St. MARY'S UNIVERSITY

SCHOOL OF POST GRADUATE STUDIES

THE EFFECTS OF PROJECT MANAGERS INTERPERSONAL SKILL ON PROJECT PERFORMANCE OF BUILDING CONSTRUCTION SITES, IN ADDIS ABABA.

BY: HANA TILAHUN

(SGS/0364/2014A)

JUNE 2023

ADDIS ABABA, ETHIOPIA

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A THESIS TO BE SUBMITTED TO THE DEPARTMENT OF PROJECT MANAGEMENT AS A PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF ART IN PROJECT MANAGEMENT.

ADVISOR: - DR. TEMESGEN BELAYNEH

SCHOOL OF POST GRADUATE IN PROJECT MANAGEMENT

JUNE 2023

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Declaration

I hereby declare that this thesis entitled "**The effect of Project Managers' interpersonal Skill on Project Performance of Building Construction sites, in Addis Ababa**." was composed by myself, with the guidance of my advisor, that the work contained herein is my own except where explicitly stated otherwise in the text, and that this work has not been submitted, in whole or in part, for any other degree or processional qualification.

Hana Tilahun   Signature ——————————— Date ———————————

St. Mary's University

Addis Ababa

June,2023

Statement of certification

This is to certify that Hana Tilahun Damena has carried out her research work on the topic entitled **"The effect of Project Managers' interpersonal Skill on Project Performance of Building Construction sites, in Addis Ababa".** The work is ordinal in natural and is suitable for submission for the reward of the Master's Degree in project management.

Advisor :Dr.Temesgen Belayneh (PhD) : _____

Date: _____

Certificate

This is to certify that the thesis prepared by Ms.Hana Tilahun Damena entitled "**The effect of Project Managers' interpersonal Skill on Project Performance of Building Construction sites, in Addis Ababa**." And submitted in fulfillment of the requirement for the Degree of Master of Science complies with the regulations of the University and meets the accepted standards with to originality and quality and Singed.

APPROVED BY BOARD OF EXAMINERS

Dean, Graduation Studies	signature	Date
Adviser	signature	Date
Internal Examiner	signature	Date
External Examiner	signature	Date

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List of Abbreviation

IPMA   International Project Management Association

LMX   Leader-Member Exchange

PE   Project Engineer

PM   Project Manager

PMBOK   Project Management Body of knowledge

PMI   Project Management Institution

RTC   Randomized Controlled Trial

SPSS   Statistical Package for the Social Sciences

TOC   Theory of Constraints

Abstract

The objective of this study is to assess the effect of project manager's interpersonal skill on project performance of building construction sites, in Addis Ababa. The researcher went through different literature on the subject matter to understand about the factors of project interpersonal skill on project performance and decided to apply descriptive research design employing qualitative and quantitative research approaches. Sampling method was used random sampling since all the respondents were selected purposely considering they have a direct involvement and pertinent information that can help the researcher. Descriptive analysis was applied in order to get the percentage frequent and mean of the respondents data. The likert scale ranging from strongly disagrees to strongly agree questionnaires were processed and analysis using SPSS V25 and presented in a narrative from by using tables. In this research selected 50 members of the study, I got the response from 45 surveys were came back at the face-to-face non-public conferences, and online survey, this means the selected members 90% of the response is came back, and the remaining 5 response replied from electronic submissions . A gap analysis was used to compare the reviewed material vs. interpersonal competencies. This research concluded that project management interpersonal transferrable skills are the ones that will be most highly sought in selected project performance in Addis Ababa city. The interpersonal skills named communication, leadership, negotiation, adaptability, and diligence will need to concentrate on those competencies within performance of project success this research should help construction project manager and engineers to be aware of interpersonal skills that they need to possess to improve their performance. Finally the framework provides a sound foundation for future studies that focused on project managers interpersonal skills.

Key words- project management; interpersonal skills; competency models

CHAPTER ONE

INTRODUCTION

1.1.   Background of the study

As project management matured as a management discipline there was an increasing recognition of the value of people in being able to successfully complete. Furthermore inspired and motivated team members were more likely to achieve project goals than those who were not (Geue, 2017) the need to interact and network with internal and external stakeholders is recognized as an essential component of successful project management. Project management practice can be applied in project based organization as well as in business organization. According to Kerzner(2009) effective project management practices ensure that the project would meet not only key techniques objective (budget, time and quality) but also the needs of stakeholders. On the other hand ineffective project management practices would lead to project failures. The failure of the project comes from the reasons for maximum mission disasters were still the problem of various researchers (Pinto& Kharbanda, 1996; Thamhain &Gemmill, 1974; Andersen, 2010). As I cite in advance those discussions those discussions are approximately what the sources of failure at the mission and resulted in adjustments within the method to project management, particularly the most important and complicated techniques of project control is that concentrate on the interpersonal relationships within project.

Construction managers, also known as construction project managers, oversee and allocate resources for various construction projects. A great construction project manager is skilled in both the technical skills required for the job and in leading and directing their team. Construction project managers oversee all aspects of the building process, working closely with engineers and architects to develop plans, establish timetables, and determine labor and material costs. They are responsible for ensuring the project is completed on budget and within scope (CIB, 2002).

This research identify effects of project managers interpersonal skill For any construction project success, a number of factors play a roles the hard and soft skills of project managers play a role in the success of a project since these skills enable project managers to better plan, execute, and evaluate project progress. The hard skills related to project management include planning, evaluation, monitoring, scheduling, and risk management. On the other hand, now soft skills are

gaining popularity and include the ability to work with different types of people, leadership, communication, negation, adaptability, and diligence. Due to the complexity and important of project managers responsibility studies have been conducted to investigate essential project managers interpersonal skills for achieving project success.

1.2. Statement of the problem

Project management is the most respect and graceful profession in the whole world at this time. Patanakul (2011) discusses that people manage projects, schedules, budgets and resources, which all ultimately lead to success and / or failure, based on how these elements are managed.

Stevenson and Starkweather (2010) note that project success and / or failure is presumably reliant upon a project manager's ability to use soft skills; including communicating effectively, fostering organizational culture, motivating the entire team, managing the expectations of stakeholders, understanding project objectives and outcomes, effectively solving problems, and making precise and informed timely decisions.

Pant and Baroudi (2008) found that more focus must be waged upon the individual traits of the project manager, and how they intricately interact with every aspect of the project, and how that interaction equates to such success and / or failure of the overall project.

Ravinder and kollikkathara (2017) maintained that those who are successful will have specific personal skill in addition to technical expertise those skills include leadership, the ability to foster and manage interpersonal relationship, and the ability to promote open communication among team members.

Pant and Baroudi (2008) discuss that project leadership, and the successful management of projects in general necessitates more than technical competence. It is furthered by Pant and Baroudi (2008) that the skills necessary to handle relationships across the project are even more essential to achieve stakeholder satisfaction through the entire life of the project. These authors, like many others further that research must be conducted to understand these relationships, if they at all exist, to truly understand the balance of both technical competence and interpersonal traits, as it pertains to project success and / or failure.

Llorens- Garcia et al., (2009) pose that there are specific interpersonal traits of every project manager that are necessary to foster these generic skills in varying situations and under certain circumstances.

According to a report of the Ethiopian parliament in 2021, 91.75% of construction project didn't complete as per the time of the plan which caused waste of the country's resources. This study was mostly concerned with the construction industry hires civil engineers as project managers who may have sound technical knowledge but may be lacking interpersonal skills. A lack of such interpersonal (soft) skills can decrease a project manager's ability to handle projects efficiently and effectively, however this study explained the impact of project managers and interpersonal skills on construction project implementation.

1.3. Research Question

For this research the selected research question is selected from the interpersonal skill:

- ➢ Is there any relation between project manager leadership and project success?
- ➢ Is there relation between project manager communications within project success?
- ➢ Is there relation between project managers Negotiation within project success?
- ➢ Is there any relation between project manager Adaptability within and project success?
- ➢ Is there relation between project manager Diligence within and project success?

1.4. Objective of the study

1.5.1   General objective

The overall aim of this study is to see if there was any link between project success and collaboration between the project manager and project engineer.

1.5.2   Specific objective

The study specifically aims to:

- To determine the relationship exists between project success and project manager Communication skill
- To examine the link between project success and project manager Leadership skill
- To determine relationship exists between project success and project manager Negotiation skill
- To examine the relationship between project success and project manager diligence skill
- To determine the relationship between project success and project manager Adaptability skill

1.6   Scope of the study

The study focused on the project managers and interpersonal skill from a solitary geographic region in the territory of Addis Ababa, Ethiopia. The populace turns into conceivably handling a profoundly assorted set of projects in conformance which characterized the project life cycle and a normal gadget that gave fashionable route to the project manager and interpersonal skill in all projects because of its location and history, Addis Ababa are a giant range of presidency projects both straightforwardly overseen over seen the governmental or private building project sites, which could have limited the evaluation's generalize ability.

1.7   Limitation of the study

The purpose of this study was limited to project managers and interpersonal skill on the project performance of building construction. The idea of the study is broad and high, so it may be difficult to make it fully accessible and also the research is too large to cover in the limit time give sampling is required which might have an impact on the general output of the study. Project managers and engineers work with different sites so that it's difficult to find all respondents on sites and it's mandatory to look for them in different places. Geographically, the study will be also limited to Addis Ababa sites.

1.8   Organization of the research

Structurally, the paper was being composed of five chapters. The first chapter will presents introductory materials. The second chapter presents the related literatures review during the desk research phase of the study. With this background the report presents analysis and interpretation of the data gathered in the third chapter. Finally the report concludes with the summary and conclusion of the study and recommendation that are made.

CHAPTER TWO

REVIEWS OF THE LITERATURE

2.1   Introduction

Relation among the project manager and interpersonal skill in the coronary of enforced comes of the improvement projects, whatever project managers consume 90th in their time communicating with project participants. However a few barriers occur throughout this important approach of moving project information. Consequently this evaluation paper highlights these constraints and the way important mission managers family members are with task engineers. Moreover, as project communiqué should be carefully managed this paper introduces conversation management because of its expensive price right at the side of the up those pursuits to fulfill the stakeholders desires through handing over sure hearth comes subsequent.

Relation between the project manager and interpersonal skill is also a wide noted terms that pulls essential interest all through the literature, in which studies showed that its far the inspection of every human interaction between fully completely one of a kind parts of the communicate and it offers meaning and solidity to the conducted activities (Jetu and Riedl, 2012). First and fundamental the lexicon defines the world communiqué as a result of the approach transmission and interchanging ideas viewpoint or facts via talking writing or indictors. Communication or the lack thereof is the challenge highlighted most often by far it is good that most project managers realize how important effective communication is to project success but it is equally frustrating to observe how few project managers take concrete step to improve it (Shi and Chen, 2006).

Interpersonal skill is that the important element of project management trade line the desire strategies of correct coming up with amassing dispensing and retrieving project records a number of the project members (PMI). It had been noted in literature because of its significance of developing an accomplice personal relationship technique of records sharing among individuals at absolutely completely different degrees. On high of that the degree composition of coming up with turning out with the project communication control is high through fostering a correspondence the executive orchestrate that help the venture administrator to diagram the diagram the problematic gathering decisive the records to be shared, and allocating the most convenient way of communication to satisfy the project dream and client need.

2.2   Theoretical Literature

2.2.1.   The future advancement of project management

Project management is the application of knowledge, skill, tools and techniques to project activities to meet the project requirements PMI. It is also defined as the application and integration of modern management and project management knowledge, skills, tool and technique to the overall planning, directing, coordinating, monitoring and control of all dimensions of a project from its inception to completion, and the motivation of all those involved to produce the product and service or result of the project on time, within authorized cost and to the required quality and requirement and to the satisfaction of participants (Chartered institute of building).

Globalization brings with it new problem for the demand for increase product and service speed to market. Project are becoming larger more complicated and difficult to manage the group are quite diverse and are locate all over the world. Cost constraints drive paintings overseas to low cost national which creates its own set of problem. The industry is evolving and project management will need to adapt as well.

As we push the boundaries of what is feasible and encounter new obstacles, new approaches and higher practices will undoubtedly emerge. Human desire propels us onward toward a better future, and with it, improvements in how we manage projects. It's unclear when and where these characteristics will manifest.

2.2.2. Factor influencing project performance

The results of several analyses, Tukel and Belassi (1996) observed that there has been companion degree sincere deal of variation amongst different types and sectors of comes. The event enterprise has seen assignment overall performance evaluation that makes a specialty of character nations, the contribution of stakeholders like buyers, contractors, and consultants, similarly as technical factors like, among others, stage of style accuracy, constructability, and protection.

Baloyi & Bekker (2011: 62) researched the causes of the price of able overruns and project delays at the 2010 FIFA match Stadia in the Republic of the African nation. From a contractor's perspective, one in all the most necessary reasons for value overruns turned into the shortage of

entire hard work, but for project delays, the tributary elements were all another time the dearth of whole hard work, poor bobbing up with, and making plans, similarly as labor disputes and strikes.

Ahadzie, Proverbs & Olomolaiye (2007: 684) investigated the vital achievement standards for a constructing task in Ghana associated terminated that the "contemporary accomplice and destiny accomplishment of accomplice degree project probable can be a Personal Relationship of the viability of the senior group, their imaginative and prescient and management, and so the combined information and abilities of the business enterprise's group of workers". mission leadership and oversight featured as key elements within the evaluation conducted with the aid of Odusami (2003: 525) on Nigerian creation comes. This takes a look at tested the Personal Relationships of a team leader's warm qualifications, career, leadership trend, and project team composition at the fulfillment of creation comes. The outcomes tested that the assignment chief's functionality impressively impacted project execution. Muller & Turner (2007: a try of-23) tested the cooperation of the task director's authority trend with project as a result of the numerous variables' Personal Relationships on the mission's completion. Project managers' leadership designs had been buxom in phrases of intellectual, emotional, and human motion competency and as compared to the success of their hottest come. Seven traits of powerful mission managers have been recognized: problem-fixing capacity; results orientation; strength and initiative; self- assurance; perspective; verbal exchange, and so the flexibleness to barter.

Chua, Kong & Loh (2013: 148-149) listed 10 vital success elements for creation comes. except for technical necessities, the listing put together capsulate assignment supervisor attributes like competence similarly as commitment and grade of involvement. Crawford (2000: 13-14) examined the characteristics of a capable project manager. She bestowed companion analysis of studies-based totally literature regarding the standards wherein project success is regarding, the variables that upload to the fulfillment of comes, in addition as an after Personal Relationship of the undertaking directors' statistics, competencies, and private attributes that unit expected to persuade to the accomplishment of roaring assignment Personal Relationships. extraordinarily very observe-up take a look at, Crawford examined senior management's perceptions of a project manager's competency. The Personal Relationships controlled bisect discernments and assumptions for r assignment the board capacity among challenge directors and their

administrators or senior administration. "An underlying trait, it is directly tied to criterion-referenced powerful and/or exceptional performance across every activity or scenario," she stated. (Crawford, 2005: eight, 15).

2.2.3. Relationships in projects

Projects are time limited endeavors that have specific performance targets and have well-adefined agenda and have a limited budget to attain the ones objectives (PMI, 2013). The project manager is "…answerable for the entire mission and responsible to the management of the assignment for safety, great, price, development, and all the different project goals. The project engineer has total duty for his area, which …includes making plans the work and controlling it. It includes managing whatever comes alongside now and again, there are disturbances to quell, disagreements to mediate, or troubles to solve… Priorities need to be set to stay inside cut-off dates, budgets, and the area of what is humanly possible (Plummer,2007, p. 7).

The character in their responsibilities is that they ought to paintings in parallel towards a not unusual aim (Dasher, 2003; Plummer, 2007). Dasher (2003), "The PM's job is to help the engineering team and buffer them from the churn generated by means of outside troubles and questions" (p. 13). The PM has the duty to preserve contact with the stakeholder community, inner and external to the task, manage resources and organizational battle, controlling scope, and immediately warfare on the project level in assist of the project engineer (dasher, 2003). The PM also has the overarching responsibility for keeping group morale, assuring that the team moves ahead (Compo nation et al., 2008; Dasher,2003). in step with Danilovic and Browning (2007),

The hassle for managers is to discover the proper manner to arrange human beings and assign paintings time beyond regulation, coordinate movements and enable communication Managers and engineers must grasp and remember interdependencies and relationships, as well as the statistics that need to be communicated, in order to take a dynamic approach, now not only within each area but additionally throughout domains. (p. 301)

2.2.4. Cultural issues in project relationships

The study of relationships among assignment stakeholders crosses cultural borders. Wang and Huang (2006) addressed the idea of guanxi, a measure of relationship and the non-public intersection between human beings. In the Chinese language construction industry projects

valued guanxi, the relationships fashioned inside the overall performance of the challenge, as an extra component for project fulfillment than price, agenda, or performance (Wang & Huang, 2006; Chen & Partington, 2004). Yifeng and Tjosvold (2008) found that "…Managers and staff can work together to support their chief-member connections, which helps with cross-cultural management" (p. 144). Mäkilouko (2004) in a examine of finish project managers observed that the most not usual approach through assignment managers changed into ethnocentric, where the leaders' focus was on juggling roles and formalizing project demands, resulting in team dissolution. Not particularly, the problem maximum recognized by way of the participants become negative communication (Mäkilouko, 2004).

2.2.5. Leader –Follower Relationships Theories

The reliance at the instrumental method defined by way of the outstanding project management associations has been called into question by scholars who have begun to examine the social relationships inside projects and with the corporations that create them (Frank et al., 2011). "There is a growing understanding that difficulties are caused by social, cultural, and economic issues, and hence are more managerial than technical," according to the report. (Harris Salamone & Kaplan, 2009, p, 291). It turned into also discovered that "particular roles and duties of the project manager in the direction of project team Project management literature does not discuss members and their role in project success" (Anantatmula, 2010, p.13).

The role of the project manager is regularly and always discussed in the venture control literature (Anantatmula, 2010; Kloppenborg & Petrick, 1999; Morris, 2010; Reeser, 1969). The role of the project engineer has additionally been addressed (Dasher, 2003; Frank et al., 2011; Ivancevich, 1979; Moses, 1993; Philbin, 2008; Powell & Buede, 2006). within the following paragraphs, the focal point is at the research into the relationships inside tasks.

2.3. EMPIRICAL REVIEW

2.3.1. Introduction

Improving project performance is a common issue in almost all organizations. Project performance cannot be completely assessed until the project is delivered and used by the customer (Razmdoost & Mills, 2016). Assessing project performance involves detailed analysis

of all aspects of a project (Todorović, Petrović, Mihić, Obradović, & Bushuyev, 2015). As ongoing research efforts are aimed to develop theories and models for improving project performance (Williams, 2005), it is necessary to improve understanding of critical competencies that must be utilized in a project context (Loufrani-Fedida & Missonier, 2015). To specify the interactions and mix of competencies leading to success, prior research studies have focused on identifying leadership competencies to develop leadership models (Hollenbeck, McCall, & Silzer, 2006).

The number of leadership competencies identified in the field of project management has steadily increased (PMI, 2013), but further research is needed to identify the specific abilities to manage projects efficiently and successfully - i.e., the competencies required for project managers in their role as leaders (Wright & Taylor, 1985; Yukl, 1989). In the engineering management and project management literature, the issue of project manager leadership competencies continue to provoke debate with regard to their contribution to project success, which highlights the need for research on leadership competencies to fully understand how they relate to project performance (Anantatmula, 2010; Battilana, Gilmartin, Sengul, Pache, & Alexander, 2010; Muller, Geraldi, & Turner, 2012; Nixon, Harrington, & Parker, 2012; Yang, Wu, Wang, & Chin, 2012). Past studies focused on analyzing and recognizing project manager leadership competencies (Berg, Karlsen, & Sarkis, 2016) and identified lack of leadership competence as the reason for many project failures. This competency represents one of the main reasons for the inability of project managers to organize available resources, to meet stakeholder expectations, to meet deadlines, and to take corrective actions for improving project performance (Ogunlana, Siddiqui, Yisa, & Olomolaiye, 2002; Sunindijo, 2015).

2.3.2. Theoretical frame work

Project Manager Leadership competencies and Models

Leadership is "a process of influencing the activities of an individual or a group to achieve project goals in a given situation" (Hersey & Blanchard, 1982, p. 94). Due to increase in projectbased organizations, project managers' competencies with respect to leadership are becoming more important in research (Kaulio, 2008).

According to Loufrani-Fedida and Missonier (2015, p. 1121), competence is "the ability of an individual, a team, or a company to mobilize and combine resources (i.e., knowledge, skills, and attitudes) in order to implement an activity in a situation." Project manager leadership competencies as critical factors of failure or success are considered a means to assess project performance (Anantatmula, 2010; Geoghegan & Dulewicz, 2008; Keller, 1992; Kerzner, 1987; Nixon et al., 2012). Leaders can be effective in some situations but not in all circumstances (Hollenbeck et al., 2006). A number of studies examine the influence of project manager leadership competencies (intellectual, managerial and emotional) on project success (Geoghegan & Dulewicz, 2008; Muller et al., 2012; Müller & Turner, 2010a, 2010b), and project manager leadership styles (transformational and transactional) on project success or performance (Yang, Huang, & Wu, 2011; Yang et al., 2013; Yang et al., 2012). However, limited research has been conducted to examine the relationship between people-oriented leadership competencies of project managers and their relationship with project performance (Anantatmula, 2008a; Anantatmula, 2010; Fung, 2014).

The 'great man' theory suggests that leadership competency models facilitate the process of grooming project managers as leaders (Hollenbeck et al., 2006). Project managers, through leadership competencies, symbolize an important role to motivate people for successful accomplishment of projects. Effective project managers articulate project vision and develop project spirit aligned with the project strategy (Shenhar, 2004). Project managers identify potential risks associated with projects (Hastak & Shaked, 2000), employ a systematic process to manage risks (Yoon, Tamer, & Hastak, 2014), and communicate important decisions to the project team members according to the situation (Strider, 2002).

A number of competency frameworks evolved in the field of project management, such as the International Project Management Association (IPMA) Competence Baseline and the Guide to the Project Management Body of Knowledge (PMBOK), developed by the Project Management Institute (PMI, 2013). The IPMA classifies 46 competency elements into three groups: a) contextual, b) behavioral, and c) technical competencies. PMI (2013), on the other hand, organizes project management competences into ten knowledge areas of project management. The IPMA competencies baseline and the PMBOK knowledge areas provide a comprehensive guide for management of a project in general. Such competency models do not reflect leadership

competencies required to improve project performance or achieve the strategic objectives of an organization (Hollenbeck et. al., 2006). The models of Hollenbeck et al. (2006) and McCrae and John (1992) refer to personality dimensions and leadership styles, respectively, focusing on general management theories. Leadership competency models are considered useful for project managers to accomplish project objectives, as lack of project manager leadership competence is directly linked with failure of projects (Nixon et al., 2012). Furthermore, project managers should be efficient in planning, implementation, and completion of project activities (Mantel, Meredith, Shafer, & Sutton, 2011).

2.3.3. Project performance measurement

Every project is unique, and project performance is measured in terms of successful completion of the project (Cheng, Ryan, & Kelly, 2012). Project information can be used to analyze and monitor project success or project performance to establish a knowledge base and enhance the process of managing future projects (Todorović et al., 2015). According to the Standish Group International (2015), 29% projects are deemed to be successful, 52% are "challenged" projects, and 19% are considered a failure. The rate of project success has declined from 34% in 2004 to 19% in 2015.

Project performance has been traditionally defined and evaluated on the basis of the number of resources required for completion of the project (Razmdoost & Mills, 2016). In accordance with the "iron triangle," a project is considered a success when the estimated schedule is met, the cost is very close to the initial planned budget, and all deliverables meet the requirements of project stakeholders (Berssaneti & Carvalho, 2015). The short-term aspects of project performance are focused on iron triangle which are crucial for clients to achieve immediate project success. However, long-term competitive advantage of projects is also significantly important for clients and project stakeholders (Berssaneti & Carvalho, 2015; Mir & Pinnington, 2014; Yang, Chen, & Wang, 2014; Yang et al., 2013).

Literature on project management suggests that new models of project performance should be multi-dimensional (Todorović et al., 2015). Project performance depends on leadership competence, organizational control processes, and the perceived relevance of prior performance (Chen, 2015). In terms of control process, process-oriented performance increases the possibility

of integrating the best available resources required to meet the project objectives (Razmdoost & Mills, 2016). Further, there are two key aspects which improve project performance during execution: a) project management processes; and b) the working relationship between project stakeholders (Meng, 2012). Both are related to project leadership. In this study, measures of overall project performance were based on dimensions of schedule performance, cost performance, quality performance, and stakeholders' satisfaction.

2.4. Conceptual framework

Figure 2.1 conceptual framework
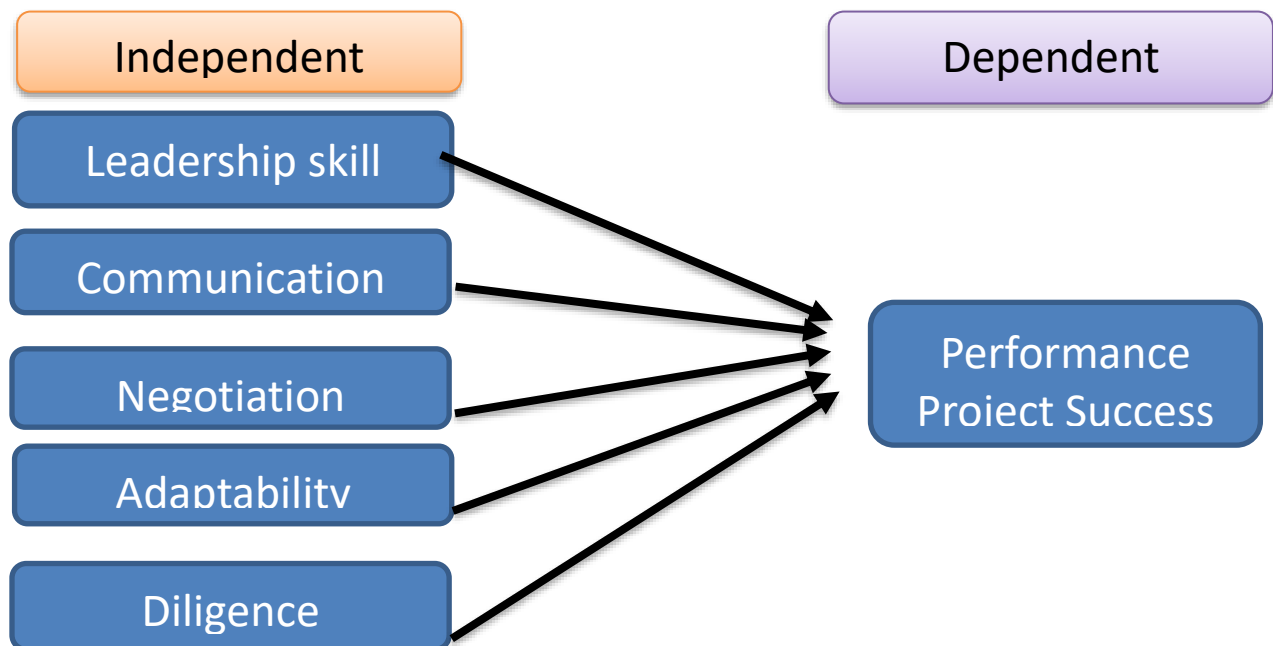
Source: Developed from Literature

The exploration questions and related the alternate degree ratings targeted from the LMX-M (Wu, 2009) and the project nation questionnaire. The hypothesis became the motive for inspecting the connection among exchage degree and project achievement.

Those ideas related with conceptual frame work

- There is a relationship between project success and project manager Communication skill?
- There is a relationship between project success and project manager Leadership Skill?
- There is a relationship between project success and project manager Negotiation Skill?
- There is a relationship between project success and project manager diligence skill?
- There is a relationship between project success and project manager Adaptability skill?

2.5. Knowledge gap

The discussions approximately projects as social entities promote the research into the roles and interrelationships within projects (Cicmil & Hodgson, 2006). These investigations into the function of social problems within projects have stimulated the project control Institute to update its tremendously popular PMBoK guide to consist of dating management (PMI, 2008). The position of project manager that become as soon as the area of the engineer-manager have been moving within the path of the professional manager who has specialized project control education or schooling (PMI, 2008).

The PM/PE management courting is complicate due to the huge impact that every on a hit execution of the project. Numerous leadership theories were brought which have a strong dyadic factor (Vroom, 1959; house, 1971; Blanchard & Hersey, 1970; Dansereau et al., 1976). At the core of every of these theories is the continuum from initiating systems to don't forget. Leader-member trade theory became decided on as the premise for assessing the relationship between the project manager and project engineer due to its general recognition.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1.   Introduction

Project management has matured steady because the methodology of option to produce new product, services, and processes (Kerzner, 2009; La Brosse, 2007). Despite the social process of project management, and therefore the tools developed to assist to regulate comes, area unit failing at associate degree dire rate (Lawrence & Scanlon, 2007; settler cluster, 2009). The project manager's leadership qualities are critical to the project's success (Geoghegan & Dulewicz, 2008; Gehring, 2007). The connection between the project manager and interpersonal skill with members of the project team has been studied (Cerpa &Verner, 2009; Cicmil, 2006; Kerzner, 2009; Morris, 1994), however the particular relationship between the project manager and his/her interpersonal skill has received very little attention (Dasher, 2003).

The goal of the chapter will be to explain the analysis methodology that is to study the information. The final population will be known and therefore the specific traits of the require sample cluster were delineates. The subsequent discussion additionally addresses the instrumentation, validity and responsibility, and approach that were taken to the info analysis.

3.2. Research method and design

The choice of analysis searches an inquiry a question a pursuit a problem exploration groundwork hunt research look methodology may be a method that's composed of many elements: (a) the researcher's worldview and approach to problem-solving; (b) the matter itself and; (c) the eye that the matter has garnered from the research community (Creswell, 2006; Neuman, 2003). The aim of the study was to determine the influence, if any, of the link between the senior project manager on the project standing. The study of the role of leadership in a very social or behavioral setting is often undertaken in quantitative, qualitative, or mixed strategies (Neuman, 2003).

A quantitative correlation methodology is selected for the study for two reasons:

The first, the tactic permits hypothesis testing, leading to a bigger understanding of the link, if any, between the independent variables and the dependent variable (Creswell, 2006). The reciprocity study determines the degree and direction of the link between the dependent and independent variables.

The second reason for selecting a quantitative methodology is the relative lack of bias that's inherent in qualitative approaches. There's no interaction between the research worker and the members of the take a look at the sample. The research worker performs an analysis of a collection data that has no information regarding the information supply (Creswell, 2006; Neuman, 2003).

The questionnaires are prepared and accessible to professionals working on the building construction site in Addis Ababa, and project managers hire a project leader (project engineer) for the form.

3.3. Sample size and sampling technique

3.3.1. Sample size determination

The sample was gathered from 119 registered Grade one General Contractors (GC1) and Building Contractors (BC1) in Addis Ababa who plays their part in various building projects in the city. The sample was taken from the project-based team for the current project of the researcher's choice by submitting a complete questionnaire. The surveys were handed out to the face-to-face interview of every selected and willing project manager and project engineer. Moreover, to do this in an effective way I scheduled all of the samples with their own free and comfortable time to get the fruitful information. At this time Project Management profession is that the well-known field in several comes that situated in several region of the country and conjointly the profession has It has its own project management institute (PMI), which is the world's most prominent institution for project management, and it promoted a project management method that was extremely revered and well accepted within the project management community. Project managers and project engineers made up the study's target

demographic. It was made up of project managers from construction corporations. The findings from the study could cause a far better understanding, and inexplicit improvement capability, of the impact of the PM/PE relationship on project standing.

3.3.2. Sampling technique

First, I was tried to gather information about how many general and building contractors are registered in Addis Ababa. The data will be taking from construction proxy data. Based on the proxy data there is 119 General and Building contractors legally registered in Addis Ababa.

Second, I was used simple random sampling to gather information because of many researchers use two major sampling techniques: probability sampling and non-probability sampling. With probability sampling, a researcher can specify the probability of an element's (participant's) being included in the sample. With non-probability sampling, there is no way of estimating the probability of an element's being included in a sample. If the researcher's interest is in generalizing the findings derived from the sample to the general population, then probability sampling is far more useful and precise. Unfortunately, it is also much more difficult and expensive than non-probability sampling.

Probability sampling is also referred to as random sampling or representative sampling. The word random describes the procedure used to select elements (participants) from a population. When I used random sampling techniques, I was followed the different steps mentioned below

Step 1- Defining the Population

Before a sample is taken, I was first defining the population to which we want to generalize my results. The population of interest may differ for each study I undertake.

Step 2-Constructing a List

Before a sample can be chosen randomly, it is necessary to have a complete list of the population from which to select.

Step 3-Drawing the Sample

After a list of population members has been constructed, various random sampling options are available. Some common ones include tossing dice, flipping coins, spinning wheels, drawing names out of a rotating drum, using a table of random numbers, and using computer programs. But I used flipping coins technique.

Step 4- Contacting Members of a Sample

Researchers using random sampling procedures must be prepared to encounter difficulties at several points. As we noted, the starting point is an accurate statement that identifies the population to which we want to generalize.

3.2. Type and sources of data

The type of data and source for this research I am used qualitative and quantitative data type, and the primary source and secondary source of data is use by preparing the questionnaire for each respondent and member of the research by selecting 26 project manager and 19 project engineers from 119 registered grade one general and building contractors in Addis Ababa City.

3.3. Data collection

This study can be introduced to the chosen project manager and project engineer (PM/PE) from exceptional constructing sites place in Addis Ababa via using the phone by way of discussing the huge outline of the look at, follow by direct face-to-face communication. The examiner population obtain the questionnaires, in which they had been invited to complete the questionnaire developed from combining the LMX-M (Wu, 2009) instrument with other questions that asked information about project overall performance.

Table 1 number of interviewees

role	Number of interviewees
Project managers	26
Project engineer	19

Table 2 interviewees background (years of experience)

Experience	Number of interviewees
1-3 years	8
4-6 years	10
7-10 years	12
11 years and above	15

3.4. Data analysis and presentation

The data analysis was done with the help of an applied mathematics code. The newest version of SPSS was used as the code. The Pearson product-moment correlation analysis was used as the study's initial analysis method for hypothesis testing. The tool needs a population that's unremarkably distributed. The information was first tested to see if it followed the standard distribution. Once the distribution was tested, the product-moment was calculated for every independent variable to live the connection between it and also the variable.

The PM and alphabetic character survey results were compared employing a chi-square take a look at the aim of this testing was to see any similarity between the 2 teams in their responses. The testing was performed on every independent variable further because the variable.

Records examination becomes performed using the Pearson product-second correlation analysis of the structured and independent variables to decide the presence of a dating to the reliant (established) variable. The method become applied to decide whether or not there has been a relation between the factors: this is, assuming an adjustment of one is joined by an exchange inside the different. The Pearson product-second correlation was utilized whilst the factors are share or stretch scale, and while a directly connection between the elements is regular. on this evaluate, the factors are in a continuum from strongly disagree to strongly agree, framing a right away area with seven focuses which can be further dispersed. As in step with Cooper and Schindler (2003), "Correlation coefficients discover the greatness and heading of connections. The volume is how lots elements circulate as one or resistance" (p. 570).

within the assessment, a really worth of r this is close to i will show that project success has a courting, potentially causal, to the corresponded exchange variable, with the signal figuring out the heading of the relationship.

3.4.1. Description of variables

3.4.1.1. Dependent variable

The dependent variable of the study was the project standing as self-assessed by the PM or the letter every PM or letter was asked to assess the standing of their project in 3 areas: cost,

timeline, and performance to their project's requirements. The respondents, who were presumed to possess a transparent understanding of the project standing, created these assessments. The 3 things that comprise this component of the survey have an associate degree objective basis (cost, schedule, performance) that was accessible to the survey subjects.

The three project standing items were evaluated using a seven-step Liker-type scale ranging from strongly disagrees to strongly agree. The participants were asked for the analysis and their assessment of every question was collected because of the mean of their responses. The independent variables were also handled in the same way. Associate degree combination figure of benefit, the mean of the 3 project standing responses, was created and used because the project standing at intervals of the sample. The figure served as a visual representation of the project's progress. Higher numbers indicate a lot of success comes and in lower numbers, less success comes. All projects standing info was confidential.

3.4.1.2. Independent variable

The freelance variables of the study were gathered through the LMX-M instrument (Wu, 2009). The variables are (a) have a Personal Relationship on, the non-public relationship between PM/PE; (b) loyalty, the degree to that the PM/PE can support the opposite once challenged; (c) contribution, the amount of effort by the PM/PE to support the action of labor goals; (d) respect, the amount of expertise perceived by the PM/PE; and (e) exchange, the amount of reciprocity perceived within the PM/PE relationship. Every of those dimensions is delineate by 3 things within the LMX-M instrument (Wu, 2009), that were averaged to form the experimental variable. Despite the fact that the LMX-M instrument is made up of two property rights instruments, permission was received to use the instrument.

3.5. Validity and Reliability

3.5.1. Validity test

Validity is a measure of the degree of validity or the validity of a research instrument. An instrument is said to be valid if it is able to measure what is to be measures or desired.

Validity calculation

- ✓ N=sample size
- ✓ Degree of freedom (DF)=N-2
- ✓ Obtain value >critical value in the table
  - Sample size =45
  - DF=45-3=43
  - See the critical value at 43DF in the table
  - 43 DF at 0.05=0.2594
  - 0.05indicate that the question is95% significant
  - C1 obtained value is 0.504 which in > critical value 0.2594 and is highly significant so it is a valid question.

3.5.2.Reliability tests

Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. It is considered to be a measure of scale reliability. A "high" value for alpha does not imply that the measure is unidimensional. If, in addition to measuring internal consistency, you wish to provide evidence that the scale in question is unidimensional, additional analyses can be performed. Exploratory factor analysis is one method of checking dimensionality. Technically speaking, Cronbach's Alpha is not a statistical test-it is a coefficient of reliability (or consistency).

Base on the above explanation reliability test was analyzed by using Cronbach's alpha test before achieving further detail analysis of other research of the respondent responses of project manager and project engineer, because of the assuring that of the collected data was compatible or not to the next analysis.

Each participant was asked to complete a survey consisting of 5 independent variables. The 5 independent variables of this study, Personal Relationship, loyalty, contribution, respect, and exchange were every shaped by 3 things. The participants assessed each item on a seven-point Likert-type scale, with response options ranging from 1 to 5 explained below.

Table 3 Likert response indication numbers

no	1	2	3	4	5
Indication	Strongly agree	Agree	Neutral	Disagree	Strongly disagree

Before analyzing additional information, we tend should check the reliability of the information supported by the subsequent reference taken from international researchers. The reliability of the information is summarized in table three.

Table 4 Reliability rules

RELIABILTY TEST: Cronbach's Alpha
Measure of Internal Consistency

Cronbach's alpha tests to see if **multiple-question Likert scale** surveys are reliable. It will tell you if the test you have designed is accurately measuring the variable of interest.

Cronbach's Alpha

$$\alpha = \frac{K}{K-1}\left[1 - \frac{\sum s^2_y}{s^2_x}\right]$$

Where

K is the number of test item

$\sum s^2_y$ is sum of the item variance

s^2_x is the variance of total score

INTERPRETATION

Interpreting ALPHA for dichotomous or Likert scale question.

CRONBACH'S α	INTERNAL CONSISTENCY
0.90 and above	Excellent
0.80 - 0.89	Good
0.70 - 0.79	Acceptable
0.60 - 0.69	Questionable
0.50 - 0.59	Poor
below 0.50	Unacceptable

https //www.statisticshowto.com/cronbachs-alpha-spss/

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Table 5Cronbach's Alpha and independent variable and characterization for PM and PE

Scale	Description	Item Number	PM N=42	PE N=18
Communication	The exchange of information by speaking, writing, or using some other medium	Mean of 1,2,3	0.83	0.73
Leadership	Ability to inspire, motivate and govern	Mean of 4,5,6	0.77	0.78
Negotiation	Ability to inspire, motivate and govern	Mean of 7,8,9	0.83	0.80
Adaptability	Match with unforeseen changes and hurdles rise to the top and take their crews with them	Mean of 10,11,12	0.87	0.82
Diligence	Careful and persistent work or effort	Mean of 13,14,15	0.77	0.71

The reliability of questionnaire tools is crucial in order to get consistent and pertinent data. According to Creswell (2018:157), a researcher has three options: Researchers use other research instruments; modify other researchers' research instruments; or create their own instruments. Tools were self-developed, modified, and tested using Cronbach's alpha.

Instruments	No Items	Reliability Cronbach alpha
Questionnaire	15	0.72

The Cronbach's alpha is 0.72 which indicates a acceptable level of internal consistency. Cronbach's alpha results should give you a number from 0 to 1, but we can get negative number as well a negative number indicate that something is wrong with our data perhaps we forget to reverse score some items.

3.6. Ethical standards and procedures

According to Rajesh kumer and C.Kandasamy (2012) ethical consideration in research work are the following

➢ **Right to choose** everyone has the right to determine whether or not to participate in a construction research project.

➢ **Right to be informed** research participants have the riht to be informed of all aspect of a research task, knowing what is involved how long the task, and what was done with the data, etc.

➢ **Right to privacy** all respondents have right to privacy.

The data was first gathered by using a telephone and face-to-face interview, that didn't establish the information sources. Once collect, there is no methodology to spot the survey participants apart from their choosing the project manager (PM) survey or the project engineer (PE) survey, there was also no thanks for connecting project managers with project engineers. The initial responses interviews were therefore low that the second set of surveys was distributed at a gathering of the every and each PMs, and PEs returning a completed survey got a sealed addressed face to face interview that they were asked to deliver to their geographical point.

CHAPTER FOUR

RESEARCH FINDING

4.1. Introduction

Chapters one up to Chapter Three contain the study to analyze whether or not there is a link between project success and the working relationship between interpersonal skill with the project manager, project engineer, and project technical lead, wherever the project managers area unit. The analysis hypothesis was delineated in chapter 3 employing a valid survey that measured the connection on 5 dimensions called Communication, Leadership, Negotiation, Adaptability, and Diligence, and connected those characteristics to the 3 criteria for project success: affordable cost, schedule, and performance targets. Every hypothesis was measured mistreatment associate degree interval variable, with a Pearson correlation analysis performed on every one of the alternate hypotheses.

The purpose of this quantitative reciprocity study was to work out through applied mathematics correlation whether there was no significant link between project success and the PM/PE interpersonal skill. The information for this analysis was gathered through a survey that was distributed and interviewed onsite. The info was analyzed using SPSS (V25) latest version to spot correlations between the relationships and project success measures. The results of this analysis area unit vital as a result they indicate ways for improvement within the approach that project managers fancy their interpersonal skill.

4.2. Review of data collection procedures

Two surveys were created, one homeward-bound toward the project manager, and therefore the different toward the project engineer. The two surveys had identical things within the same sequence with the words project manager within the survey for project engineers, inside the project manager questionnaires every question contained seven options ranging from strongly agree to strongly disagree. The project manager population known for the study was the skilled project manager and project engineer within the public and private building project set in Addis Ababa. The target population was chosen as a result of its level of project managers operating in

several buildings comes. The invite and choice of the sample were friend's recommendations and alone. The project managers and project engineers are well-known renowned and well-respected professionals and therefore the confidentiality statement within the face-to-face survey was reproduced in the face-to-face face interview survey.

4.3. Issues related to data collection

The initial survey was taken using taking rough data concerning the study approach and that the project manager and project engineer are appropriate for the study. Project managers and project engineers each responded with three replies to this inquiry. The information-gathering season created additional information assortment smoother and a lot of possibilities for the following move. In February and March, the rough data was taken from construction proxy website to develop the first move with my survey concerning of the study members of analysis, which selected from 119 registered GC1 and BC1 contractors in Addis Ababa. From all contractors I was selected 50 members of the study,35 study members was selected from general contractor,15 study members of the study was selected from building contractors, it means the study is took 42% of the whole number of contractors.

Then after I was followed the above steps briefly explained in chapter three, I was trying to get the overall responses from 30 project managers and 20 Project Engineers that point, many choices were mentioned with leadership. A brief chance to deal with the meeting was granted, wherever the members were asked to complete the surveys and come them by the tip of the meeting. From the selected 50 members of the study, I got the response from 45 surveys were came back at the face-to-face non-public conferences, and online survey, this means the selected members 90% of the response is came back, and the remaining 5 response replied from electronic submissions were created within the days once after the private meeting.

4.4. Data analysis procedure

Data analysis is the method of aggregating, conniving, and scrutiny the gathered information in a very type that enables rational decision-making (Cooper & Schindler, 2003). Exploring relationships among the variables permits the solution to the analysis inquiries to be induced with clarity (Creswell, 2006). During this study, the information was collected and therefore the data things were compared severally and jointly to see the right response to the analysis questions.

Descriptive statistics such as mean media scores, Standard deviations, percentages, and frequency distribution were computed to describe the characteristics of the variables of interest in the study. These tools should bring out the basic features of the data collected on the variables under study and provide the impetus for conducting further analysis (Mugenda, 2008). This offered quantitative and qualitative description of the objectives under study. Data collected was analyzed using the Statistical Package for Social Sciences (SPSS verstion25) software. A descriptive and inferential approach was used to analyze the data collected. Data analyzed will be presented using graphs, tables, charts, and figures. A multiple linear regression analysis will be applied to examine the effect of project manager's interpersonal skill on project performance of building construction

.

To empirically test the relationship between the dependent and independent variables discussed so far, particularly whether β1 is statistically significantly positively different from zero, the following multiple OLS regression model was applied:

$$PP_{it} = \beta_o + \sum_{k=1}^{n} \beta_i x_{it} + e$$

PP_{it} : Project performance i at time (dependent variable)

β_o : The intercept of equation

β_i : Coefficients of X i t variables

x_{it} : The different independent variables for i at time t

t: Time = number of respondent

e : The error term

Specifically, when the above general least squares model converted into current study

Specified variables it becomes:

$$PP_{it} = \beta_o + \beta_i(COM_{it}) + \beta_1(LED_{it}) + \beta_2(NEG_{it}) + \beta_3(ADP_{it}) + \beta(DLI_{it}) + e$$

4.5. Analysis

The analysis was done by calculating the chi-square ($\chi 2$) statistics by comparing the survey responses. The survey responses were compressed into three levels of response agree, neutral, and disagree for each of the independent variables. The test's decision rule is based on the test's level of significance and degrees of freedom, which is defined as degrees of freedom (DF) = k1 (where k is the number of response categories). The observed and anticipated frequencies will be near in value, and the chi-square ($\chi 2$) statistics will be close to zero if the null hypothesis is correct. The chi-square ($\chi 2$) statistics will be big if the null hypothesis is wrong. A table of probabilities for the distribution contains critical values. The test for each hypothesis resulted in the two-by-three matrix, giving a calculation with DF = 2 and a critical value for p = 0.05 of 5.99. Table 3 shows the results of the analysis, which shows that the two waves were uniform in their response, and had a 5% level of significance. The correct critical value is 5.99, and the following is the decision rule: If $\chi 2 > 5.99$, reject H0.

The null hypotheses (H01, H02, H03, H04, H05) together with H00, addressing project performance, were restated for chi-square testing to determine the existence of a relationship between the early respondents and the late respondents. The null hypothesis stated that the replies of early and late responders were identical. The null hypothesis stated that the replies of early and late responders were identical. If the null hypotheses could not be rejected, then the non-respondents would be expected to respond in the same way as the late respondents. If the null hypothesis was rejected then non-response bias exists and the two waves of responses are not predictors of the behavior of the non-respondents. The analysis was done by hard the chi square ($\chi 2$) statistics by examining the first and late survey responses. The survey responses were compressed into 3 levels of response agree, neutral, and disagree for every one of the independent variables. the choice rule for the takes a look depends on the amount of significance and therefore the degrees of freedom, outlined as degrees of freedom (DF) = k-1 (where k is the variety of response categories). If the null hypothesis is true, the discovered and expected frequencies are moved on price, and therefore the and therefore they are on the brink of zero. If the null hypothesis is false, then the chi-square datum is massive. Important values are often found in an exceeding table of possibilities for the chi-square distribution. The take a look at every hypothesis resulted in the two-by-three matrix, giving a calculation with DF = a pair of and

an important price for p = 0.05 of 5.99. Table 3 shows the results of the analysis, which shows that the two waves were uniform in their response, and had a five-hitter level of significance. The suitable important price is 5.99, and therefore the call rule is as follows: Reject H0 if $\chi 2 > 5.99$.

The null hypotheses (H01, H02, H03, H04, H05) beside H00, addressing project performance, were restated for chi-square testing to see the existence of a relationship between the first respondents and therefore the late respondents. The null hypotheses exhibit that there was no distinction within the responses between the first and late respondents. If the null hypotheses couldn't be rejected, then the non-respondents would be expected to reply in the same manner because of the late respondents. If the null hypothesis was rejected then non-response bias exists and therefore the two waves of responses don't seem to be predictors of the behavior of the no respondents.

Table 6 Chi-Square Test Table

$$\chi^2 = \Sigma \frac{(oij - eij)^2}{eij}$$

Percentage Points of the Chi-Square Distribution

Degrees of Freedom	Probability of a larger value of x^2								
	0.99	0.95	0.90	0.75	0.50	0.25	0.10	0.05	0.01
1	0.000	0.004	0.016	0.102	0.455	1.32	2.71	3.84	6.63
2	0.020	0.103	0.211	0.575	1.386	2.77	4.61	5.99	9.21
3	0.115	0.352	0.584	1.212	2.366	4.11	6.25	7.81	11.34
4	0.297	0.711	1.064	1.923	3.357	5.39	7.78	9.49	13.28
5	0.554	1.145	1.610	2.675	4.351	6.63	9.24	11.07	15.09
6	0.872	1.635	2.204	3.455	5.348	7.84	10.64	12.59	16.81
7	1.239	2.167	2.833	4.255	6.346	9.04	12.02	14.07	18.48
8	1.647	2.733	3.490	5.071	7.344	10.22	13.36	15.51	20.09
9	2.088	3.325	4.168	5.899	8.343	11.39	14.68	16.92	21.67
10	2.558	3.940	4.865	6.737	9.342	12.55	15.99	18.31	23.21
11	3.053	4.575	5.578	7.584	10.341	13.70	17.28	19.68	24.72
12	3.571	5.226	6.304	8.438	11.340	14.85	18.55	21.03	26.22
13	4.107	5.892	7.042	9.299	12.340	15.98	19.81	22.36	27.69
14	4.660	6.571	7.790	10.165	13.339	17.12	21.06	23.68	29.14
15	5.229	7.261	8.547	11.037	14.339	18.25	22.31	25.00	30.58
16	5.812	7.962	9.312	11.912	15.338	19.37	23.54	26.30	32.00
17	6.408	8.672	10.085	12.792	16.338	20.49	24.77	27.59	33.41
18	7.015	9.390	10.865	13.675	17.338	21.60	25.99	28.87	34.80
19	7.633	10.117	11.651	14.562	18.338	22.72	27.20	30.14	36.19
20	8.260	10.851	12.443	15.452	19.337	23.83	28.41	31.41	37.57
22	9.542	12.338	14.041	17.240	21.337	26.04	30.81	33.92	40.29
24	10.856	13.848	15.659	19.037	23.337	28.24	33.20	36.42	42.98
26	12.198	15.379	17.292	20.843	25.336	30.43	35.56	38.89	45.64
28	13.565	16.928	18.939	22.657	27.336	32.62	37.92	41.34	48.28
30	14.953	18.493	20.599	24.478	29.336	34.80	40.26	43.77	50.89
40	22.164	26.509	29.051	33.660	39.335	45.62	51.80	55.76	63.69
50	27.707	34.764	37.689	42.942	49.335	56.33	63.17	67.50	76.15
60	37.485	43.188	46.459	52.294	59.335	66.98	74.40	79.08	88.38

Table 7Hypothesis Test Summary

No	Null Hypothesis	Test	Sig.	Decision
1	The categories there are no significant differences between early and late respondents' perceptions for project performance occur with equal probabilities	One-Sample Chi-Square Test	0.002	Reject the Null Hypothesis
2	The categories there are no significant differences between early and late respondents' perceptions for Communication occur with equal probabilities	One-Sample Chi-Square Test	0.101	Retain the Null Hypothesis
3	The categories there are no significant differences between early and late respondents' perceptions for Leadership occur with equal probabilities	One-Sample Chi-Square Test	0.032	Retain the Null Hypothesis
4	The categories there are no significant differences between early and late respondents' perceptions for Negotiation occur with equal probabilities	One-Sample Chi-Square Test	0.125	Retain the Null Hypothesis
5	The categories there are no significant differences between early and late respondents' perceptions for Adaptability occur with equal probabilities	One-Sample Chi-Square Test	0.005	Retain the Null Hypothesis
6	The categories there are no significant differences between early and late respondents' perceptions for Diligence occur with equal probabilities	One-Sample Chi-Square Test	0.008	Retain the Null Hypothesis

4.5.1   Testing Hypotheses: the PM/PE Surveys

Data were gathered from project managers and project engineers who were elite by the project managers who older the survey. The technical leads were treated as an independent sample from a special population since there was no demand for the project managers to pick a project engineer who worked on an equivalent project. The null hypothesis for the takes a look posited that there was no important distinction between the project managers' and therefore the project engineers' perception of the six things tested within the surveys. the information was compressed to a few classes disagree, neither agree nor disagree, and agree, as a result of the chi-square tests came invalid results caused by a variety of zero rows within the project engineer survey as a result of the tiny number of surveys came. The comparisons were between PM and PE performance; PM and letter Personal Relationship; PM and Communication; PM and Leadership; PM and Negotiation; and PM and Adaptability, and PM and Diligence. The results area unit is displayed in Table eight.

Table 8 comparing the project manager and project engineer survey to determine similarity between two samples

No	Null Hypothesis	Test	Sig.	Decision
1	The categories there are no significant differences between early and late respondents' perceptions for project performance occur with equal probabilities	One-Sample Chi-Square Test	0.000	Reject the Null Hypothesis
2	The categories there are no significant differences between early and late respondents' perceptions for Communication occur with equal probabilities	One-Sample Chi-Square Test	0.164	Retain the Null Hypothesis
3	The categories there are no significant differences between early and late	One-Sample Chi-Square	0.566	Retain the Null Hypothesis

	respondents' perceptions for Leadership occur with equal probabilities	Test		
4	The categories there are no significant differences between early and late respondents' perceptions for Negotiation occur with equal probabilities	One-Sample Chi-Square Test	0.125	Retain the Null Hypothesis
5	The categories there are no significant differences between early and late respondents' perceptions for Adaptability occur with equal probabilities	One-Sample Chi-Square Test	0.051	Retain the Null Hypothesis
6	The categories there are no significant differences between early and late respondents' perceptions for Diligence occur with equal probabilities	One-Sample Chi-Square Test	0.23	Retain the Null Hypothesis

4.5.2   Testing Hypotheses: Comparing Surveys

Table two compares the responses of the project managers and project engineers who submitted completed surveys. The null hypothesis in every take a look was that there was no distinction between the project man and project engineers' surveys of the dimension being studied. This supports the concept that the two teams had similar approaches

Null Hypothesis 0: There is no difference in how project managers and interpersonal skill view in project performance.

The results of the tests were that the null hypothesis was rejected. This means that the two survey area units are different. This result implies that project managers and interpersonal skill have dissimilar perceptions of project performance.

The null hypothesis was retained based on the outcomes of the tests. This implies that the two polls aren't completely dissimilar. This result implies that project managers and interpersonal skill have similar perceptions of impact.

Null Hypothesis 1: there's no distinction between project managers' and project engineers' perceptions of Communication

The results of the tests were that the null hypothesis was retained. This means that the two surveys aren't different. This result implies that project managers and interpersonal skill have similar perceptions of communication.

Null Hypothesis 2: There is no difference in contribution views between project managers and leadership.

The null hypothesis was retained based on the outcomes of the tests. This implies that the two polls aren't completely dissimilar. This finding suggests that project managers and project engineers have comparable leadership views.

Null Hypothesis 3: there's no distinction between project manager and project engineers' perceptions of negotiation.

 The null hypothesis was retained based on the outcomes of the tests. This implies that the two polls aren't completely dissimilar. This finding suggests that project managers and project engineers have comparable negotiation views.

Null Hypothesis 4: The perspectives of project managers and project engineers on the adaptability are the same.

The results of the tests were that the null hypothesis was retained. This means that the two surveys aren't different. This suggests that project managers and project engineers have similar perceptions of adaptability.

Null Hypothesis 5: The perspectives of project managers and project engineers on the diligence are the same. The results of the tests were that the null hypothesis was retained. This means that the two surveys aren't different this suggests that project managers and project engineers have similar perceptions of diligence.

4.6. RESULTS OF THE STUDY HYPOTHESIS

4.6.1 Project managers

The sample collected within the study was 27 project managers of a population from 119 registered Grade one General Contractors (GC1) and Building Contractors (BC1) in Addis Ababa who played their part in various building projects in the city. This sample depicted 22.68% of the population. The project managers were asked to self-assess their project performance, which resulted in the creation of the variable project performance. The variable was tested and therefore the null hypothesis, that the info was unremarkably distributed, was rejected, which implies that the info isn't ordinarily distributed. Figure one shows the SPSS analysis of the variable's distribution.

Table F1 in Appendix shows the correlation of the 5 analysis inquiries from SPSS to project success for the project managers. A 95% confidence level was wont to confirm if the null hypothesis, that there was no relationship between the variable (project performance) and therefore the experimental variable (personal relation, loyalty, contribution, respect, exchange), was rejected.

4.6.2 Project engineers

The sample collected within the study was 18 project engineer's elite by responding project managers from 119 registered Grade one General Contractors (GC1) and Building Contractors (BC1) in Addis Ababa who played their part in various building projects in the city. These drawn 15.12% proportion of the attainable population. The project engineers were asked to self-assess their project performance, which resulted in the creation of the variable project performance. The variable was tested and also the null hypothesis, that the information area unit was commonly distributed, wasn't rejected, which implies that the information was commonly distributed. Figure 2 shows the Minitab analysis of the variable's distribution.

Table F1 in Appendix F shows the correlation of the 5 analysis inquiries from SPSS to project success for project engineers. A 95% confidence level was wont to confirm if the nullhypothesis, that there was no relationship between the variable (project performance) and therefore the experimental variable (personal relation, loyalty, contribution, respect, exchange), was rejected.

4.7. Linear regression - results and analysis

After the necessary pre-processing and setup on the software tool, the data was subjected to Linear Regression analysis. In the following sections, we present the results obtained while testing each of these hypotheses. Furthermore, in light of the regression output, we discuss the underlying concepts that explain the subject in more detail. Results obtained from the questionnaire survey were exported to SPSS software package.

Table 9 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the estimate	Change statistics R square change	F change	Df1	Df2	Sig. F change
1	0.503	0.253	0.133	1.20795	0.253	0.655	15	29	0.805

a. Predictors: (Constant), My project engineer will return it when I give effort at work, My project engineers would come to me defense if I were 'attacked' by others, My project engineers is willing to apply extra efforts, beyond those normally required, to help me meet much work goals, My project engineers is impressed with my knowledge of my job, My project engineers likes me very much as a person, My project engineers will eventually repay me if I do something for his/her, My project engineers does not mind working his/her hardest for me, I have a friendly communication and attachment with project engineers and other , My project engineers would defend me to others in the organization if I made an honest mistake, My efforts are reciprocated by my project engineers, My project engineers admires my professional skills, My project engineers defends my work actions to a superior, even without complete knowledge of the issue in questions, My project engineers provides me with support and resources that go beyond what is specified in his/her job description, My project engineers things it is a lot of fun to work with me, My project engineers respects my knowledge and competence on the job

Table 10 ANOVA

Model		Sum of Squares	df	Mean square	F	Sig.
1	Regression	14.327	15	0.955	0.655	.805[b]
	Residual	42.315	29	1.459		
	Total	56.64	44			

b. Predictors: (Constant), My project engineer will return it when I give effort at work, My project engineers would come to me defense if I were 'attacked' by others, My project engineers is willing to apply extra efforts, beyond those normally required, to help me meet mu work goals, My project engineers is impressed with my knowledge of my job, My project engineers likes me very much as a person, My project engineers will eventually repay me if I do something for his/her, My project engineers does not mind working his/her hardest for me, I have a friendly communication and attachment with project engineers and other , My project engineers would defend me to others in the organization if I made an honest mistake, My efforts are reciprocated by my project engineers, My project engineers admires my professional skills, My project engineers defends my work actions to a superior, even without complete knowledge of the issue in questions, My project engineers provides me with support and resources that go beyond what is specified in his/her job description, My project engineers things it is a lot of fun to work with me, My project engineers respects my knowledge and competence on the job.

Table 11 Coefficients

Model	Unstandardized coefficient		Standarded coefficient	t	Sig.	95%confident interval for B	
	B	Std. Error	Beta			Lower bound	Upper bound
(Constant)	.471	.197		2.39	.018	2.173	6.006
Communication skill	-.278	.061	-.241	-3.26	.001	.329	.322
Leadership skill	.108	.063	.088	1.36	.000	.496	.443
Negation skill	.337	.067	.317	5.23	.017	.139	.476
Adaptability skill	.176	.072	.161	2.36	.000	.270	.561
Diligence skill	.424	.057	.409	7.41	.000	.366	.591

The results shows that among the skills set, the highly influential skills of project manager on project success include diligence skills (β=.424, P<.05); Negotiation skills (β=.337, P<.05); Adaptability skills (β=.176, P<.05); and Leadership skill (β=.108, P<.05). The results for communication skills turned out to be negative and significant (β= -.278, P<.05); and insignificant for coordination skills (β=.091, P>.05). The interpretive structural model shows that the project success is dependent over the independent variables called personal relationship, loyalty, contribution, respect, and exchange. This hypothesis was tested using regression analysis and was found to be true. The project success (Dependent Variable) is positively influenced (β =0.503, σ=0.655) by the five variables (Independent Variables) with R2=0.253 which is significant. The project execution is undertaken through the various units which in turn associated to different projects. Besides, the project manager controls the overall project performance containing projects and thereby his decisions will influence projects directly.

4.8. Major findings

The study results indicated that for project managers there was significant correlation in the five hypotheses, where the null was rejected. There was a significant relationship between project performance scores and the project managers' communication, leadership, negotiation, adaptability, and diligence scores. The indication is that there is a possible causal relationship between the project manager's perceptions of the relationship with the interpersonal skill and project performance. The null hypothesis, that there was no significant relationship between project performance and the project manager-Interpersonal skill relationship, Not only the decision for continuation or termination of projects do lie with the project manager, but also allocation of resources, prioritization of projects over a constrained resource etc. is at his discretion. These decisions in turn have a bearing on how projects are executed by the project manager and thereby resulting into overall project performance management.

This may indicate that the relationships studied here were less important to the project engineer than to the project manager. The knowledge baseline related to the reasons for project performance appears to have been increased.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Summary

The goal of this analysis was to realize further insight into the connection between the project managers with interpersonal skill. A quantitative-correlational approach was used to see if there was a relation between project manager with interpersonal skill and project success. The populations designated for this study was the well-respected professionals of project managers and interpersonal skill all are playing them add completely different building sites set in Addis Ababa at the time of the study. The study's dependent variable was a self-assessment by the respondents of the project's performance, budget, and schedule as a part of the study survey. The connection between the project manager and interpersonal skill was measured via two surveys employing a Likert-type scale (Agree and Disagree). One survey was custom-built for project managers, and also the different for project engineers.

The project manager does need to possess the right values and should also possess good interpersonal skills. Project managers need to have good leadership skills and should know how to promote team building within its members. Other skills necessary include a good decision maker, negotiator, motivator, and communicator. From 50 members of the study,35 study members was selected from general contractor,15 study members of the study was selected from building contractors, it means the study is took 42% of the whole number of contractors and also overall responses from 30 project managers and 20 Project Engineers selected 50 members of the study, I got the response from 45 surveys were came back at the face-to-face non-public conferences, and online survey, this means the selected members 90% of the response is came back, and the remaining 5 response replied from electronic submissions were created within the days once after the private meeting.

The project success (Dependent Variable) is positively influenced (β =0.503, σ=0.655) by the five variables (Independent Variables) with R2=0.253 which is significant. The project execution is undertaken through the various units which in turn associated to different projects.

Five hypotheses were articulated to deal with the study objective. Every hypothesis was used to distinguish any association between the dependent and independent variables. The technique does not display the result to verify the presence of a linear. The Pearson product-moment correlation was the link. To analyze the impact of many waves of response, a close non-response analysis was used.

5.2. Conclusions

This quantitative descriptive project was designed to work out if there was any relationship between the two (two people maintaining a sociologically important relationship) relationship between the project manager with interpersonal skill and project performance. The objective of this study was to identify interpersonal skill which significant influence on the project success the. Study was based on Ethiopian context and data collected from project manager and engineer through random sampling. Results indicate that among the leadership skill, communication skill, negation skill, adaptability skill, diligence skills are the most important interpersonal skill which have significant influence on project success.

Interpersonal skill in the other word communication skill and other skill are necessary in construction management, because they allow you to create relationship with people. Established contact and proper interpersonal skill allow you build and maintain good relationship with people and exert the desired influence on people. The results show that communication is fundamental to the development of leadership and others ability and effective management in order to product successful projects. The construction project managers and engineers in developing their leadership, negation, adaptability, diligence and communication abilities through improved communication improve their management and leadership ability ensuring the successful execution of projects.

5.3. Recommendations

According to Vaagaasar (2011),"technical competencies mustn't be the only issue once assessing what competencies, the team ought to possess" (p. 304). The relationships that the project manager and interpersonal skill connection with the stakeholders of a project together with. The research also recommendation that building construction project participation join profession

groups to regulation that industry and ensure that all have requisite skills to boost project performance while also contributing to economic development and job creation.

The model is predicated on the influence of

- **Communication** this is probably the most important project managers and engineer who are good communication are able to help teams understand the scope of their duties and solve problem as they arise if project manager is not able to clearly communication expectations a project will be more complicated than necessary from the very start project manager who are still developing their communication skills can benefit from taking time each day to think about what their team need to know and then conversing with them about those they also benefit from making an effort to listen to their team members

- **Leadership** skill leaders can inspire and motivate team members to achieving project goals Project managers who want to refine their leadership skills can begin by finding new ways to provide team members with regular feedback on their progress. Additionally, they can work on managing stress in order to approach difficult situations with a strong, composed attitude.

- **Negation** skills allow project managers to swiftly and effectively reach agreements with their crew members and find common ground with them, even when disagreements arise. Successful managers are known for their negotiation skills—they can quickly reach an agreement with their allies and find common ground with their rivals. They know how to make stakeholders work out so that everyone wins, which makes their teammates respect them. Project managers who want to improve their negotiation skills can try to be more flexible and let others win instead of taking the credit for themselves.

- **Adaptability** Project managers who can adapt to unforeseen changes and hurdles rise to the top and take their crews with them. Adaptable project managers are quick on their feet and are ready to adjust expectations and plans when necessary. They also anticipate potential pitfalls and plan ahead for ways to adapt to trouble down the road. For the most part, becoming more adaptable is a shift in attitude. Adaptable project managers

and engineers accept that things may not go according to plan and mentally prepare for snags.

- **Diligence** skill Successful project managers work hard and do members right so that the rest of their team can do the same. They also work hard and pay close attention to every detail, which helps them outperform and outplay the competition. Project managers can learn to be responsible by keeping their daily promises and meeting their goals.

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APPENDIX

Questioners

I am preparing a research on the interaction between project managers and interpersonal skill on project performance of building construction sites in Addis Ababa to meet the requirements of obtaining a Master's Degree in Project Management at St. Mary's University.

In order to be able to prepare this research, a questionnaire was designed to collect data and opinions related to its paragraphs.

Please respond to this questionnaire with all the accuracy and objectivity that we expect from you. There is no doubt that the opinions and information you provide will be completely confidential and will necessarily enrich this research.

Personal and Functional Information

 Demographic Information

1. **Sex**:   A. Male   B. Female

2. **Age**:   A. 19-28   B. 29-39   C.40-55   D.56 and above

3. **Levels of Education**:   A. Degree   B. Master's Degree   C. PhD and above

4. **Number of years experience at the construction project**

     A. 1-3   B.4-6   C.7-10   D.11 and above

5. **Position:** _ A. project engineer   B. project manager   C. other

Instruction: please give an explanation to open ended questions.

1. What kind of communication method is effective to project manager?

_____

_____

2. How communication is important for project manager?

_____

_____

3. Is effective communication enough on project manager level? Why

_____

_____

The following questions concern your relationship with your supervisor. Please indicate how much you agree or disagree with each statement.

How strongly do you agree or disagree that the statement describes your feelings

5= Strongly Agree   4= Agree   3= Neutral   2= Disagree   1= Strongly Disagree

	1	2	3	4	5
Leadership					
project managers are defending others work actions to a superior, even without complete knowledge of the issue in questions					
project managers are true leaders					
project managers are leading their work practically than					

theoretically					
Negotiation					
Project managers are effectively reaching agreements					
Project manager always know some situations require give and take					
Project manager always to be more flexible					
Adaptability					
Project managers are always adapting with the unforeseen changes					
Project managers are always quick on their feet and ready to adjust expectations and plans					
Project managers are accepting the plans and mentally prepare for snags					
Diligence					
project managers are do not mind working /her hardest way					
project managers are willing to apply extra efforts, beyond those normally required					
project managers are providing support and resources that go beyond what is specified in job description					

Survey Instrument Project managers and Engineers questionnaire

Project Information								
				1	2	3	4	5
Triple Constraint		1	The project is on schedule					
		2	The project is within budget					
		3	The project meets the scope					
Project Manager and Project Engineer Survey								
Scale	Description	No of Question		1	2	3		
Leadership	Ability to inspire, motivate and govern	1	project managers are defending others work actions to a superior, even without complete knowledge of the issue in questions					

		2	project managers are true leaders					
		3	project managers are leading their work practically than theoretically					
Negotiation	Discussion aimed at reaching an agreement	1	Project managers are effectively reaching agreements					
		2	Project manager always know some situations require give and take					
		3	Project manager always to be more flexible					
Adaptability	Match with unforeseen changes and hurdles rise to the top and take their crews with them	1	Project managers are always adapting with the unforeseen changes					

		2	Project managers are always quick on their feet and ready to adjust expectations and plans					
		3	Project managers are accepting the plans and mentally prepare for snags					
Diligence	Careful and persistent work or effort	1	project managers are do not mind working /her hardest way					
		2	project managers are willing to apply extra efforts, beyond those normally required					
		3	project managers are providing support and resources that go beyond what is specified in job description					

Appendix Study Results

Table F1 Correlation Results for Project Manager Survey Performance

Variable	Correlation	Significance
Communication	0.529	0.127*
Leadership	0.991	0.002**
Negotiation	0.404	0.037**
Adaptability	0.197	0.324*
Diligence	0.218	0.275**
Note. *p < 0.05,	** p < 0.01.	

Note: **Significant at 0.01 levels (Two tailed)

Table F2 Correlation Results for Project Engineer Survey Performance

Variable	Correlation	Significance
Communication	-0.123	0.626
Leadership	0.158	0.530
Negotiation	-0.197	0.433
Adaptability	0.193	0.547
Diligence	0.170	0.499
Note. *p < 0.05,	** p < 0.01.	

Table F3 Critical Value for Correlation Coefficients

These tables concern tests of the hypothesis that a population correlation coefficient ρ is 0. The values in the tables are the minimum values which need to be reached by a sample correlation coefficient in order to be significant at the level shown, on a one-tailed test.

Product Moment Coefficient					Sample size, n
Level					
0.10	0.05	0.025	0.01	0.005	
0.8000	0.9000	0.9500	0.9800	0.9900	4
0.6870	0.8054	0.8783	0.9343	0.9587	5
0.6084	0.7293	0.8114	0.8822	0.9172	6
0.5509	0.6694	0.7545	0.8329	0.8745	7
0.5067	0.6215	0.7067	0.7887	0.8343	8
0.4716	0.5822	0.6664	0.7498	0.7977	9
0.4428	0.5494	0.6319	0.7155	0.7646	10
0.4187	0.5214	0.6021	0.6851	0.7348	11
0.3981	0.4973	0.5760	0.6581	0.7079	12
0.3802	0.4762	0.5529	0.6339	0.6835	13
0.3646	0.4575	0.5324	0.6120	0.6614	14
0.3507	0.4409	0.5140	0.5923	0.6411	15
0.3383	0.4259	0.4973	0.5742	0.6226	16
0.3271	0.4124	0.4821	0.5577	0.6055	17
0.3170	0.4000	0.4683	0.5425	0.5897	18
0.3077	0.3887	0.4555	0.5285	0.5751	19
0.2992	0.3783	0.4438	0.5155	0.5614	20
0.2914	0.3687	0.4329	0.5034	0.5487	21
0.2841	0.3598	0.4227	0.4921	0.5368	22
0.2774	0.3515	0.4133	0.4815	0.5256	23
0.2711	0.3438	0.4044	0.4716	0.5151	24
0.2653	0.3365	0.3961	0.4622	0.5052	25
0.2598	0.3297	0.3882	0.4534	0.4958	26
0.2546	0.3233	0.3809	0.4451	0.4869	27
0.2497	0.3172	0.3739	0.4372	0.4785	28
0.2451	0.3115	0.3673	0.4297	0.4705	29
0.2407	0.3061	0.3610	0.4226	0.4629	30
0.2070	0.2638	0.3120	0.3665	0.4026	40
0.1843	0.2353	0.2787	0.3281	0.3610	50
0.1678	0.2144	0.2542	0.2997	0.3301	60
0.1550	0.1982	0.2352	0.2776	0.3060	70
0.1448	0.1852	0.2199	0.2597	0.2864	80
0.1364	0.1745	0.2072	0.2449	0.2702	90
0.1292	0.1654	0.1966	0.2324	0.2565	100