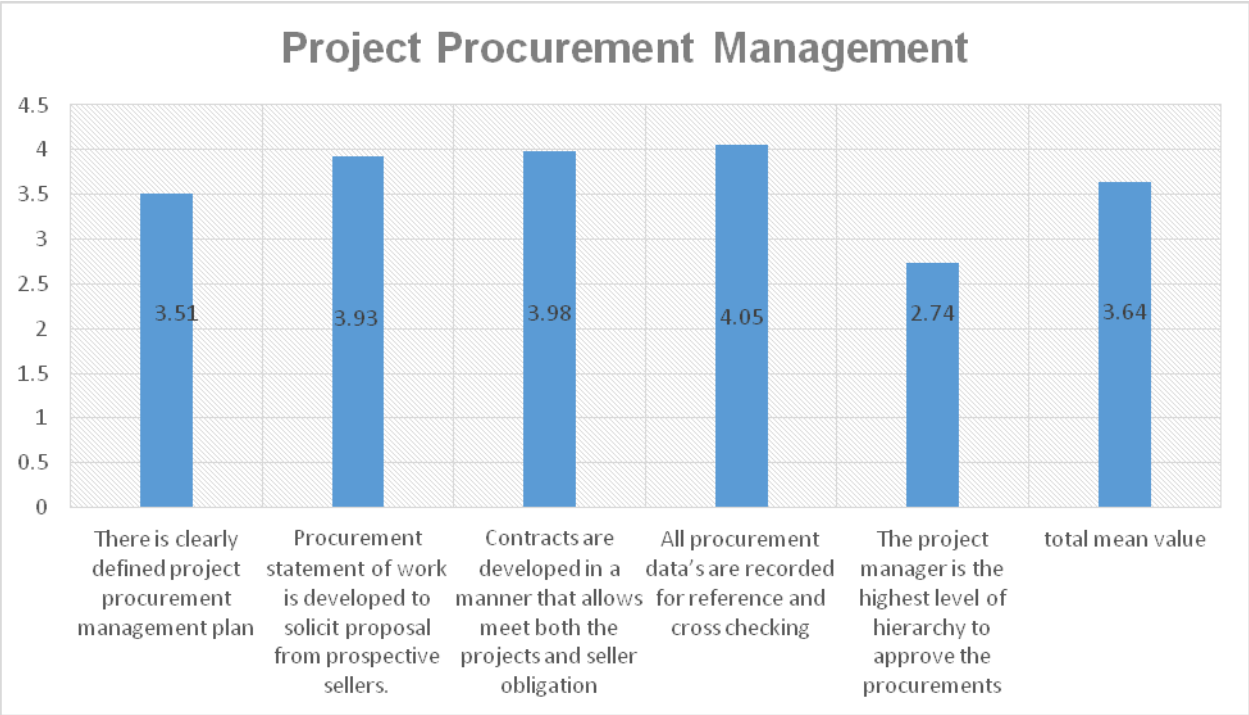


Source: Own Survey, 2020.

Project risk management is all about conducting risk management planning, identification, analysis, response planning, and controlling risk on a project. On the selected statements, risk is monitored on a continuous basis, presence of well-established risk management plan, risks are prioritized and analyzed by the probability of occurrence and impact, risk response is done to enhance opportunities and reduce threats to objectives and risks are identified and characterized a mean value of 1.44, 1.28, 1.47, 2.23 and 2.19. The overall mean scored is 1.72 indicating that the project risk management practice is barely implemented across the projects.

4.3.1.8. Project Procurement Management

Figure 4.3. Mean Score of Project Procurement Management



Source: Own Survey, 2020.

Project procurement management is the establishment of a relationship with outside suppliers for materials and services needed for the completion of a project. It has got distinct but mutually exclusive parts including initiating and planning procurement, selecting, contract development, monitoring procurement activities, and closing and finalizing. At this competency unit, the overall mean scored is 3.64, and as for the individual statements the first statement states the presence of clearly defined procurement plan scores 3.51 mean, where for the second statement the presence of statement of work to a solicit proposal from prospective sellers has a mean value of 3.98. For the third and the fourth statement stated that there is a contract that allows meeting buyers and sellers obligation, and there is a recorded procurement data scored a mean value of 3.98 and 4.05. But on the fifth statement that checks if the project manager is the highest level of hierarchy to approve the procurements has a mean value of 2.74 where more than 44 % of respondents disagree on the matter.

4.3.1.9. Project Stakeholder Management

Table 4.10. Project Stake Holder Management Unit's Mean Value

Project Stakeholder Management	Mean		1	2	3	4	5
There is planned stakeholder involvement		N	4	21	4	11	3
	2.72	%	9.30	48.84	9.30	25.58	5.98
Stakeholders are comprehensively identified and listed		N	1	5	4	30	3
	3.67	%	2.33	11.63	9.30	69.77	6.98
Stakeholders are communicated and involved throughout project lifecycle		N	0	13	8	19	3
	3.28	%	0.00	30.23	18.60	44.19	6.98
The project is in acceptable position for the stake holders		N	23	13	3	4	0
	1.72	%	53.49	30.23	6.98	9.30	0.00
The engagement level of stakeholders is evaluated and documented.		N	4	28	4	7	0
	2.33	%	9.30	65.12	9.30	16.28	0.00
Overall mean	2.74						

Source: Own Survey, 2020.

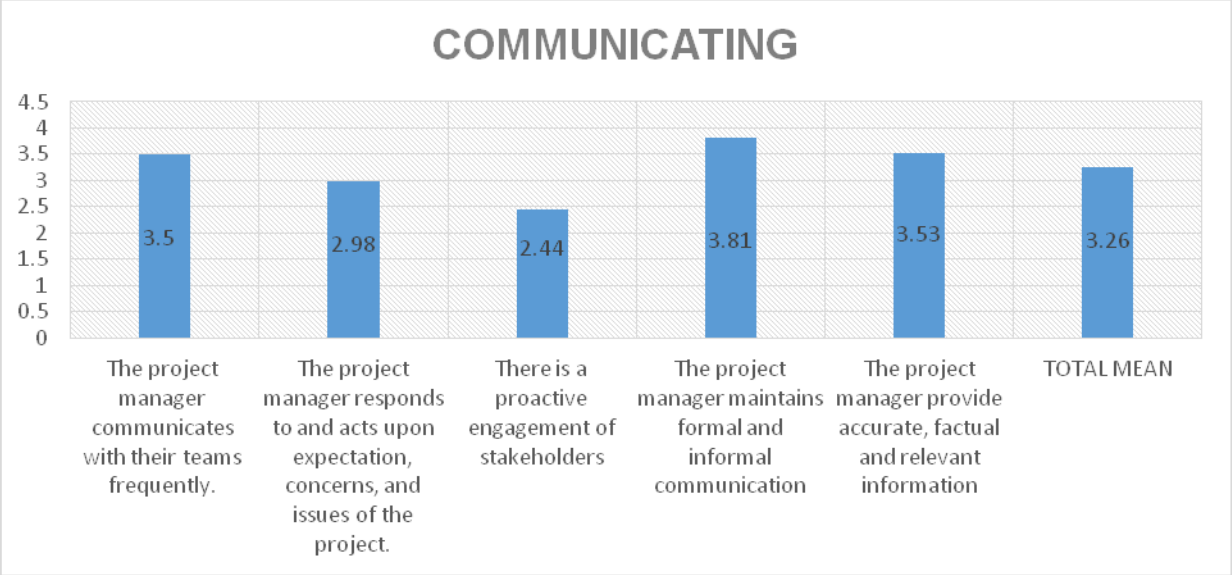
Project stakeholder management involves identification and ranking stakeholders based in their level of influence and interest on the project, analyzing their expectations, and develop suitable strategies to work with the stakeholders and execute project tasks. For the statements stating that Stakeholders are comprehensively identified and listed; and stakeholders are communicated and involved throughout the project lifecycle scored a mean of 3.67 and 3.28 which above the average and there is a greater level of agreements. And for the other three statements indicating that there is planned stakeholder involvement, the project is in acceptable position for the stakeholders; and the engagement level of stakeholders is evaluated and documented scored mean of 2.72, 1.72, and 2.33.

4.3.2. Personal Competency

Personal competency is about how project managers act when doing tasks within the project surroundings, their attitude and core personal characteristics. According to the PMCD framework it has 6 (six) units that are discussed individually below.

4.3.2.1. Communicating

Figure 4.4. Mean Score of communicating



Source: Own Survey, 2020.

*T*he first unit in personal competency is communicating with project stakeholders for relevant information in a suitable manner. The overall mean is 3.26, which above-average indicating the projects are on the right track but need to upgrade because it closely marked against the neutral. The five statements stated as the project manager communicates with their teams frequently, the project manager responds to and acts upon expectation, concerns, and issues of the project, there is a proactive engagement of stakeholders, the project manager maintains formal and informal communication and the project manager provide accurate, factual and relevant information have a mean value of 3.35, 2.98, 2.44, 3.81 and 3.53 respectively. Except for the proactive engagement of stakeholders that lies below the average the rest is above and close to average.

4.3.2.2. Leadership

Table 4.11. Leadership Unit's Mean Value

Leadership	Mean		1	2	3	4	5
There is good collaboration among project team members	3.51	N	0	4	13	26	0
		%	0.00	9.30	30.23	60.47	0.00
The project manager leads by example	2.63	N	16	4	4	18	1
		%	37.21	9.30	9.30	41.86	2.33
The project manager creates a team environment that promotes high performance	2.88	N	4	16	4	19	0
		%	9.30	37.21	9.30	44.19	0.00
The project manager builds and maintains effective relationship	2.28	N	4	11	9	5	5
		%	9.30	25.58	20.93	11.63	11.63
The project manager takes accountability for delivering the project	3.91	N	1	4	4	23	11
		%	2.33	9.30	9.30	53.49	25.58
Overall mean	3.04						

Source: Own Survey, 2020.

A project leader guides and motivates team members and other project stakeholders to manage and solve issues efficiently to achieve project objectives. The second unit of the personal competency is leadership in which the overall mean is computed to be 3.04. The first statement indicates the presence of good collaboration among the project team members has a mean value of 3.51 which is above the average, the second statement states that the project manager leads by example for which there is below the average mean score of 2.63. The third statement indicates that the project manager creates a team environment that promotes high performance has also a below average mean of 2.88. The fourth statement states that the project manager builds and maintains an effective relationship have a response of below the average with a mean of 2.28. The last statement of this unit has above the average mean of 3.91 which states that the project manager takes accountability for the delivery of the project; by looking at the mean that is slightly above average it can be seen that leadership competency is midway exercised.

4.3.2.3. Managing

Table 4.12. Managing Unit's Mean Value

Managing	Mean		1	2	3	4	5
The project manager builds and maintain the project team.	2.84	N	0	23	8	8	4
		%	0.00	53.49	18.60	18.60	9.30
The project manager plans and manages for project success in an organized manner.	2.84	N	0	15	20	8	0
		%	0.00	34.88	46.51	18.60	0.00
The project manager maintains a positive attitude and effective relationship among team members	3.60	N	0	4	9	30	0
		%	0.00	9.3	20.93	69.77	0.00
The project manager identifies, evaluates and selects internal and external talent.	2.98	N	0	20	8	11	4
		%	0.00	46.51	18.60	28.58	9.30
The project manager applies standards and generally accepted practice.	3.44	N	4	4	4	31	0
		%	9.30	9.30	9.30	72.09	0.00
Overall mean	3.14						

Source: Own Survey, 2020.

A project manager needs to effectively administer the project through deployment and use of human, financial, material, and intellectual resources. The five statements used at this unit are the project manager builds and maintain the project team, the project manager plans and manages for project success in an organized manner, the project manager maintains a positive attitude and effective relationship among team members, the project manager identifies, evaluates and selects internal and external talent and the project manager applies standards and generally accepted practice were given a response by the respondents that generated mean value of 2.84, 2.84, 3.60, 2.98 and 3.44 respectively. The total mean generated is 3.14 which is slightly greater than the average meaning that the managing component is weakly present.

4.3.2.4. Cognitive Ability

Table 4.13. Cognitive Ability Unit's Mean Value

Cognitive Ability	**Mean**		1	2	3	4	5
There is understanding of project stakeholder needs, interest, and influence for project success	2.74	N	4	17	8	14	0
		%	9.30	39.53	18.60	32.56	0.00
The project manager understands both the formal and informal structure of the organization	3.26	N	5	7	3	28	0
		%	11.63	16.28	6.98	65.12	0.00
The project manager simplifies complexities for a complete and accurate analysis	2.74	N	5	19	5	10	4
		%	11.63	44.19	11.63	23.26	9.30
There is application of selected tool and/or techniques to project management	2.98	N	0	12	20	11	0
		%	0.00	27.91	46.51	25.58	0.00
The project manager consolidates opportunities and passes them to the organization	3.16	N	4	8	11	17	3
		%	9.30	18.60	25.58	39.53	6.98
Overall mean	2.98						

Source: Own Survey, 2020.

The application of an appropriate depth of insight and judgment to effectively direct a project in a changing and evolving environment is cognitive ability. The overall mean computed is 2.98 which is slightly below average, and for three statements compute below average whereas two statements were above average. The presence of understanding of stakeholder needs and interests, the presence of the project manager's ability to simplify complexity, and the application of selected tools and techniques computed to have 2.47, 2.74, and 2.98 respectively. Whereas the understanding of formal and informal structure within the organization and the project manager's ability to consolidate opportunities and passes them to the organization has a mean value of 3.26 and 3.16 respectively.

4.3.2.5. Effectiveness

Table 4.14. Effectiveness Unit's Mean Value

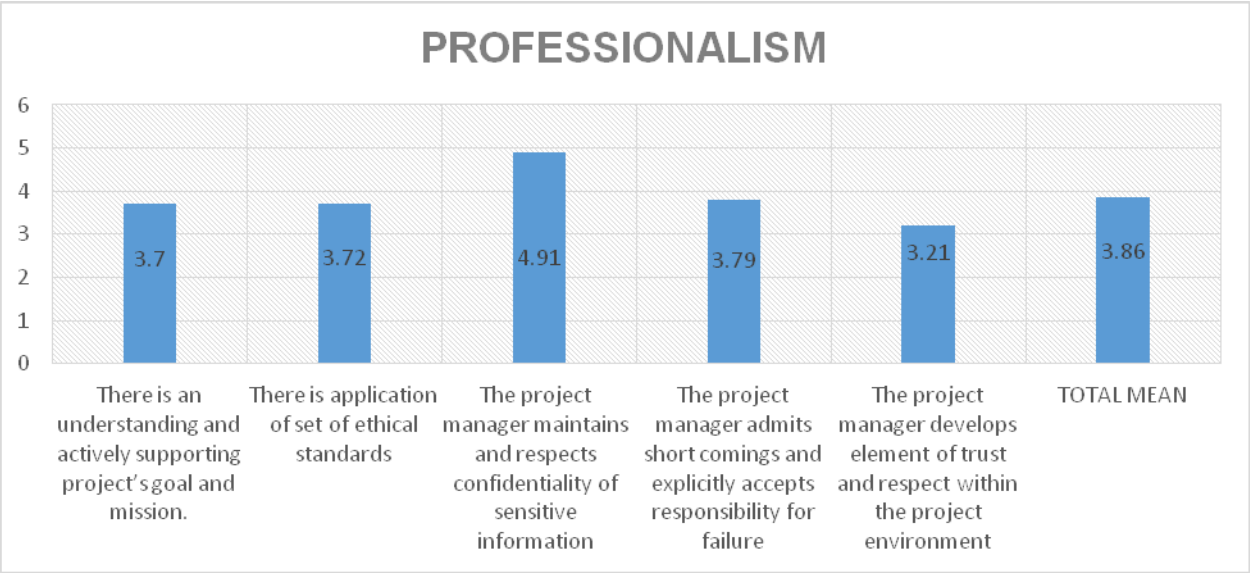
Effectiveness	mean		1	2	3	4	5
There is application of appropriate problem-solving technique	3.12	N	1	16	3	23	0
		%	2.33	37.21	6.98	53.49	0.00
The project manager adapts to change in the project environment to minimize adverse impact	3.14	N	4	8	9	22	0
		%	9.30	18.60	20.93	51.16	0.00
There is a system that enables a change friendly environment by fostering continuous learning	3.12	N	4	9	8	22	0
		%	9.30	20.93	18.60	51.16	0.00
The project manager makes a timely decision based on the fact while managing ambiguity.	2.44	N	15	5	12	11	0
		%	34.88	11.63	27.91	25.58	0.00
There are persistence and consistency in action.	2.19	N	16	11	11	2	3
		%	37.21	25.58	25.58	4.65	6.98
Overall mean	2.80						

Source: Own Survey, 2020.

Effectiveness could be contextually defined as to produce desired results by using appropriate resources, tools, and techniques in all project management activities. The overall mean is 2.80 which is below average and implicating there is a weakness in terms of effectiveness as a unit of personal competency. The mean value for the two statements of the project manager makes a timely decision based on the fact while managing ambiguity and there is persistency and consistency in action are computed below the average; 2.44 and 2.19 respectively. The two below the average statements has decreased the total mean significantly.

4.3.2.6. Professionalism

Figure 4.5. Mean Score of Professionalism



Source: Own Survey, 2020.

The last unit of the personal competency as shown in Figure 4.5. has a mean value of 3.86 which is far greater than the average. All five statements were responded with a high percentage of agreement. The statements at this unit are there is an understanding and actively supporting project's goal and mission, there is an application of a set of ethical standards, the project manager maintains and respects the confidentiality of sensitive information, the project manager admits shortcomings and explicitly accepts responsibility for failure and the project manager develops an element of trust and respect within the project environment and the mean value computed is 3.70, 3.72, 4.91,3.79 and 3.21 respectively. Taking into consideration that the overall mean is far greater than the average it can be concluded that project managers act more professionally.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

In the fifth chapter, the major findings are summarized and based on that summary a conclusion is drown. Based on the conclusion recommendations are forwarded that will improve the project management competency of the overall organization.

5.1. **Summary**

The objective of this research project was to assess the project manager's competency at TIRET Corporate; and nine (9) ongoing projects are included in the study. Since census was applied all project managers and all project team members that are directly engaged in project management activities are included, and the respondents background data indicates that the respondents represent different age groups, gender, educational background and level of experience.

The total sampling frame consists of nine (9) project managers and (38) project team members from which a total of 43 respondent's fill out the questioner that makes the response rate of 87.7%. And as to the projects 55.6% are from the manufacturing sector, 33.3% are from agro-industry sector and the remaining 11.1% is a mining project. As to the demographic result, 14.0 % of the respondents are female and 86.0 % are male, & 76.7 % have 5 years and below work experience and 23.2 % have above 5 years of work experience. As regard to education level, 76.7% have a bachelor degree and 23.3 % have a Master's degree. 58.1 % of the respondents don't have any kind of formal training/education on project management discipline.

To summarize the findings of the performance and personal competency units the mean value is used and the neutral value which is 3 taken as a reference point and the interpretation for the values are stated as below and above average, the strong disagreement and the disagreement scores of 1(one) and 2(two) are stated as below average, and 4 &5 scores that represent the agree and strongly agree respectively are represented to be above average. The statements used on the questioners are derived from the Project Management Competency Development framework (PMCD) and are activities implemented in overall project management practice. The collected data requested respondents to rate their own perceived competence and available facts about conducting project management tasks with five interrelated statements that were provided for each

unit for the respondents. If the mean scores computed to be above average, it indicates the presence of good exercise on that particular unit and vice versa.

The nine units of performance competencies that were evaluated are project integration management, project scope management, project time management, project cost management, project quality management, project human resource management, project risk management, project procurement management, and project stakeholder management.

Project Integration Management is concerned with tasks of identifying, defining and coordinating project management activities that are executed among the stakeholders. These sequences of actions in integration should be applied from the initiation of the project through closure. The results depicted in figure 4.1 highlight that there is a 2.32 total mean score that is interpreted as below-average score.

Project Scope Management includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully. Project scope management involves defining and conducting all the work required, for successful completion. On this unit as indicated in table 4.5 an overall mean score of 2.92 was scored that falls slightly below the average and still indicates inadequate performance in project scope management.

Project Time Management efficient use of time in accordance with the schedule baseline for timely completion of the project. Table 4.6 indicates the mean value, 2.13 indicating below-average performance on time management.

Project Cost Management includes efficient use of the allocated budget in accordance to the cost baseline with basic activities of planning, estimating, budgeting, financing, funding, managing, and controlling project costs. From the computed mean indicated in table 4.7, the value is 2.35, it is concluded that there is also a poor implementation of adequate project cost management practice.

Project Quality Management involves executing tasks by following up the quality assurance parameter to meet a predetermined quality standard. The overall mean result stated in table 4.8, (2.56) indicates that the quality management practice is below average exhibiting unsatisfactory practice.

Project Human Resource Management includes the processes to identify, acquire, and manage the human resources needed for the successful completion of the project. As indicated in table 4.9 a mean score of 2.93 is still below the average.

Project Risk Management is involved in identifying and characterizing risks, developing risk response and controlling plans for all risks based on their level of impact and probability of occurrence. It has long been recognized that risk management as a knowledge area is one of the least mature knowledge areas of project management (Erasmus & Marnewick 2014; Marnewick, 2013). As indicated in Figure 4.2; a total mean score of 1.72 checks out to be very much below the average score that is evidence of very poor practice of risk management.

Project Procurement Management is the establishment of a relationship with outside suppliers for materials and services needed for the completion of a project. It has got distinct but mutually exclusive parts including initiating and planning procurement, selecting, contract development, monitoring procurement activities, and closing and finalizing. These resources and materials are obtained through a procurement process that requires wider organizational involvement and is not just managed internally by the project (Clements & Gido, 2012). About Project Procurement Management, the result indicates higher level competency with a mean score of 3.64 (figure 4.3).

The last unit of performance competency in the study is Project Stakeholder Management which includes the processes of identifying the people, groups, or organizations that could impact or be impacted by the project, Table 4.10 indicates that the implementation of stakeholder management practice result with a mean score of 2.74 is below-average value interpreted as presence of poor practice.

To summarize the performance competency analysis the total means value for the nine units was computed and yields 2.59, indicating the project management competency in terms of performance competency in below-average exhibiting that there is underperformance in exercising the competency.

The personal competency domain consists of the following six competencies which are analyzed and summarized in the study: communicating, leading, managing, cognitive ability, effectiveness and professionalism. The first personal competency unit focuses on communication competency.

Communication is one of the 10 knowledge areas and is seen as a significant skill for project managers to master.

Communicating- A glance at Figure 4.4 indicates that the mean score value is 3.26, it falls above the average margin and gives evidence of the relatively good exercise of the competency unit. The statements within the communicating competence focus on whether the project manager communicates with their teams frequently, responds to and acts upon expectation, concerns, and issues of the project, whether there is a proactive engagement of stakeholders, whether the project manager maintains formal and informal communication and finally whether the project manager provides accurate, factual and relevant information.

The second component of personal competency is leading, this unit focuses on guiding, inspiring and motivating team members and other project stakeholders to manage and overcome issues to effectively achieve project outcomes. As seen in table 4.11 the overall mean of 3.04 indicate that there is above performance on the leading unit.

The third unit of personal competency focuses on Managing; Managing a project focuses on how effectively a project manager can administer the project through the appropriate allocating and using human, financial, material, intellectual, and intangible resources (PMI, 2007). Table 4.12 gives a mean value of 3.14 in managing a project as well as the project team.

The fourth component of personal competency is cognitive ability. The Project Management Institute (2007) defines cognitive ability as the application of an appropriate depth of perception, discernment and judgment to effectively direct a project in a changing and evolving environment. The five investigative statements included on the study focuses on whether there is an understanding of project stakeholder needs, interest, and influence for project success, the project manager understanding of both the formal and informal structure of the organization, whether the project manager simplifies complexities for a complete and accurate analysis, if there are application of selected tools and/or techniques to project management and if the project manager consolidates opportunities and passes them to the organization. The result in table 4.13 indicates a mean value of 2.98 in their cognitive ability, slightly below the average standard.

Effectiveness is the fifth unit of personal competency according to the study. The overall mean computed for this unit reveals 2.80 that is below the acceptable average range as indicated in table 4.14. It can be concluded there is poor performance on the effectiveness unit.

The last unit of the personal competency of the study is professionalism, contextually defined as activities that conforms to ethical behavior governed by responsibility, respect, fairness, and honesty in the practice of project management. As shown in figure 4.5 the overall mean score is 3.86 that is above the average range providing evidence that this competency unit is practiced well.

The total mean score of personal competencies is 3.18 for the above mentioned six competency units. The result demonstrates the personal competency is exercised with above-average performance through all the study projects

5.2. Conclusions

This study was performed to assess the overall competency of project management practice at TIRET Corporate and to achieve this objective a questioner was designed based on the PMCD framework to collect general information, and personal and performance competency related practices. The mean value of the results was taken as a reference point to judge as to the competency unit below and above average. The overall mean score value computed for personal and performance competency is 3.18 and 2.59 respectively.

The distribution of the mean score results of the performance competency is composed 9 units and except for project procurement with a mean value of 3.64, all 8 competency units namely project integration management (2.32), project scope management (2.92), project time management (2.13), project cost management (2.35), project quality management (2.56), project human resource management (2.93), project risk management (1.72), and project stakeholder management (2.74) have a mean score below the average reference. The mean score value for the personal competency was generated from 6 units, communicating (3.26), leading (3.04), managing (3.14), cognitive ability (2.98), effectiveness (2.80) and professionalism (3.86).

Project management practices in terms of computed performance competency among the study projects have a below-average score which complies to the fact that most projects are not successfully going according to plan as stated on the annual report (Tiret, 2019).

So it can be concluded from the conducted study the project management practice is very immature and the performance especially about the nine above mentioned performance competency units of is below the average reference taken.

5.3. **Recommendations**

- ✓ Since TIRET is engaged in different projects of varying nature it should have a mature project support office with appropriate composition of experts having detailed project management knowledge and developing standardize templets on all aspects of personal and professional competency areas, setting measurable results, etc.
- ✓ The corporate office should design a professional development strategy in project management methodologies with particular attention to professional competency.
- ✓ When recruiting for a new project manager, put standard skill and attitude competency measurement on the criteria for selecting candidates.
- ✓ Project manager competency development is an ongoing process throughout the project life cycle, the corporate office should have to evaluate project manager's and project team's competency level using a standardized competency assessment tool to fill out gaps.

5.4. **Further Area of Study**

Since project management competency is a broad scope, there shall be in-depth studies to be conducted with similar areas. Associating the project success factor with the project manager's competency will give a whole picture of the corporate level project management practice.

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Appendix

Questionnaire

Addis Ababa University School of Commerce

MA in Project management

Informed Consent & A Letter of Invitation

Title of The Study- Assessment of Project Managers Competency; The case TIRET Corporate.

Introduction- You are invited to participate in a study to be conducted that assess competencies of the project managers at TIRET corporate. which is important to know the distribution of essential competencies that exists in the corporate office, knowing competencies will be important for project managers, as they seek to motivate and lead, to remove or minimize barriers to performance and also useful for TIRET Corporate to encourage their project managers to improve their competencies, and add success and positive results to the projects and the whole organization. Please read the following statements and ask any unclear points before you agree to participate. Participation in this study is exclusively voluntarily. If you once decide to participate you have to mark on the consent form and you may obtain a copy of information sheet.

Expected From-You are expected to give answers for all the questions listed on both parts of the questionnaire.

Time Taken- You will spend 15-20 Minute until the Questionnaire is filled and the consent signed.

Benefit- This study may not benefit you directly but your participation is important for studying the key competencies of project managers and the identified competencies will create awareness and room for improvement in TIRET Corporate overall project management practice.

Confidentiality- All information that you give and the result from your data will be used for this study only. Only limited number of professionals will have access to the information. All information will be coded in a password protected computer.

Participation & Withdrawal- Your participation in this study is completely voluntarily and you have the right to refuse your participation in this study. You can stop to participate in this study at

any time after giving your assent. If you withdraw from the study, your data will be withdrawn from analysis.

Person To Contact- Please direct any questions or problems you may encounter during this study to Essayas Zerayakob Assefa *Mobile;* +251911-74-52-23 *e-mail;-esayasvet@gmail.com*

Agree to Participate? Yes ☐ **No** ☐

I. General information

Please mark✓ on your choice.

1. Sex: Male ☐ Female ☐
2. Age ……
3. Education Level: Diploma ☐ Bachelor Degree ☐ Master's Degree ☐ Ph.D. ☐
4. Do you have a formal training/education of project management of any kind?
   Yes ☐ No ☐
5. What is your personal experience in years on project management? .....
6. What is the approved budget of the projects you work on in Etb birr?
   0≤100,000,000 ☐
   100,000,001-250,000,000 ☐
   250,000,001-500,000,000 ☐
   500,000,001-1,000,000,000 ☐
   ≥1,000,000,000 ☐
7. Industrial category of the project
   Manufacturing ☐
   Agro industry/Agricultural ☐
   Construction ☐
   Service ☐
   Others ☐
8. What is your current position?
   Project manager ☐ Project team member ☐

II. Professional and personal competency related questions

The second part contains statements relating to the way a project is to be done. Each item must be rated on a five-point scale whether you agree with the statement or not. Use the following guidelines. You can circle your choice.

1 = strongly disagree

2 = disagree

3 = neutral

4 = agree

5 = strongly agree

To what extent do you agree with the following statements?

Professional competency						
Project integration	There is documented project charter	1	2	3	4	5
	Project management plan is developed	1	2	3	4	5
	The project follows the phases according to the project life cycle	1	2	3	4	5
	Project plan and documents are updated frequently as projects progress	1	2	3	4	5
	Deviation from plan were corrected and managed	1	2	3	4	5
Project Scope Management	The scope of the project is clearly defined	1	2	3	4	5
	Project activities and tasks are well defined	1	2	3	4	5
	Mile stone reviews were conducted and recorded	1	2	3	4	5
	Scope is frequently monitored to identify changes.	1	2	3	4	5
	The project deliverable is decomposed to its level of planned work	1	2	3	4	5
Project time Management	There is estimate of duration for every detailed activity	1	2	3	4	5
	Relationship and dependencies among project activity are identified and documented	1	2	3	4	5
	Change is managed into the schedule baseline	1	2	3	4	5
	The project manager monitor status of project activities to update project progress	1	2	3	4	5
	The project process meets time deadlines	1	2	3	4	5
Project Cost Management	The project is going according to the budget plan	1	2	3	4	5
	project resource are well planned and secured	1	2	3	4	5
	The project manager monitor status of project activities to update project costs	1	2	3	4	5
	There is an authorized project cost baseline	1	2	3	4	5
	There is cost over-run indicative approach	1	2	3	4	5
Project quality management	Quality standard are maintained.	1	2	3	4	5
	Quality requirements are audited and resulted from quality control measurement	1	2	3	4	5
	There is assessment to identify causes of poor quality and take action to eliminate	1	2	3	4	5
	The project deliverable are validated to check if the work meet the requirements	1	2	3	4	5

	There is documentation on how the project will demonstrate quality compliance	1	2	3	4	5
Project human resource management	Needs for experience, knowledge and skill are well defined	1	2	3	4	5
	There is a good relationship amongst the team members	1	2	3	4	5
	Conflict within teams are recognized and dealt with	1	2	3	4	5
	Team members are allowed to take initiative in problem solving	1	2	3	4	5
	There is a clear guide line to manage human resource.	1	2	3	4	5
Project risk management	Risk is monitored on a continuous basis	1	2	3	4	5
	There is well established risk management plan	1	2	3	4	5
	Risks are prioritized and analyzed by the probability of occurrence and impact	1	2	3	4	5
	Risk response is done to enhance opportunities and reduce threats to objectives	1	2	3	4	5
	Risks are identified and characterized.	1	2	3	4	5
Project procurement management	There is clearly defined project procurement management plan	1	2	3	4	5
	Procurement statement of work is developed to solicit proposal from prospective sellers.	1	2	3	4	5
	Contracts are developed in a manner that allows meet both the projects and seller obligation	1	2	3	4	5
	All procurement data's are recorded for reference and cross checking	1	2	3	4	5
	The project manager is the highest level of hierarchy to approve the procurements	1	2	3	4	5
Project stakeholder management	There is planned stakeholder involvement	1	2	3	4	5
	Stakeholders are comprehensively identified and listed	1	2	3	4	5
	Stakeholders are communicated and involved throughout project lifecycle	1	2	3	4	5
	The project is in acceptable position for the stake holders	1	2	3	4	5
	The engagement level of stakeholders is evaluated and documented.	1	2	3	4	5
Personal competency						
Communicating	The project manager communicates with their teams frequently.	1	2	3	4	5
	The project manager responds to and acts upon expectation, concerns, and issues of the project.	1	2	3	4	5
	There is a proactive engagement of stakeholders	1	2	3	4	5
	The project manager maintains formal and informal communication	1	2	3	4	5
	The project manager provide accurate, factual and relevant information	1	2	3	4	5
Leadership	There is good collaboration among project team members	1	2	3	4	5
	The project manager leads by example	1	2	3	4	5
	The project manager creates a team environment that promotes high performance	1	2	3	4	5
	The project manager builds and maintains effective relationship	1	2	3	4	5
	The project manager takes accountability for delivering the project	1	2	3	4	5
Managing	The project manager builds and maintain the project team	1	2	3	4	5
	The project manager plans and manages for project success in an organized manner	1	2	3	4	5

	The project manager maintains a positive attitude and effective relationship among team members	1	2	3	4	5
	The project manager identifies, evaluates and selects internal and external talent	1	2	3	4	5
	The project manager applies standards and generally accepted practice	1	2	3	4	5
Cognitive ability	There is understanding of project stakeholder needs, interest, and influence for project success	1	2	3	4	5
	The project manager understands both the formal and informal structure of the organization	1	2	3	4	5
	The project manager simplifies complexities for a complete and accurate analysis	1	2	3	4	5
	There is application of selected tool and/or techniques to project management	1	2	3	4	5
	The project manager consolidates opportunities and passes them to the organization	1	2	3	4	5
Effectiveness	There is application of appropriate problem-solving technique	1	2	3	4	5
	The project manager adapts to change in the project environment to minimize adverse impact	1	2	3	4	5
	There is a system that enables a change friendly environment by fostering continuous learning	1	2	3	4	5
	The project manager makes timely decision based on the fact while managing ambiguity	1	2	3	4	5
	There is persistency and consistency in action.	1	2	3	4	5
Professionalism	There is an understanding and actively supporting project's goal and mission.	1	2	3	4	5
	There is application of set of ethical standards	1	2	3	4	5
	The project manager maintains and respects confidentiality of sensitive information	1	2	3	4	5
	The project manager admits short comings and explicitly accepts responsibility for failure	1	2	3	4	5
	The project manager develops element of trust and respect within the project environment	1	2	3	4	5