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The effect of project managers' emotional intelligence and competencies on project success: The case of Addis Ababa city road authority projects

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The Effect of project managers' emotional intelligence and competencies on project success: The case of Addis Ababa city road authority projects

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DECLARATION

The thesis entitled: *The Effect of project managers' emotional intelligence and competencies on project success: The case of Addis Ababa city road authority projects* is conducted under the supervision of Tsegabrhan Mekonen (PhD)

I declared that the information reported in this research paper is the result of my own work. The references used in this research are clearly acknowledged. No part of this thesis was previously presented for another degree at this or other institute.

Signature _____ Date _____

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THESIS TITLE: *The Effect of project managers' emotional intelligence and competencies on project success: The case of Addis Ababa city road authority projects*

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This is to certify that the thesis submitted in Partial Fulfilment of the Requirement for the degree of Masters of Business Administration (MBA) complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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ABSTRACT

The main causes of Addis Ababa City Road Authority (AACRA) projects delay are poor site management, payment delay for employee and poor contract management. Thus, the problem of the research is to understand how the emotional intelligence and competency of the project managers are associated with project success and measure its impact level. In this case, independent variables are project managers emotional intelligence and project managers competency with their aspects such as self-awareness, self-management, social awareness and relationship management as well as knowledge, skill and attitude. Dependent variable is project success with sub essential paraments such as project cost, time, quality and stakeholder satisfaction. The researcher employed explanatory research design and quantitative research approach. The research used questionnaire for data collection instrument. Primary data was gathered from the project managers of AACRA's ongoing projects. The data was collected from AACRA, Ethiopian construction works corporation (ECWC), and private contractor project managers. From distributed questionnaire which is forty-five, thirty-six questionnaires were returned back. Correlation and Multiple regression method were used for data analysis. Correlation between emotional intelligence and competency (.748) is strong. The relationship between emotional intelligence and project success (.440) as well as project manager competency and project success (.551) are moderate. The result satisfies all five classical linear regression assumptions. The main finding of the research reflects that project managers competency has impact and predictive relevance on project success. In contrary, project managers emotional intelligence has no significant effect on project success.

Keywords: project success, project managers' emotional intelligence, project managers' competency, project management.

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AACRA: Addis Ababa city road authority

AHP: Analytic Hierarchy Process

ANOVA: Analysis of variance

C: Competency

CLRM: Classical Linear Regression Model

DW: Durbin-Watson

ECWC: Ethiopian construction works corporation

EI: Emotional intelligence

ICB: IPMA Competence Baseline (also known as “Individual competency baseline”)

IPMA: International Project Management Association

KMO: Kaiser-Mayer-Olkin

PMCDF: Project management competency development framework

PS: Project success

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Projects are organized to accomplish complex tasks that cannot be handled by lone individuals but by multidisciplinary teams in the construction industry. Project success depends upon how well the personnel can work effectively to accomplish objectives within scope, cost and quality constraints. Hence, the need for project manager is used as a system for managing and integrating iron triangle performance i.e., cost, time and quality. In previous studies, many researches were done to frame an effective project managers emotional intelligence and competency system construction industry based on the defects in the existing systems adopted globally.

In the past few decades, project success was only measured from the view point of the effectiveness of the project in time, budget, quality and scope. But now adays the project success basically focuses on the satisfaction of stakeholders in addition to the above criterions or features (Badewi, 2016). Project success depends on different factors that helps to achieve defined goals by directly manipulating project cost, time, quality performance (Radujković & Sjekavica, 2017).

Project success is a key issue for developing countries. Most of developing counters suffered from the project delay. In Kenya, construction projects are unsuccessful due to project management competency and others (Wambui, Ombui, and Kagiri, 2015). In Ghana, project success depends on project manager influence and leadership style, project team members coordination (Nubuor, Hongyi and Frimpong, 2017).

Road construction project success is the main issue for Ethiopian construction sectors. According to Zewdu (2016) research on Ethiopia construction sector project delay, the key factors that affect project performance are cash flow

problem, mismanagement, improper planning, slow decision making and late delivery of material and equipment. Based on the study, Project execution can be improved using efficient and effective management of resource, knowledge-based cost management and timely decision.

Addis Ababa city road authority (AACRA) working different road construction and maintenance. This construction projects are under taken based on defined schedule. But there are different constraints to finalize the project according to schedule. It means, completing projects with in time cost and quality are challenging task for the AACRA in different active road projects. Therefore, impacts on Addis Ababa city road authority (AACRA) projects success are principal problem.

In general, this research had been analyzing the impact of project managers emotional intelligence and competency on the success of the Addis Ababa city road construction projects. A comprehensive literature review was conducted about project managers emotional intelligence, competency and project succuss. The research articulates and discusses the key components of the framework including the perspectives, critical success factors and the contribution of project manager to the success of construction organizations.

1.2 PROBLEM STATEMENT

Project success problems are various in their type and scope. Project managers are responsible for the project success to finish in time, budget, quality and scope (LaMarsh, 2009). Project managers require different technical skills, soft skills and their commitment to accomplish projects based on the schedule.

Construction industry in Ethiopia is increasing almost by 10.5 % per year for the past 10 years. In contrary, project success is still a limiting factor for Ethiopia road construction industry (Hailemarkos, 2020). Project success in Ethiopia depends on different factors that determine its performance. These factors are project managers competency, communication and coordination among project participants, owner’s competency, understanding responsibilities, adequate plan

etc. Project managers capability is one of key determinant factors that determine project success. In Ethiopia, construction industry pays less attention to project managers' competency (Sinesilassie, Tabish, and Jha, 2017).

Projects' success has required not only project managers technical skill but also managerial capability on emotion and competency. Usually in Ethiopian construction projects, project managers are selected based on their technical capabilities. But project managers' emotional and managerial competency has its own effect on project success (Amanuale 2019). Project manager emotional intelligence and competency need a detail investigation to contribute for construct project success. Therefore, project manager leaderships competency should be considered because it has significant contribution for project success in Ethiopia construction sector.

The main causes of AACRA projects delay are poor site management, payment delay for employee and poor contract management (Yared, 2019). Project managers management practice has high contribution for these causes of project delay. Project managers technical skill, emotion and competency commonly determine their practice. Thus, AACRA project managers emotional intelligence and competency has their own contribution for project delay or success. Beyond other causes of project delay or success, the degree of project managers contribution due to their emotion and competency for project performance is not yet carefully measured.

In general, Project managers are high level decision makers to utilize project success factors i.e., cost, quality time and stakeholder satisfaction (Hailemarkos, 2020). To manage these factors effectively, project manager needs soft skills in addition to technical skill such as teamwork, communication, leadership and management (Haile, 2019). In addition, Project managers capability and commitment is a key input for project success. Level of Project managers emotional intelligence and competency has the potential to determine their capacity and subsequently affect the project success. Therefore, the aim of the

research is to understand how the emotional intelligence and competency of the project managers are associated with project success and measure its impact level.

1.3 RESEARCH QUESTIONS

To address the problem statement, the following research questions are formulated.

- What is the degree of influence of project managers emotional intelligence features on project success?
- What is the degree of influence of project managers competency features on project success?
- What are the tools and techniques which helps project managers to improve their emotional intelligence and competency?

1.4 RESEARCH OBJECTIVES

1.4.1 GENERAL OBJECTIVE

The general objective of this study is to investigate the impact of project managers' emotional intelligence and competency on project success.

1.4.2 SPECIFIC OBJECTIVES

The specific objectives are:

- To examine the degree of the impact of emotional intelligence factors i.e., self-awareness, self-management, social awareness and relationship management of project manager on project success.
- To examine the degree of the impact of project managers competency factors i.e., knowledge, skill and attitude on project success.
- To propose tools and techniques for different regulatory bodies for improving their project managers' emotional intelligence and competency.

1.5 SCOPE OF THE STUDY

CONCEPTUAL

Project conceptual scope was limited to project manager emotional intelligence, competency and project success. Because, road project success influenced by different factors such as contractual legal cases, project managers performance, weather condition etc. It means, project success factors are broad enough to be covered in this research. Therefore, the researcher only focuses on two project success factors which are project manager emotional intelligence and competency.

SPATIAL

The research scope was concentrated to AACRA projects project managers. Specifically, the scope focused on project managers who worked for Addis Ababa city road authority's active projects.

1.6 SIGNIFICANCE OF THE STUDY

The findings of this study would enable:

- The customer / consultant organization to understand how their project managers contribute to the project success in terms of time, budget and agreed quality as well as satisfying their customers.
- The different regulatory bodies such as project board of Addis Ababa city road authorities, will use as an input while select and assigning new project managers and judging and commenting existing project manager.
- To serve as a guidance for project managers what kind of tools and techniques need to use for improving their competency and emotional intelligence functions.
- To give a general information for clients' (AACRA), consultants', contractors' project managers the degree of the impact of their emotion and competency can influence their project success.

- Other Researchers to use the study's finding an input for further research in a similar area.

1.7 LIMITATION OF THE STUDY

The study's limitation was that it only looked at project managers who were currently working on active projects. It does not take into account other participant groups involved in the active project. Furthermore, the study only included AACRA projects. As a result, the total population of the study is limited.

1.8 DEFINITION OF KEY TERMS

- **Project management:** is initiating, planning, organization, monitoring, control and closeout of all aspects of project, with motivation of all included to achieve project goals on safe manner, within agreed schedule, budget and performance criteria.
- **Project manager emotional intelligence:** ability of the project manager to monitor one's own and other feelings and emotions.
- **Self-awareness:** the project manager reading his emotion and understand its impact.
- **Self-management:** the project manager cares his disruptive emotions and force himself to under control the feeling.
- **Social awareness**: ability to aware how others feel and to understand the situation.
- **Relationship management:** the ability to guide the groups emotion.
- **Project manager competency:** the potential of the project manager to assemble knowledge, ability and attitude that needed to work a specific project task.
- **Project managers knowledge:** implies that collection of information and experience that a project manager owns.
- **Project managers skills:** cover specific technical capabilities that enable a project manager to perform a task.
- **Project managers attitude:** reflects about the effective delivery of knowledge and skills in a given context.

- **Project success:** finalizing projects with in the defend time, budget and quality to satisfy a project sponsor.
- **Project time success:** refers to the degree of accomplishment of the road construction project based on the available time schedule.
- **Project Cost success:** is the degree of achievement due to charge value of the work completed compared to the actual cost.
- **Project Quality success:** is defined as the degree of excellence of the constructed road based on AACRA manual required by a product or services to satisfy a given need, or fitness for its purpose.
- **Stakeholder satisfaction:** is a degree of fulfilment of approved stakeholders' requirement on the demarcated project.

1.9 STRUCTURE OF THE REPORT

The study was composed in to five chapters. The first chapter deals with the introductory part which introduced about the impact of project managers emotional intelligence and competency on project success. The chapter also show statement of the problem, general and specific objective, research question, significance of the study etc.

Chapter two has mainly focused on related literature review. It has debated about the theoretical review of the research. It also has detailed discussion about the introduction and general concept of the research, project success, project management, project manager, project managers emotional intelligence and project managers competency as well as empirical review and conceptional frame work of the research was undertaken. The third chapter has presented the research design and methodology that helps to guide how the research. Fourth chapter reflect about presentation, analysis and interpretation which discussed using different tools and techniques i.e., SPSS, graphical and frequency as well as tabular representation. The fifth which is the final chapter has covered the review of major findings and conclusions drawn from the findings and also the possible recommendations will be forwarded by the researcher.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

Project success is determined by different factors. Project manager competencies and emotional intelligence are the main factors for project success. From different literatures the main project managers competencies are knowledge, skill and attitude. These competencies are the basic and determinant measure for project success. According to project manager competency development framework (Pmi, 2007), project managers consistently apply their personal project management knowledge to fulfill project stakeholders' interest and to deliver projects successfully. For project success, project managers use their knowledge, skill, attitude and behavioral competency together while the projects are implemented.

Project manager emotional intelligence is the others factor which affect the project successes. According to Druskat and Druskat, (2006) project manager EI classified in to four i.e., self-awareness, self-management, social awareness and relationship management. Project managers emotional intelligence have significant contribution for solution making, problem solving and better team work.

According to different scholars' research, project manager emotional intelligence has relationship with and direct impact on project success. For instance, Maqbool, Sudong, Manzoor, and Rashid, (2017); Afzal, Khan, and Mujtaba, (2018); Alawnehand and Sweis (2016) researches demonstrate project manager emotional intelligence has positive relationship with project success.

Similarly, project manager competencies i.e., skill, knowledge and attitude have positive relationship with project success. For instance, Dziekonski (2017); Samuel (2019) studies shows that project manager competencies have positive relationship with project success.

2.2 PROJECT MANAGEMENT

“Project management is planning, organization, monitoring and control of all aspects of project, with motivation of all included to achieve project goals on safe manner, within agreed schedule, budget and performance criteria’’ (Radujkovic and Sjekavica, 2017: 608). Project management is the application of tools and techniques to produce special and one-time product with in defined cost quality and budget (Atkinson, 1999). Project management features are the main factor for project succuss. It means the scheme need to find suitable project management style for different projects based on their category and framework (Usman, 2018). Project management practice using PMBOOK and PRINCE 2 as a standard (Badewi, 2015).

2.3 PROJECT MANAGER

Project manager is demanded in high and complex projects from the early or initiation stage to the final or closeout stage. The complex project requires project managers critical thinking than simple project (Alshammari, Yahya, and Haron, 2020). Once assigned as a project manager, he needs to understand the job’s requirement and what he likes and dislike within the job that he or she involved (Havermans, Van der Heijden, Savelsbergh, and Storm, 2019). In construction projects project managers duty, responsibility and other tasks leads to highly anxious in his mind and body. So, when selection appropriate a project manager, he needs to improve working competence and reducing faults (Cui, 2016). Therefore, selection of project manager is a key factor for project succuss and important for the leadership of the temporal organization (Chaghooshi, Arab, and Dehshiri, 2016).

2.4 PROJECT SUCCUSSES

Project success is the result that realize the project achievement within the benchmark of specified cost, quality and time as well as stakeholder satisfaction (Al-Khawaldah, 2017). Projects always focuses on finalizing projects with in the specific budget and within defined scope of time. In contrary, different stakeholders

need to fulfil and achieve their own interest and need to secure their return on investment (Amgad, 2015). Project manager is responsible for completion of the project with in the defended cost, quality and time frame (William, 2009). Therefore, in addition to other success factors, project success depends on project managers self-awareness, self-management, relationship management and social awareness (Rashid, 2017) as well as project managers knowledge, skill and attitude (Samuel, 2019). In general, project succuss expressed in products quality, cost, time and stakeholder satisfaction (Afzal, 2018).

Project cost management is an estimating, budgeting and controlling project costs. It provides solution and recommend to the project manager to control the cost and finish the project within predicted budget (Poorhassan, 2020). Different construction projects highly affected by cost overrun but the degree of those overrun is differed between projects (Abdul, 2012). Project success is basically a quantity relative with cost saving and delivered the product on the schedule (Lopez, 2011).

Project time management is planning, monitoring and controlling the duration of tasks in relation to project time performance. Delay of the project is one of the major and common problems in construction projects (Solís-Carcaño, Corona-Suárez and García-Ibarra, 2015). Time in construction project should effectively controlled from the project startup to the project closure to reduce control time over run or time delay (Memon, Abdul Rahman, Ismail and Zainun 2014).

Quality is main determinant feature for project success through satisfying agreed stakeholders' requirements. Project quality management is an administering the success of production and operation quality using different tools and technique (Mane and Patil, 2015).

Stakeholder could be organization or individuals those have interest on the project. Stakeholder management is a process that identifying their interest and agreed upon the requirements and works to meet those requirement (Oliveira and

Rabechini, 2019). Stakeholder satisfaction is a fulfillment of agreed requirements on the project's performance (Oppong, 2017).

2.5 THEORETICAL FOUNDATION OF THE STUDY

The theoretical models are related and distinguished according to the nature of their contents. According to the Pablo Fernández-Berrocal and Natalio Extremera (2006), The Bar-on the concept theoretic is wider and broader than Salvoy and Mayar which focuses on the ability-based and emotional-social intelligence respectively. On the other hand, the Goleman theoretical modal basically focuses on which is basically known as the modals the emotional intelligence of the people influenced by their working place or area of living. Goleman basically indicate the essential parts of the emotion's intelligence i.e., self-awareness self-management, social awareness and relationship management.

The theoretical model of competency basically focuses on three pillars. These pillars are skill, knowledge and attitude. According to PMCD framework (2007) and ICB - IPMA Competence Baseline Version 3.0 indicates that these pillars are the main theoretical elements for project competency measure.

2.5.1 PROJECT MANAGER EMOTIONAL INTELLIGENCE

Emotional intelligence is defined as:

"… is a sub set of social intelligence that involves the ability to monitor one's own and other feelings and emotions, to discriminate among them and to use this information to guide one's thinking and action" (Salvoy and Mayer, 1990: 189).

Emotional intelligent can get different attention from executive management using the concept that some people are more emotionally intelligent than others (Lee, 2019). Investigating one's level of emotional intelligence will helps to determine and influence the success of the manager and to improve using different exposure and training. In addition, emotional intelligence in the long run helps the

organization to be successful using better interpersonal relation, smart problem solving and creativity (Obradovic et.al., 2013).

Emotional intelligence is basically expressed in different variables or factors such as self-awareness, self-management, social awareness and relationship management (Maqbool et. al., 2017). Self-awareness is understanding one's emotion and its influence on its productivity performance on project implementation (Sasu, 2018). Project managers are aware of their emotional intelligence capacity and understand their strength and weakness while managing projects (Obradovic et al., 2013).

Self-management is that understanding the project manager emotion through forecasting and know how to control this emotion (LaMarsh II, 2009). It is all about the capability of setting the project managers personal goal and measuring the project performance against this goal (Marnewick, Joseph, and Erasmus, 2016). In general, self-management is the capacity to manage one's emotion (VIERIMAA, 2013).

Social awareness is understanding others emotion and distinguish and gives required feedback (VIERIMAA, 2013). Recognize projects staff emotion will help to produce high level of social awareness (Dominic, Dominic, James, Krishnan and Godwin, 2019). Relationship management of the project manager is the relationship between the project manager with his team, with the organization and stakeholders (Meng and Boyd 2017)

According to theoretical point of view Bar-On (2006: 14), "emotional-social intelligence is a cross-section of interrelated emotional and social competencies, skills and facilitators that determine how effectively we understand and express ourselves, understand others and relate with them, and cope with daily demands".

According to Druskat and Druskat (2006) theoretical framework, scientists have discussed emotional intelligence issues for a century. Based on their article, emotional intelligence can affect work performance. Emotional intelligence has classified in to potential categories to fulfill the gap and to use for project success

appropriately. The researcher indicates Goleman and Boyatzis model classify emotional intelligence based on the context such as personal EI competency (self-awareness and self-management) and social EI competency (social awareness and relationship management). The following diagram illustrate EI competencies:

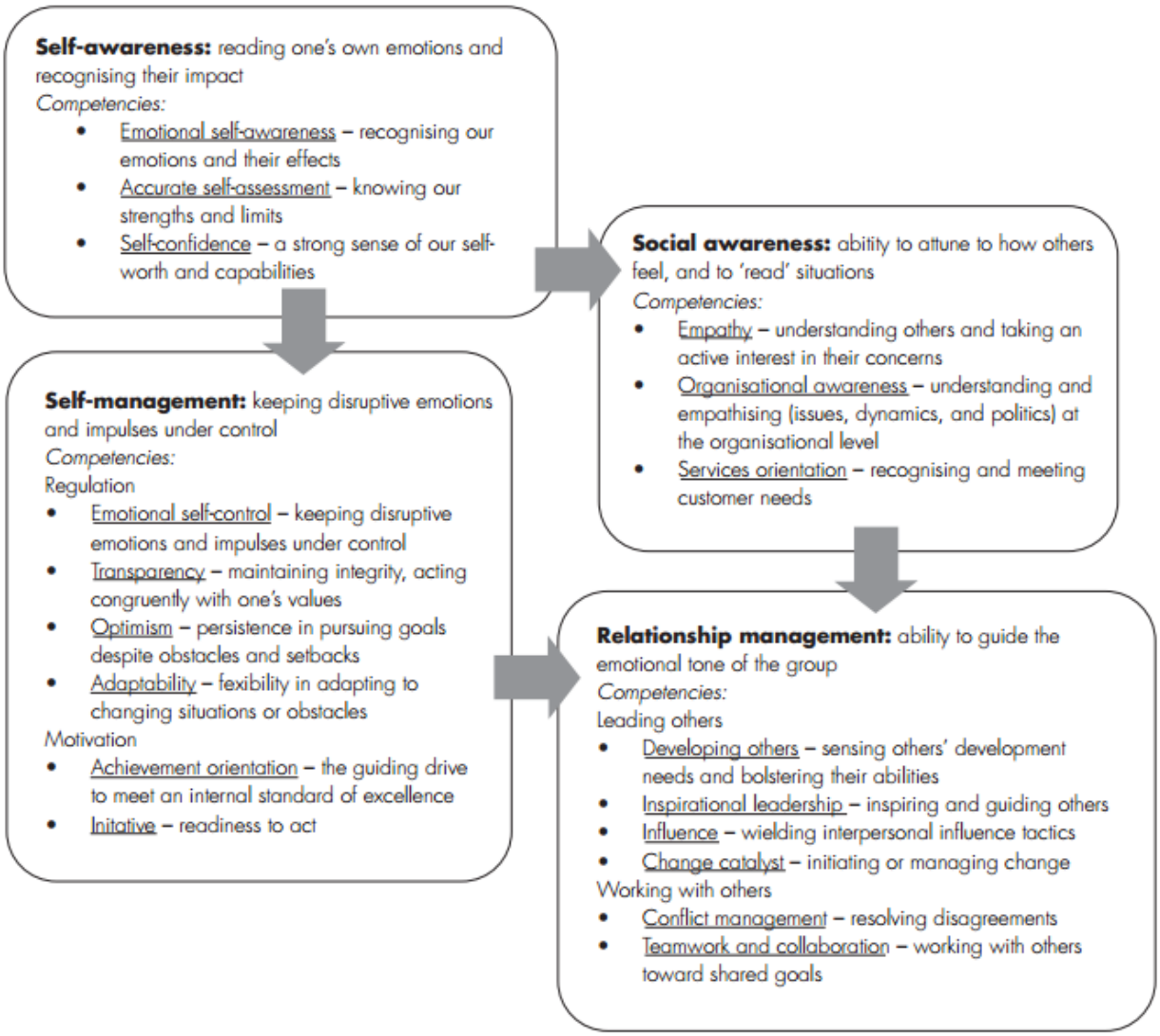


Figure 2.1 Emotional intelligence model (Druskat and Druskat, 2006)

2.5.2 PROJECT MANAGER COMPETENCY

According to theoretical framework of Spencer and Spencer (1990) who was the pioneer of competency theory development, classifying competency as surface

and core competencies. Surface competencies are knowledge and skill and core competencies are motive trait and self-concept. On the other hand, Zack (1999) had classifying competencies in to declarative, procedural and casual knowledge. In addition, Quinn et al. (1998) who works on presenting competency theoretical model, competencies especially professional competencies are classified in to cognitive knowledge, advanced skill, systems understanding and self-motivated creativity.

Spencer & Spencer (1993) competency characteristics		Finn (1993)	Heywood et al. (1992) competence components	Crawford (2005) competence elements	Görög (2013a)
knowledge	input competencies	input competencies	knowledge	input competencies	knowledge
skills			skills		skills
			experience		
- motives - traits - self-concept	core personality characteristic		- attitudes - personality traits - behaviours	personal competencies	-attitudes -personal characteristics -leadership style of the project manager

Table 2.1 Comparison between competency elements of different scholars (source: Horvath, 2018)

Project manager competency defined as the assembly of knowledge, ability and attitude that needed to work a specific project tasks (Ballesteros-Sánchez, Ortiz-Marcos and Rodríguez-Rivero, 2019). There is a solid association between project accomplishment and project managers competency (Dziekoński, 2017). According to PMCD Framework, project managers always apply their competency for better project performance. These competencies are knowledge, skill and attitude (personal behavior). Project manager critically address these competencies for satisfying stakeholders' interest.

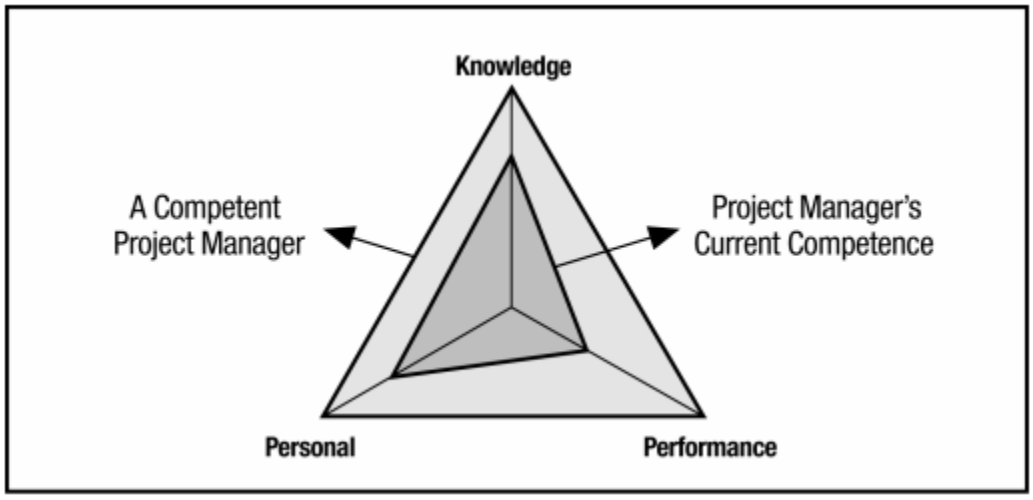


Figure 2.2 project manager competency model (PMCD framework, 2007)

According to ICB - IPMA Competence Baseline Version 3.0, competency is a combination of project manager knowledge, skill and attitude which helps for work performance or project success. According to Kalinova (2008) research on project manager and his competency (skill, knowledge and attitude), specialized knowledge, intellectual maturity, entrepreneurial maturity, interpersonal maturity and professional maturity are Project manager competency that used to differentiate successful project manager from unsuccessful ones. Knowledge, attitude and ability are required for project manager effectiveness and project accomplishment. Specifically, knowledge and experience are necessary for project managers to understand and uses technologies. Technical skill required and covered specialized knowledge and analytical thinking e.g., project management which have project management body of knowledge (El-Sabaa,1999).

Usually, Determining the skill of project managers is the necessary step for the project success. Project manager needs six skill areas such as communication, organizational, teambuilding, leadership, coping and technological skill (El-Sabaa,1999). To assess the performance competency of the project manager each individual skill should be consider (PMCD framework, 2007).

Project management attitude (behavioral) competency classified in to four factors, these are communication, team work, attentiveness and, conflict management (Afzal, Khan and Mujtaba, 2018). The main tool for project success is proper communication with stakeholders. Project communication is sharing information about the project progress to create mutual understanding between different stakeholders (Rani and Amat, 2017). Project communication can satisfy project stakeholders through meeting project goals using smooth progress reports i.e., in time, with in the budget and appropriate quality (Hettiarachchi, 2016).

“Team work is a set of interrelated thoughts, attitudes, and action needed to function as a team, combined to facilitate a coordinated performance of tasks to meet of value-added outcome” (Jiang, Klein, and Chang, 2019:3). Project manager has played a key role for team work through positively influence team members. Team work has different dimensions i.e., communication within and between team members, cohesiveness and collaboration with in team members (Iqbal, Nawaz, and Bahoo, 2017). In addition, project managers attentiveness as one of project manager competency which build interpersonal relationship (Maqbool, et. al., 2017).

Conflict is the disagreement between two or more employee or stakeholders based on differences in their believes or actions (Madalina, O., 2016). Conflict management is a management all factors that helps to resolve all conflict (Turkalj, Fosić, and Dujak, 2008).

2.5.3 PROJECT MANAGER EMOTIONAL INTELLIGENCE AND PROJECT SUCCESS

Positive emotion has creating the better environment to work and has positive impact at work (Mayer, 2008). On the other hand, negative emotion has negative impact on the project work and it would decrease the performance of staffs. The first argument is that, the manager with high emotional intelligence can accomplish the given task (Goleman, 1998). In this case the manager reflects their positive emotion to the staff and it will lead to effective interaction and the positive

collaboration. the second argument comes from the impact of emotional intelligence vary according to the nature of work (Lindebaum, and Jordan, 2012).

According to Rezvani, Chang, Wiewiora, Ashkanasy, Jordan and Zolin (2016), project managers which have good emotional intelligence capability can practice their emotion positively and influence others based on their helpful emotion. In addition, Emotional intelligence has the potential to assist project managers while developing stakeholder relationships; for conflict management with in the team and outside the team, anticipate and avoid emotional breakdowns; Manage emotional information; for better communication to make better decisions and to support the project's success. In addition, positive emotional intelligent project manager can create a positive work environment and collaborative team sprite. cast a vision for shared project objectives that will attract, inspire, and motivate the project team (Mersino,2016). In general, the PMI concluded that project success directly linked to the project manager emotional intelligence.

2.5.4 PROJECT MANAGER COMPETENCY AND PROJECT SUCCESS

According to Marnewick, Joseph, and Erasmus (2016), the project success or faller has been influenced by different factors. one of the key factors is project management competency. The project management competency has directly influenced the project performance. Project managers are commonly selected and recruited based on their competency performance (Usman, 2018). It will help to improve the project management method and project performance.

Some of the micro levels of project success are the skill and the competency of project manager (Kendra and Taplin, 2004). Different articles which published in recent years indicate that the competency of a project manager and project staffs linked with the project success (Adzmi and Hassan, 2018). According to Kendra et al., (2004), to assure the project management and improve project performance the organization will follow the change initiative. It is improving project managers competency level through investing on training and certification.

2.6 EMPIRICAL REVIEW

Former scholars mainly focused on project manager emotional intelligence and competency and their impact on project success. Those scholars argue that project managers performance determined by their emotional intelligence and competency measures. Project manager performance has impact on the project success but the degree of influence varied according to scholars' research findings.

Maqbool et. al. (2017) conducted a research on impacts of project managers emotional intelligence on project success. It results Emotional intelligence has positive impact on the project success. According to the research beta value which is 28.5 percent project manager emotional intelligence has impact on the project success. Specifically, the study results self-awareness and relationship management have high correlation ($0.192 < \gamma < 0.244$) with project success.

According to the research which is conducted by Afzal, Khan, and Mujtaba, (2018), result shows that project manager emotional intelligence has positive effect on project success. Its beta value is 0.138. It interpreted as emotional intelligence of project manager has 13.8 percent impact on project success. Similarly, According to Rezvani, Chang, Wiewiora, Ashkanasy, Jordan, and Zolin, (2016) project manager emotional intelligence plays a key role in complex project success. Its result reveals that project manager emotional intelligence has positive relation with project success. The researchers argue that the result indicate project managers has emotional attachment with team members.

According to Clarke (2010) there is a relationship between project manager emotional intelligence with project manager behavioral competency. The scholar argued that relationship of the two measures will help for the successful outcome of the project. The researcher classifies behavioral (personal) competency which described in PMCDF (project manager competency framework) in to four variables. They are team work, communication, conflict management and attentiveness. The result indicates that both emotional intelligence ability, using

emotions to facilitate thinking, and an overall measure of EI ability were found to be associated with project manager competences of teamwork and managing conflict, respectively.

Conducted research by Alawnehand and Sweis (2016) objective is to examine relationship between emotional intelligence level of a project manager and his/her effectiveness. Researcher's hypothesis said that there is no positive relationship between emotional intelligence and project manager effectiveness. In contrary, the result shows that there is high degree of influence of emotional intelligence variables such as social awareness, relationship management, self-awareness, self-management and leadership behavior on project manager effectiveness because the mean value of all variables is above 3 (using 5-point Likert scale using questioner). There is a positive correlation (47 %) between emotional intelligence variables and project managers effectiveness.

According to Dziekonski (2017) conducted a research on project manager competency model on for construction industry in Poland. The researcher conclude that project manager key competency area are knowledge, skill and attitude. Using clustering analysis method, Dziekonski (2017) classifies the factors that strongly affect the project manager competency. They are basic managerial skill, inter personal ability supporting managerial skill, emotional intelligence and formal skill.

Conducted research by Samuel (2019) exploring project manager competency effect on project success. These project manager competencies are knowledge, skill and attitude. There is a positive moderate correlation between knowledge, skill and attitude which known as independent variables. The correlation between project manager competencies and project success results has significant positive relationship which has ranging from ($r=0.664$, $p<0.01$) to ($r= 0.826$, $p<0.01$). According to researcher finding, 82 % variation (R2) in project success explained by project manager skill, knowledge and attitude. In general, regression result indicates that project managers' competencies have effect on project success.

In addition, based on Al-khawaldah (2017) result, project managers competency has positive impact on project success. Since the alpha value was less than 0.05 and R2 result was 0.992, the researcher conclude that the null hypothesis was rejected.

In general, scholars argue that project manager performance determined by his emotional intelligence and competency measures. And his performance has impact on the project success. But the degree of influence varied from researcher to researcher.

2.7 CONCEPTUAL FRAMEWORK

This conceptual frame work is developed form scholars review literature finding on variables relationship. The variables clearly identified from the theory of project managers competency frame work of PMI (2007) and from Emotional intelligence model of Druskat and Druskat (2006). It shows basically the dependent and independent variables. Dependent sub-variables are features of project success such as project budget, time, quality and customer satisfaction. Independent sub-variables are features of project manager emotional intelligence and project manager competency such as self-awareness, self-management, social awareness, relationship management, skill, knowledge and attitude.

Different scholars' research correlation result indicates that there is positive relationship between dependent and independent variable. For instance, according to Rezvani, Chang, Wiewiora, Ashkanasy, Jordan, and Zolin, (2016) that project manager emotional intelligence has positive relation with project success. According to Samuel (2019) project manager competencies has positive relationship with project success. In addition, according to Clarke (2010) there is a relationship between project manager emotional intelligence with project manager behavioral competency. In general, the conceptual framework developed based on relationship between dependent and independent variables.

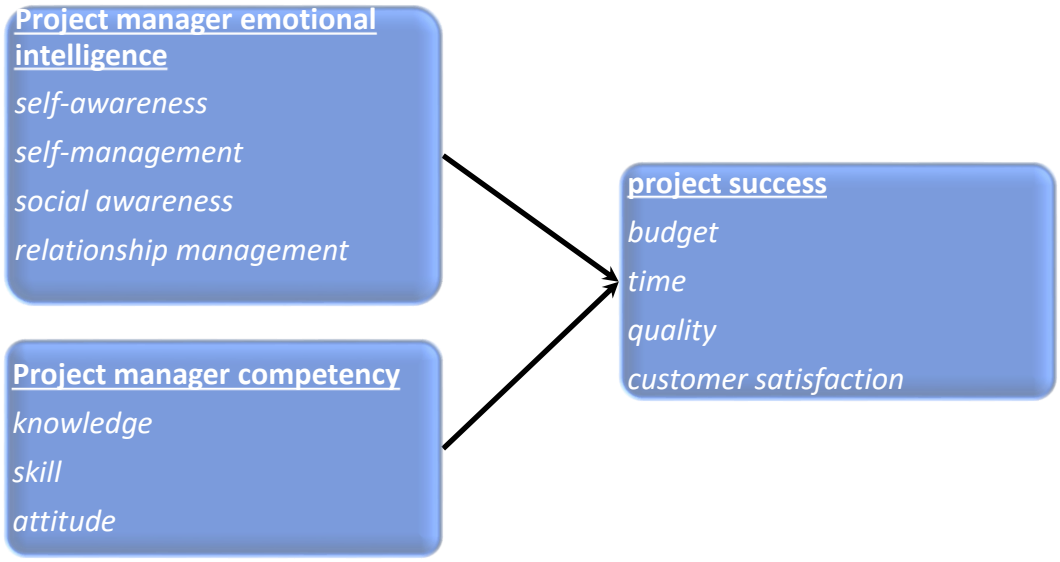


Figure 2.3 Conceptual framework derived from Maqbool et. al. (2017) and Samuel (2019)

Based up on the above conceptual framework, the following hypotheses are formulated.

H1: project manager emotional intelligence has positive impact on project success

H2: project manager competency has positive impact on project success

CHAPTER 3: RESEARCH DESIGN AND ANALYSIS

3.1 STUDY AREA

Based on the proclamation number 35/2012 which describes about reestablishment of Addis Ababa city executive and service organization, Addis Ababa city road authority was reestablished. Proclamation number 35 article 44 fully covered about its power as well as its rules and regulations.

There are different projects in Addis Ababa city road authority such as highway road construction projects, road maintenance projects, road construction for community such as condominium asphalt road construction and other own-force road construction projects. Study area was focused only on Addis Ababa city road projects which is owned by AACRA.

3.2 RESEARCH DESIGN AND APPROACH

The researcher followed Explanatory research design. Because this design will help to answer the research questions and testing hypotheses. It will help to answer why and how dependent and independent variables are interrelated.

The researcher followed Quantitative research approach (Creswell and Creswell, 2018). This approach is basically objective based. It is suitable for testing research objective through examining the association between variables. It helps to realize the degree of relationship between the research dependent and independent variables.

3.3 TARGET POPULATION AND SURVEY TECHNIQUE

3.3.1 TARGET POPULATION

The target population for the study has been defined based on the following inclusion and exclusion criteria. First, the population included in the research was project managers only. Second, these project managers are working for AACRA.

These project managers are direct employees of AACRA or employee of contractors working for AACRA road projects. Third, these project managers were working on active projects while the research was conducted. The population outside the above criteria were excluded.

Based on the above criteria, target population was Addis Ababa city road authority projects' project managers. These target group are from AACRA's five directorate. Two directorates (housing road construction contract directorate, road construction directorate) outsourcing projects for private and public contractors. It means, these organizations project managers who works for AACRA projects were included in the target population. These project managers come from private contractor and Ethiopian construction works corporation (ECWC). These project managers were actively involved on ongoing projects (active projects list APPENDIX II) while conducting the data collection.

Accordingly, the following table (table 3.1 and appendix II) summarizes the total population size which was 45 while conducting this research.

Table 3.1 Total population

Directorate	Population
Housing road construction contract administration directorate	15
Road construction contract administration directorate	23
Own-force Road construction directorate	4
Own-force Road maintenance directorate	2
Input and product supply directorate	1
Total	45

3.3.2 SURVEY TECHNIQUE

The researcher utilized the census method/ technique. Complete enumeration is appropriate when the entire population size is small. therefore, the entire population was used for survey because the total population in this study is 45.

3.4 DATA TYPE AND SOURCES

The researcher had used primary data type. This primary data was collected form AACRA projects' project manager using questionnaire survey. Sources of the data were AACRA, ECWC and privet contractors project managers. The list of sources of data was decided based on active project that undertaken by AACRA as a contractor or client.

3.5 DATA COLLECTION INSTRUMENT

3.5.1 QUESTIONNAIRE

The objective type questionnaire was used because it is a good strategy for obtaining information without losing the context or the core concept of the research questions. It is expected to establish a good relationship with respondents and easier to answer the question. The questionnaires were distributed after potential participants had selected and informed about the purpose of the research.

The questioner has two parts. The first part focused on demographic data about respondents i.e., age, sex, educational level, working experience etc. The second part has mainly emphases on the subject matter i.e., the questions that helps to measure about project managers emotional intelligence and competency as well as project success. In this part, selected project managers were asked to rate each question based on their professional judgment on a given five-points Likert-type scale that the level of importance where: 1 – Strongly disagree, 2 – disagree, 3 – impartial, 4 – agree and 5 – Strongly agree.

3.6 DATA COLLECTION METHOD

The researcher used online platforms in addition to face-to-face data collection. Face-to-face data collection was difficult due to time constraints and other factors making it hard to reach each project managers. For the reasons

stated below, a portion of the questionnaires were distributed via on online platforms. First, respondents' locations were placed in different corner of Addis Ababa. Second, they were not willing to respond due to covid-19 as well as by their own reason. As a result, to reduce face-to-face contact, the questionnaires were distributed via online platforms such as google form format, e-mail and telegram. However, some project managers were hesitant to respond using online platform.

3.7 DATA ANALYSIS METHOD

This section presents the analysis of the data which was collected using close-ended questions. The participating project managers response was converted to numerical scoring. It had expressed their opinions in the form of the degree of importance of each question. This method has pursued quantitative data analysis through the following techniques:

- Formulas, like mean, median, mode and standard deviation
- Graphical method
- Frequency distribution
- The following software was used for data organization and analysis on this project:
  - SPSS

In addition, the correlation and multiple regression method were used to test hypotheses and to answer research question via SPSS software. The correlation method was used to determine the degree of direct relationship of dependent and independent variables. Multiple Regression analysis was used to determine the impact of project managers' emotional intelligence and competency on project success.

$$Y_i = \beta 0 + \beta 1 * X_i 1 + \beta 2 * X_i 2 + e_i$$

Where:

Y_i = project success (PS)

X_i1= emotional intelligence (EI)

X_i2= competency (C)

3.8 VALIDITY AND RELIABILITY

3.8.1 VALIDITY

Validity is reflecting the degree of the collected data which present the mirror image of the reality or the actual area of interest. In this research, the survey instrument reflects the AACRA project managers' emotional intelligence and competency as well as their project successes according to its face validity. Because the questionnaire is reasonable, unambiguous and clear (Oluwatayo, 2012) while it was developed. According to its content validity, the questionnaire addresses the concept using detail literature review. The literature review helps to identify the elements and their details of the main and sub variables which required to address. Judgmental approach (Lewis,1995) was used for content validation for the survey questionnaire using different experts and peer review of the questionnaire.

3.8.2 RELIABILITY

According to Hinton, McMurray and Brownlow (2014), there are four categories for reliability check. These are excellent reliability (0.9 and above), high reliability (0.70 up to 0.90), moderate reliable (0.50 up to 0.7) and low reliability (0.5 and below). The reliability test of the current variables should be more than 0.5 to be credible. In this case, the total Cronbach alpha test result is 0.92 for 46 questions or items. Cronbach's alpha test results of Emotional intelligence, competency and project succuss are 0.826, 0.873 and 0.722 respectively. It means the survey instrument is credible.

Table 3.2 Reliability Statistics

Reliability Statistics		
Variables	**Cronbach's Alpha**	**N of Items**
Total	0.920	46
Emotional intelligence	0.826	17
Competency	0.873	23
Project succuss	0.722	6

3.9 ETHICAL CONSIDERATION

The ethical and moral consideration was taken while thesis writing and reporting. The information which collected from project managers and AACRA was confidential during compilation and analyzing the report. The questionnaire was clearly described the confidentiality of target groups' (AACRA project managers') response. On the other hand, literatures review cited based on the manual of Addis Ababa university reference reporting technique. In general, the thesis was conducted based on ethical and moral obligation of the research writing and reporting.

CHAPTER 4: RESULTS AND DISCUSSION

4.1 INTRODUCTION

In this part, based on the returned information, descriptive statistics and factor analysis were conducted. The demographic data of the information mainly focus on the frequency of age, sex, nationality, level of education, type of the organization and length of working experience of project managers working for AACRA. In addition, correlation and regression analyses of the data was also run. While conducting the correlation and regression analysis, the classical linear regression model assumptions were also tested.

According to Nulty (2008), the questionnaire response rate is acceptable when it has more than 50 percent repose rate of distributed data. In addition, more than 75 percent response rate is preferable for further data analysis and to represent the total population. Questionnaire response rate of this research denoted that, from distributed questionnaires thirty-six forms was returned. Nine questionnaires were not collected. In general, from the distributed questionnaire which is forty-five, thirty-six which is 80% are returned back.

4.2 DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Demographic characteristics of the respondents focus on age, sex and nationality of project managers who working for AACRA. In addition, the level of education, type of the organization and length of working experience of respondents were included for further analysis.

Based on the respondents' survey report, from the total 36 responses 29 project managers which is the 80.6 percent of the replies were from age group 30 to 39, the remaining responses were coming from the other age groups. For instance, age group 50 and above had 8.3 percent of the respondents and age group 18 up to 29 and 40 up to 49 had 5.6 percentage share. In addition, all project managers who participated in this survey were male in their gender category. So,

the AACRA should prioritize the recruitment and advancement of female project managers.

Participants survey data indicates that majority number of the project managers have Ethiopian nationality. According to their percentage share, 83.3 percent of the respondents were Ethiopians and remaining 16.7 percent foreigners. The level of education could measure the level of the respondent's knowledge and their understanding about the concept of the survey questions. In this case, 21 respondents which is 58.3 percent out of the total were bachelor degree holders and 15 respondents which is 41.7 percent out of the total project managers have masters. It means, the target population can have the basic academic stand for understanding the research questionnaire concept.

The following tables indicate also about the number and percentage of respondents based on their organization type and length of working experience. Significant number of respondents come from privet contractors which also include international contractors. The percentage share of private, public contractors and AACRA are 69.4, 11.1 and 19.4 % respectively. On the other hand, length of working experience of respondents indicates that most of project managers had sufficient experience to develop an adequate skill on project management.

According to the data, project managers experience had the following percentage share. Out of the total received questionnaires, 21 respondents or 58.3 percent were from 10 up to less than 15 years working experience. From 0 up to less than 5 years, from 5 up to less than 10 years and above 15 years working experience have 5.6, 25.0 and 11.1 percentage share respectively. As a result, it demonstrates that all project managers have sufficient experience on road construction projects.

In general, the demographic data represent appropriate cross-sections on their age, nationality, level of education, working experience, and types of organization to reflect the from different aspects of response. It helps to understand the perception of response that could examine based on their age, nationality, level of

education, working experience, and types of organization. But gender group responses could be partial because all project managers in AACRA was male. Project managers level of education respondents and working experience reflect knowledge and skill combination specifically on road projects. Therefore, the responses of questionnaire were sufficient and effective to take as an input for data analysis.

Table 4.1 Demographic data

		Frequency	Percent	Valid Percent	Cumulative Percent
Age	18-29	2	5.6	5.6	5.6
	30-39	29	80.6	80.6	86.1
	40-49	2	5.6	5.6	91.7
	50 and above	3	8.3	8.3	100.0
	Total	36	100.0	100.0	
Sex	Male	36	100.0	100.0	100.0
Nationality	Ethiopian	30	83.3	83.3	83.3
	Other	6	16.7	16.7	100.0
	Total	36	100.0	100.0	
Education Level	Degree	21	58.3	58.3	58.3
	Masters	15	41.7	41.7	100.0
	Total	36	100.0	100.0	
Organization Type	Private contractor	25	69.4	69.4	69.4
	Public contractor	4	11.1	11.1	80.6
	AACRA	7	19.4	19.4	100.0
	Total	36	100.0	100.0	
Working Experience	From 0 to < 5	2	5.6	5.6	5.6
	From 5 to < 10	9	25.0	25.0	30.6
	From 10 to < 15	21	58.3	58.3	88.9
	15 and above	4	11.1	11.1	100.0
	Total	36	100.0	100.0	

4.3 DESCRIPTIVE STATISTICS OF DEPENDENT AND INDEPENDENT VARIABLES

Table 4.2 Descriptive statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Self-Awareness	36	3.67	5.00	4.5093	.39429
Self-Management	36	3.33	5.00	4.3472	.36160
Social Awareness	36	1.00	5.00	3.9815	.71689
Relationship Management	36	1.60	5.00	4.2611	.60251
Emotional Intelligence	**36**	**3.24**	**4.88**	**4.2859**	**.35854**
Knowledge	36	2.38	4.88	4.1007	.54184
Skill	36	3.56	5.00	4.3642	.33556
Attitude	36	3.67	5.00	4.4120	.43000
Competency	**36**	**3.39**	**4.96**	**4.2850**	**.35052**
Project Success	**36**	**2.83**	**4.83**	**3.8241**	**.56617**

Project manager emotional intelligence, competency, and project success have 4.286, 4.285 and 3.824 mean value with 0.36, 0.35 and 0.57 standard deviation respectively. The minimum and the maximum mean value of emotional intelligence sub variables are social awareness (mean = 3.98 and standard deviation= 0.72) and self-awareness (mean = 4.51 and standard deviation= 0.394). Within project manager from competency sub variables, minimum and the maximum mean value are found in knowledge (mean = 4.1 and standard deviation= 0.54) and attitude (mean = 4.4 and standard deviation= 0.43). On average, the response of emotional intelligence, competency and project success were close to “agree” which has the value “4”. Its standard deviation also reflects that there was less variance from the mean or average value between project managers responses. In general, all project managers reflect their own responses

but standard deviation reflects that they had less deviation from the mean value (from their responses average value).

As the result, the following interpretation was carried out. On average, AACRA project managers are generally aware of and managing their emotional intelligence, which includes self-awareness, self-management, social awareness and relationship management while managing the project. According to the mean value, respondents are agreed on understand, use and follow defined level project managers competency parameters while doing their jobs. Furthermore, on average, AACRA project managers have considerable track record of level of project success

4.4 FACTOR ANALYSIS

According to the Kaiser and Rice (1974), the KMO (Kaiser-Mayer-Olkin) which represent sampling adequacy test result is represented and interpreted as follows. Below 0.5 interpreted as unacceptable and below 0.6 the result represents as miserable, 0.6s presented as mediocre, in 70s presented as middling and 0.80s and 0.90s are meritorious and marvelous respectively. The research KMO test result had fallen at 70s (which is 0.746) and it was taken as acceptable and middling. It means, the result of the survey indicates that acceptable for further analysis. In general, sample data is adequate to run factor analysis because KMO test result was 0.746 (Appendix III).

Based on the total variance explained table (Appendix III Factor analysis), the factor extraction was conducted. Eigen values with each factor (linear components) was conducted before extraction, after extraction and after rotation. According to the result, the 23.807 percent of total variance explained by the first factor before rotation. After rotation, the 13.868 percent of total variance explained by the first factor. The remaining factors listed on total variance explained table.

4.5 CORRELATIONS

Correlation analysis helps to understand the relationship between the main variables which are emotional intelligence, competency and project success. For instance, emotional intelligence has 74.8 percent relationship with competency and 44 percent positive relationship with project success. In addition, project success has 55.1 percent positive relationship with competency. The data shows that there was a sufficient correlation between these three variables. The significance value of all correlations is in acceptable range ($p \leq 0.01$).

A perfect relationship exists if the correlation coefficient value is one, according to Dancey and Reidy (2007) correlation categorization. If the correlation coefficient is between 0.7-0.9, 0.4-0.69, 0.1-0.39 or below 0.1, the correlation can be classified as strong, moderate, weak or negligible respectively.

Based on the above categorization, the percent relationship figure (Table 4.3) implies that the correlation between emotional intelligence and competency (.748) is strong. On the other hand, the relationship between emotional intelligence and project success (.440) as well as project manager competency and project success (.551) are moderate. The high correlation may cause multicollinearity problem but according to the VIF result (Table 4.4) there was no multicollinearity problem between these variables.

Table 4.3 Correlations

Correlations				
		Emotional Intelligence	Competency	Project Success
Emotional Intelligence	Pearson Correlation	1	.748**	.440**
	Sig. (2-tailed)		.000	.007
	N	36	36	36
Competency	Pearson Correlation	.748**	1	.551**
	Sig. (2-tailed)	.000		.000

	N	36	36	36
Project Success	Pearson Correlation	.440**	.551**	1
	Sig. (2-tailed)	.007	.000	
	N	36	36	36
**. Correlation is significant at the 0.01 level (2-tailed).				

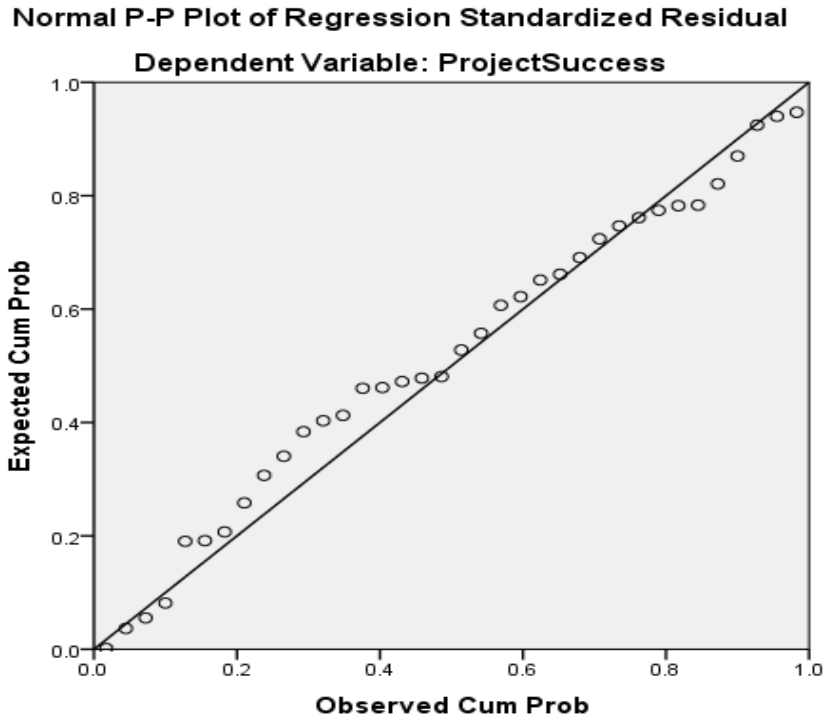
4.6 REGRESSION ANALYSIS

4.6.1 ASSUMPTION TEST

4.6.1.1 LINEARITY TEST

The linearity test can be determined by looking in to the figure depicted below. Based on the figure, the dots are closer to the diagonal line. It means the residual are normally distributed. Therefore, the result satisfies the linearity assumption.

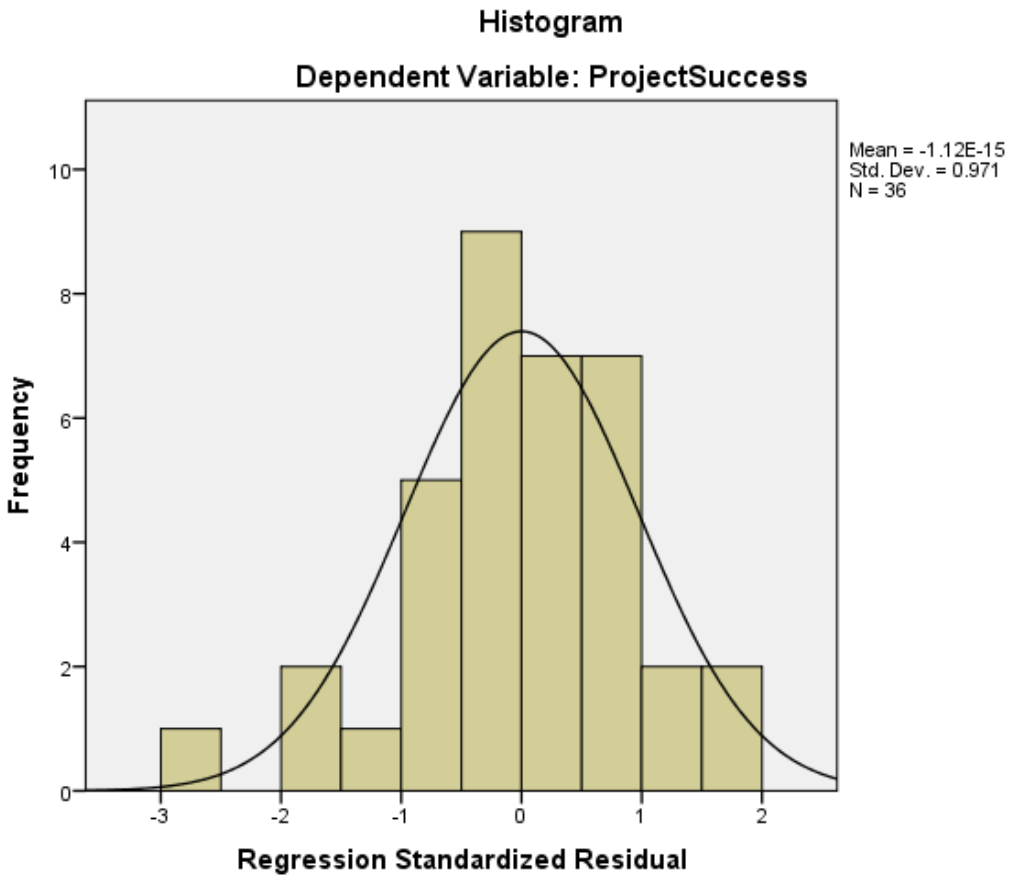
Figure 4.1 Assumption for linearity test



4.6.1.2 NORMALITY AND HOMOSCEDASTICITY TEST

Normality and homoscedasticity tests help to understand the residual distribution level and the suitability of the data for regression analysis. According to Gujari (2004), in classical regression assumption, the normal data means each residual should distribute normally to get valid inference from regression. The normality of the data represented as follows in the following histogram. It indicates that the data is normal. The normal p-p plot shows that the data had good fit for regression analysis.

Figure 4.2 Normality test



The homoscedasticity test is represented by the scatter plot. The following scatter plot represent the data is homoscedastic. The normal scatter plot shows

that the data is homoscedastic which means the variance of the error is constant (Brooks, 2019).

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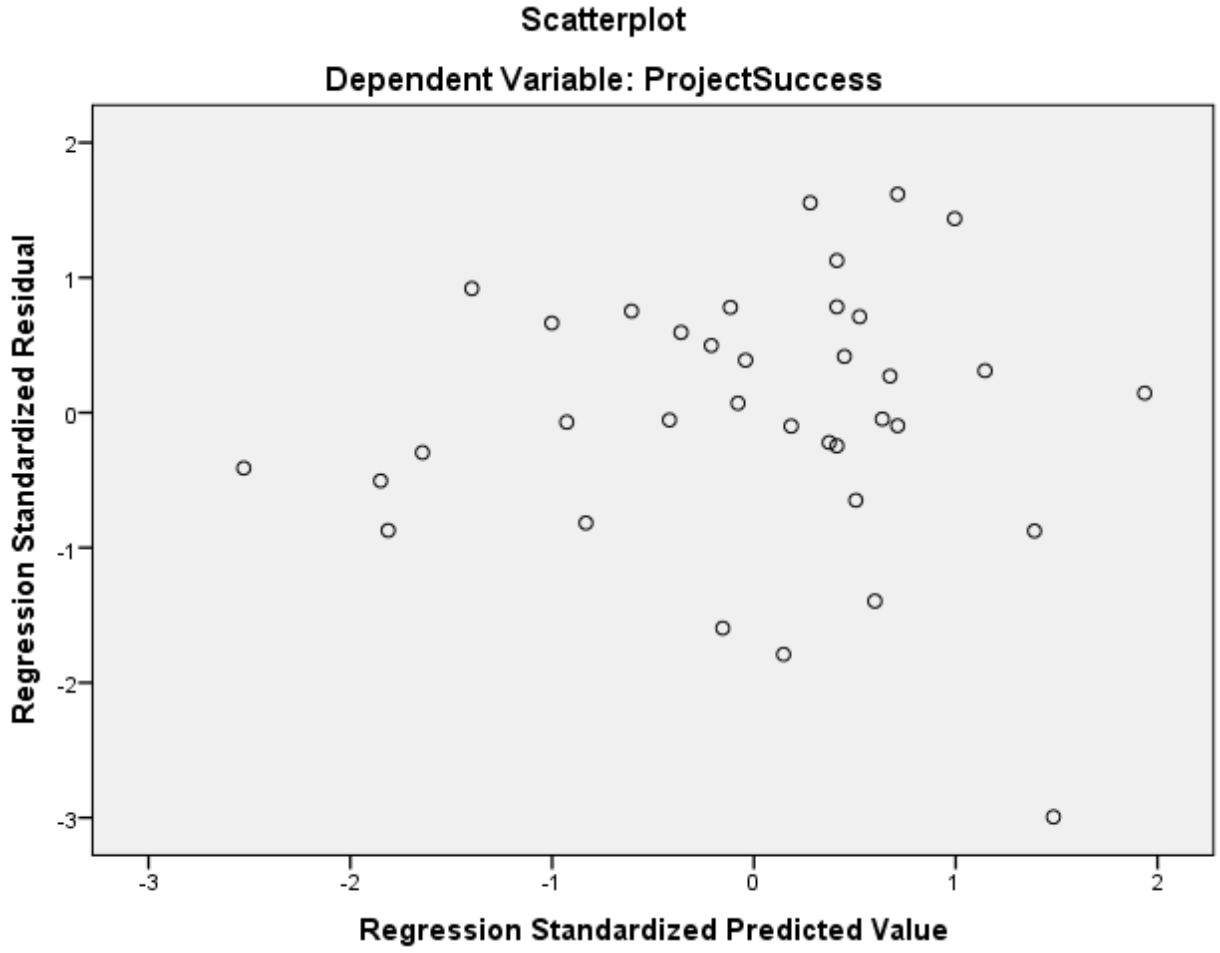
Figure 4.3 Homoscedasticity test



4.6.1.3 AUTOCORRELATION TEST

"Durbin–Watson (DW) is a test for first order autocorrelation – i.e., it tests only for a relationship between an error and its immediately previous value" (Brooks, 2019:196). DW test is a test which detect weather autocorrelation exist or not in the residual. It ranges from 0 up to 4. The value 2 is a critical value for DW

autocorrelation test result. It works for small sample size. In this case, Durbin-Watson test result was 1.840 (table 4.5). the result was approaching to value 2. It means there is no autocorrelation.

4.6.1.4 MULTICOLLINEARITY TEST

Commonly, to Check no multi collinearity problem, VIF and tolerance of collinearity statistics should be less than 10 and above 0.2 respectively. Both variables (emotional intelligence and competency) VIF values were 2.267 and their tolerance value also above 0.441. It means there is no multicollinearity problem on the regression.

Table 4.4 multicollinearity problem

Model		Collinearity Statistics	
		Tolerance	VIF
1	Emotional Intelligence	.441	2.267
	Competency	.441	2.267
a. Dependent Variable: Project Success			

4.6.2 MODEL TEST

Table 4.5 Model summary

Model Summary b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.553a	.305	.263	.48598	1.840
a. Predictors: (Constant), Competency, Emotional Intelligence					
b. Dependent Variable: Project Success					

Regression analysis is a method which helps to identify the impact of independent variable (competency and emotional intelligence) on dependent variable (project success). According to Crawford, (2006) competency and emotional intelligence are considered as predicator variable as well as project success is known as outcome variable. Based on R Square result, 30.5 percent of project success variance brought by the variables called project managers' competency and emotional intelligence. It means, 30.5 percent project success variation was explained by the regression model. In contrary, 69.5 percent, almost 70%, of the variation in project success is explained by other factors which were not identified in this research. It means, the relationship is not strong.

4.6.3 MODEL GOODNESS OF FIT

Table 4.6 Analysis of variance (ANOVA)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.425	2	1.713	7.252	.002b
	Residual	7.794	33	.236		
	Total	11.219	35			
a. Dependent Variable: Project Success						
b. Predictors: (Constant), Competency, Emotional Intelligence						

Based on Analysis of variance (ANOVA) table, the regression model p (significance) value (0.002) result has good fit because its value is less than 5 % ($p < 0.05$). The significance value result implies that the model is good enough to make prediction.

4.6.4 REGRESSION COEFFICIENTS

Table 4.7 Regression coefficients

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.090	1.066		-.084	.933
	Emotional Intelligence	.100	.345	.063	.290	.774
	Competency	.813	.353	.504	2.305	.028
a. Dependent Variable: Project Success						

$Y_i = \beta0 + \beta1 * X_i1 + \beta2 * X_i2 + e_i$

Where:

Y_i = project success (PS)

X_i1= emotional intelligence (EI)

X_i2= competency (C)

Then:

$PS = \beta0 + \beta1 * EI + \beta2 * C + e_i$

Since emotional intelligence has insignificant effect, the formula could be expressed as follows:

$PS = -0.09 + 0.813 * C + e_i$

Based on the above table p value result, emotional intelligence is not significant because its value is more than 0.05 (expected p-value). Therefore, hypothesis one (H1) is rejected because emotional intelligence significance value is 0.774 which is more than 0.05. It implies that emotional intelligence has no predictive relevance for project success. On the other hand, competency significance value is less than 0.05 which is 0.028. In this case, hypothesis two (H2) is accepted.

The above table indicates that the B (coefficient) value of competency is 0.813. It means that the change in competency by one could change the project success by 0.813. This rate of change helps to work on the potential change of the project success while the project managers competency improved. So, the project manager and their organization basically focus on how to improve the project manager competency to add value on project success.

Table 4.8 Summary of hypotheses testing

Hypothesis NO	**Hypothesis**	**Results**
H1	Project manager emotional intelligence has positive impact on project success	Rejected
H2	Project manager competency has positive impact on project success	Accepted

4.7 DISCUSSION

The goal of this research is to investigate the impact of project managers' emotional intelligence and competency on project success. The motivation to do this research is that projects in Ethiopia specifically AACRA road projects had poor in quality, delay in time and overrun in cost. Cost, quality and time are the main parameters of project success. In recent years, stakeholder's satisfaction also included as an additional measurement tool for project success.

Project performance can be influenced by different variables. Project managers leadership quality is the main determinant aspect for project performance. The project manager level of emotional intelligence and competency can determine his/her leadership quality. The researcher has investigated impact level of the two independent variables (project managers' emotional intelligence

and competency) on the project success using multiple regression analysis. From the two variables (EI and C), the result indicates that project manager Competency had significant effect on project success.

According to the first hypothesis, project manager emotional intelligence has positive impact on project success, test result indicates that project manager emotional intelligence variable has no significant effect on project success(H1). It means, emotional intelligence has no predictive relevance for project success. Based on the result, the project managers emotional intelligent elements such as self-awareness self-management, social awareness and relationship management have no significant effect on project success. In between, the researcher didn't find researches or articles which had similar outcomes to strengthen the test result termed as emotional intelligence no significant effect on project success.

In contrary, different scholars had got the result against this research outcome. These scholars had reflected about the predictive relevance of the project manager emotional intelligence on project performance. For instance, Maqbool et. al (2017) and Afzal et. al. (2018), had got the results that Emotional intelligence has 28.5 and 13.8 percent positive impact on the project success respectively. In addition, since EI beta value was 0.238 and significant to determine the project success, emotional intelligence had positive and determinant impact on project success (Ayob, 2019). These and other researchers were concluded that emotional intelligence was one of the variables which had impact on project performance and determine its success.

According to the second hypothesis, project manager competency has positive relationship with and impact on project success, test result indicates that project manager competency variable has significant effect on project success(H2). It means, H2 is accepted and project managers competency level has predictive relevance for project success. Based on the result, the project managers competency elements such as knowledge skill and attitude have significant effect on project success.

Similarly, the following scholars had also got the same result about the impact of project managers competency on project success. For instance, Al khawadah (2017) and Samuel (2019) had got a result project manager competency effect on project success. In addition, Afzal et. al. (2018), had got the results that project manager competency as having 45.8 percent positive impact on the project success. He had investigated skill, knowledge and attitude (these are the elements of project manager competency) variables separately and got positive impact on project success. In general, regression result indicates that project managers' competencies have effect on project success.

The theoretical foundation which described in this research was reflecting that the project performance and success were determined, affected and influenced by project managers' emotional intelligence and competency level. According to Druskat and Druskat (2006), emotional intelligence can affect work performance. As stated by Dziekoński (2017), there is solid association between project accomplishment and project managers competency. Unlike project managers' competency, PMs' emotional intelligence test result was found out against the developed theory in the literature review chapter.

Since project manager emotional intelligence multiple regression analysis test result was insignificant, the researcher focused only on project managers competency tools and techniques. According to Varajão and Cruz-Cunha (2013), AHP (Analytic Hierarchy Process) and the ICB (IPMA Competence Baseline) can be used as a tool for the decision-making process of selecting the more suitable managers for projects in a suitable manner. These decision tools help while conducting the difficult selection processes. AHP also known as multi criteria decision making technique, can be used to select potential project managers using competency criteria hierarchy. The ICB provides an explanation and classification of the project managers competences which expected personnel. Joint AHP and ICB is a suitable technique which focusing the selection criteria based on knowledge and experience of project managers.

Project management competency development framework (PMCDF) has also considered as suitable tool and technique which helps to improve project managers competency. According to Mansourimoayyed, Colabi, and Semiari (2020) Project Managers' Competency Development Framework (PMCDF) is a guide that supports to develop project managers' competencies. Its purpose is providing a framework the define, assess, and develop the competence for portfolio/program/project manager (Cartwright and Yinger, 2007). In general, PMCDF can be used to develop and improve project managers competency manuals. So, AACRA can use PMCDF as a guideline when developing project managers competencies for their projects in a suitable manner.

CHAPTER 5: SUMMARY OF FINDING, CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY OF FINDING

According to the survey results, 29 project managers (80.6 percent) were between the ages of 30 and 39, with the remainder coming from other age groups. It means, large number of respondents are younger age group. Respondents age groups from 18 to 29, 40 to 49 as well as 50 and above have 5.6 %,5.6 % and 8.3 % share of the total response rate respectively. Furthermore, all of the project managers who took part in this survey were male in their gender category. According to their nationality percentage share, 83.3 percent of respondents were Ethiopians, with the remaining 16.7 percent being foreigners. Furthermore, 21 (58.3 %) and 15 (41.7 %) respondents have a bachelor's degree and master's degree respectively. The percentage shares of private, public (ECWC), and AACRA contractors are 69.4, 11.1, and 19.4 percent respectively. According to the length of work experience, 21 respondents (58.3 percent) had 10 to less than 15 years of experience. Working experience ranging from 0 to less than 5 years, 5 to less than 10 years, and 15 years or more has a 5.6, 25.0, and 11.1 percentage share respectively.

Project manager emotional intelligence, competency, and project success have mean values of 4.286, 4.285, and 3.824, with standard deviations of 0.36, 0.35, and 0.57. On average, the responses for emotional intelligence, competency, and project success were close to “agree,” with a value of “4.” Its standard deviation also indicates that project managers' responses differed less from the mean or average value. All project managers, in general, reflect their own responses, although standard deviation indicates that they deviated less from the mean value (from their responses average value).

The correlation between emotional intelligence and competency (.748) is strong. The relationship between emotional intelligence and project success (.440)

and project manager competency and project success (.551) is moderate. According to the R Square result, the variables called project managers' competency and emotional intelligence account for 30.5 percent of the variance in project success. That is, the regression model explained 30.5 percent of the variance in project success.

According to the p value results (table 4.7), emotional intelligence is not significant because its value is greater than 0.05 (expected p-value). As a result, hypothesis one (H1) is rejected because the emotional intelligence significance value is greater than 0.05. It implies that emotional intelligence is unrelated to project success. Competency significance value, on the other hand, is 0.028, which is less than 0.05. In this case, Hypothesis 2 (H2) is accepted. As a result, the project manager and their organization should primarily concern with how to improve project manager competency in order to add value to project success.

5.2 CONCLUSIONS

To conclude, investigating the impact of emotional intelligence and competency on project success was the purpose of this research. According to literature review, the project manager has the potential for project success or vain. This potential was supported by his or her emotion and competency. Emotional intelligence and project manager competency were the two major variables necessary to investigate the potential level of change on project success.

According to empirical evidences of this study, “project manager competency has impact on project success”. Project managers knowledge, skill and attitude has determinant impact on project success. Based on Horvath (2019) conceptualization, project managers knowledge implies that collection of information and experience that an individual possesses. On the other hand, project managers skills cover specific technical capabilities that enable an individual to perform a task and project managers attitude reflects about the effective delivery of knowledge and skills in a given context.

According to the research, project managers emotional intelligence has no substantial impact on project success. Regardless of the study findings, the majority of academics agreed that EI plays a key role in the project success.

Based on this research finding, project managers competency has the predictive relevance on the project's success. In addition to other features, it can be taken as one of the determining factors for project success. Therefore, level of project managers' competency had substantial effect on project performance. In contrary, project managers emotional intelligence had insignificant impact on project success.

There are different internationally known competency development and upgrading tools. For instance, ICB (IPMA Competence Baseline) can be used as a tool for the decision-making process of selecting more suitable managers for projects. On the other hand, PMCDF is a guide that supports to develop project managers' competencies. Combining ICB or PMCDF with AHP can be used as a suitable technique while developing AACRA manuals / guidelines or selecting criteria for project managers. In addition, PMP or Price2 Certifications as well as 360-degree feedback about the project manager performance are some of tools and techniques that can be used while evaluating project managers competency level.

5.3 RECOMMENDATIONS

The recommendation basically focuses on the potential endorsement of the researcher which fundamentally help AACRA and its project manager. In addition, it helps to reflect the latent and possible future research areas for further investigation. The recommendation is formulated based on the research finding, discussion and conclusion. Since emotional intelligence has no significant effect on project success, the researcher concentrates only on project manager competency.

Based on the finding and its discussion, the researcher has endorsed the following major recommendations:

Based on the finding, the AACRA and its project managers should focus on the project manager competency advance and improvement. While assigning as project manager, the organization (AACRA) mainly focuses on project managers' knowledge, skill and attitude (in addition to other parameters). For instance, while measuring the knowledge the evaluator should consider international project management certifications exams (PMP or Price2 Certifications). These certifications exams mainly help to understand and measure project managers' project management knowledge and experience.

When evaluating the project managers skill, the organization should consider project managers' task level understanding of the use of project management tools and technique. For example, when evaluating potential project managers, the organization may use a comprehension exam that aids in the scheduling of project activities using Primavera 6 or MS Project.

To evaluate the ability of the project manager, the organization or other target group should use the effective delivery of the project. For example, it can mitigate using pilot projects or reviewing his or her past project management history (project closure lesson learned log). It indicates how he/ she had successfully completed the project.

Policy developers should develop the well-known criterions for project managers competency level measurement and valuation or accept international measuring technique as mandatory to hire project managers.

For the organization (AACRA), it should focus, allocate resources and investing on upgrading of project manager competency than improving emotional intelligence through formal training and development.

In addition, for AACRA, should collect 360-degree feedback about the project manager performance from different anonymous groups i.e., from staff member, project clients, project consultants, project bords and other stockholders.

For future researchers, project success has different factors that disturb to encounter its performance. The researcher covers a dot in the ocean. So, you (the prospective researchers) may examine different determents of project success. For example, you can investigate emotional intelligence and competency sub-variables one by one or other unseen determinants in detail. Besides, you can refer this research as a supportive document and argue with its finding.

With some improvement, this thesis results and recommendations can be used for road and other sectors project researches. Because, all project managers can follow similar project life cycle and use similar knowledge area.

5.4 CONTRIBUTION TO THEORY, PRACTICE AND DIRECTION FOR FURTHER RESEARCH

In this section, the multiple regression analysis result had been used to reflect theoretical contribution of the research. The test results indicates that project success and project managers competency have strong relation. In contrary, project managers emotional intelligence has no relation with project success. So, its (the test result) involvement to the theory has described as follows. AACRA project managers with high competency level which have good knowledge, skill and attitude about project management have better contribution on project performance. In addition, the project manager with high competency with low emotionally intelligent has better contribution for project success than project manager with high emotionally intelligent but lesser competency. Therefore, unlike emotional intelligence, project manager competency has considered as the determinant variable for project managers performance.

Many of scholars concluded that emotional intelligence has significant effect on project success. But based on the researcher finding, EI has no predictive relevance for project success. So, further investigation will be necessary on emotional intelligence variable in depth to strengthen the argument. Thus, the interested researcher is essential to focus on this argument in detail.

The study also focuses on active road projects in Addis Ababa. It means, the study can show the ongoing situation which reflect the project managers competency and emotion. Then, the future researcher can take to crosscheck for longitudinal study.

In addition, the researcher had time and resource restraints to address different variables such as soft skill, hared skill, leadership quality or sub variables of EI and C in detail i.e., competency variables knowledge, skill and attitude or emotional intelligence variables such as self-awareness, self-management, social awareness and relationship management separately. The future researchers can focus on those described variables one by one using this research as an input.

For different organization which works on project managers, this research's finding can be implemented for practical use or improvement for project managers competency capacity.

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APPENDIX I QUESTIONNAIRE

Addis Ababa University, College of Business and Economics
MBA program

Dear respondent,

I thank you in advance for sparing time to fill in this questionnaire. The objective of the questionnaire is to evaluate project managers response on his/ her emotional intelligence and competency and its impact on project success. The study is conducted as a partial fulfillment for an MBA degree. I assure you that the responses will be kept confidential and used only for academic purposes.

If you require further briefing on the following contents, you can communicate using the following address:

Ashenafi Sema

Phone number: 0913645919

E-mail: ashe2demo@gmail.com

SECTION A

Dear respondent, please respond to the following questions based on your demographic features using tick (√) mark and write an appropriate response for the open-ended question.

1. Sex:

   Male ☐ Female ☐

2. Age:

   18-29☐ 30-39☐ 40-49☐ 50 and above ☐

3. Name of the organization where you worked for:

   _____
   _____
   _____

4. Type of organization where you worked for:

   Private contractor ☐ Public contractor ☐ AACRA ☐

5. Nationality:

   Ethiopian ☐ Other ☐

6. Level of education:

   Diploma ☐ Degree ☐ Masters ☐ PhD ☐

7. Length of service year:

   0-5☐ 5-10☐ 10-15☐ 15 and above ☐

SECTION B

Dear respondent, please respond to the following questions based on your reaction to the statements using tick (√) mark to reflect the degree of your everyday project management characteristics. The degree of your responses classified as follows:

- 1 – Strongly disagree, 2 – dis agree, 3 – impartial, 4 – agree and 5 – Strongly agree

No	**Project manager emotional intelligence and competency as well as project success measures**	1	2	3	4	5
Project manager's Emotional intelligence						

self-awareness						
1	I understand my emotional feelings					
2	I understand my strength and weakness					
3	I have Self-confidence while doing the job					
self-management						
1	I have ability to keep my disruptive emotions					
2	I am transparent enough when it is while reporting necessary					
3	I am adaptable or flexible in doing the job and decision making					
4	I always address the project goals and objectives					
5	I am always trying to take an initiative for a new production system or a new idea					
6	I am always hopeful while doing the day-to-day job					
social awareness						
1	I understand and give response for team and stakeholder relationship improvement.					
2	I have the ability to read groups emotional emotion flows and network relationship with in the project.					
3	I am serving the project stockholders based on the requirement as well as their interest.					
relationship management						
1	I am inspirational leader to influence others i.e., with in the project or outside the project.					
2	I usually helping others to advance on different skills.					
3	I usually analyze and manage project changes and change requests.					
4	I usually building bonds with in the project team and outside the project					

5	I am collaborative with project team members and other stakeholders					
Project manager's competency						
Knowledge						
1	I always investigate facts on the project management					
2	I always take an action based on the appropriate information and assumptions					
3	On the bases of strategic plan / contract agreement, I always develop/ set objectives					
4	I usually identify supportive or none supportive ideas for project accomplishment.					
5	I always follow the PMbook or prince-2 steps to manage different stages of the project					
6	I always identify changes on the project and request change orders					
7	I have clear vision and understanding on the project life cycle					
8	I always follow project closeout procedures properly which clearly indicate on project plan document.					
Skill						
1	I always directing and managing the project and give a guidance for team members					
2	I always communicate with team members and project stakeholder					
3	I usually encourage creative ideas and influence others.					
4	I always identify risks of the project and its stakeholders and take immediate action or categorize based on severity.					
5	I always Managing costs according to the resource priority schedule.					

6	I usually Negotiating with different stakeholders / conflict management.					
7	I always follow creative or critically think about problems happened on the project.					
8	I always track duties of each team members and managing according to the schedule.					
9	I usually tracking my weakness and strength.					
Attitude						
1	I always Passionate while I am working with team members and other stakeholders.					
2	I have Sense pride and obligation to contribute for project success					
3	I am satisfied by means of utilizing my profession and contribute to the project success.					
4	I understand my roles and responsibilities and realize project's Job specification detail.					
5	I usually Link the concepts of individual group and organization with project aspect.					
Project success						
1	I completed the project with in specified scheduled time frame					
2	I completed the project on or lower than the budgeted cost					
3	I completed the project based on agreed quality check lists and according to the project scope					
4	I always satisfy my team members based on my day-to-day project management style					
5	I always satisfy stockholders based on their interest or requirements on the project					
6	I was able to accomplish the project purpose					

APPENDIX II OUTSOURCED ACTIVE PROJECTS LIST AND AACRA'S STAND-BY PROJECT OFFICES

S.No.	Road projects and Own-force stand-by project offices
Road construction contract administration directorate (active projects)	
1	*Form Bole Kaba entrance - Medhanialem lot 1*
2	*Form Bole Woreda - Bulbula 40/60 condominium lot 2*
3	*Form Megenania -Wuhalimat- ministry of agriculture- AA city water and sanitary authority- woreda 17 health center asphalt road*
4	*Form CMC road – Wondirad school – Goro overpass Bridge*
5	*Form Kera Kebt beret – Gofa Mebrathile condominium*
6	*Form Ararat hotel – Kotebe college lot 1*
7	*Form Ararat hotel – Kara lot 2*
8	*For Hugian industry zone road construction (from Hile garment square – Jomo square)*
9	*Form Ras-Desta – Kechene Medhanialem – no 8-bus destination*
10	*From Kality ring road square – Akaki bridge – Tuludimtu square*
11	*From Kality ring road square – Bulbula – Kilinto 2nd ring road square*
12	*From Fafa food industry – Dama – Bihere Tsge Sene 9 school Debre Zeyit road*
13	*From Shiromeda – Kuskuam*
14	*From Dejach Wube – Abune petros – Awtobis tera – no 18-bus destination (from north to south)*
15	*From Pushkin square – Gotera Interchange*
16	*From Bole Michael square – Bulbula Kaba entrance*
17	*For AACRA garage building*
18	*From Woji Medhanialem to CMC road*
19	*From Nigeria embassy – Kechene – Ring road*
20	*From Augsta – Woyira*
21	*Imperial and Kadisco square (lot 1)*
22	*Tolu Dimtu condominium for external ring road*
23	*B.R.T B-2 road construction*
Housing Road construction contract administration directorate active projects	
1	*Construction work of package 12 KOYE FICHE-2 Condominium road project; Lot-1*
2	*Construction work of package 12 KOYE FICHE-2 Condominium road project; Lot-2*
3	*Construction work of package 12 KOYE FICHE-2 Condominium road project; Lot-3*
4	*Construction work of package 12 KOYE FICHE-2 Condominium Phase 2 road project; Lot-1 (Project 11)*

5	*Construction work of package 12 KOYE FICHE-2 Condominium Phase 2 road project; Lot-2 (Project 18)*
6	*Construction work of package 6 condominium road project; Bole Arabsa 5- Lot-1*
7	*Construction work of package 6 condominium road project; Bole Arabsa 5- Lot-2*
8	*Construction work of package 7 condominium road project; Lot-1: Bole Arabsa 6*
9	*Construction work of package 5 condominium road project; Lot-1: Jamo Gara*
10	*Construction work of package 5 condominium road project; Lot-2: Yeka Tafo*
11	*Construction work of package 9 Chefe condominium Asphalt*
12	*Construction work of package 9 road project: Bole Ayat 1,2,3,4 and Ayat Meri site 4 condominium housing road projects*
13	*Construction work of package 9 road project: Bole Ayat 4 condominium asphalt road projects*
14	*Construction work of package 9 road project: Ayat Meri site 4 condominium asphalt road projects*
15	*Construction work of package 9 road project: Asko, Bulbula and Imperial condominium road projects*
Own-force Road construction directorate (stand-by project offices by LOT)	
1	*Lot 1 project management office (one project manager)*
2	*Lot 2 project management office (one project manager)*
3	*Lot 3 project management office (one project manager)*
4	*Lot 4 project management office (one project manager)*
Own-force Road maintenance directorate (stand-by project offices by regions)	
1	*South-East region (one project manager)*
2	*Central-North-west region (one project manager)*
(Stand-by project office for road construction input supply)	
1	*Input and product supply directorate (one project manager)*

APPENDIX III FACTOR ANALYSIS

KMO and Bartlett's Test

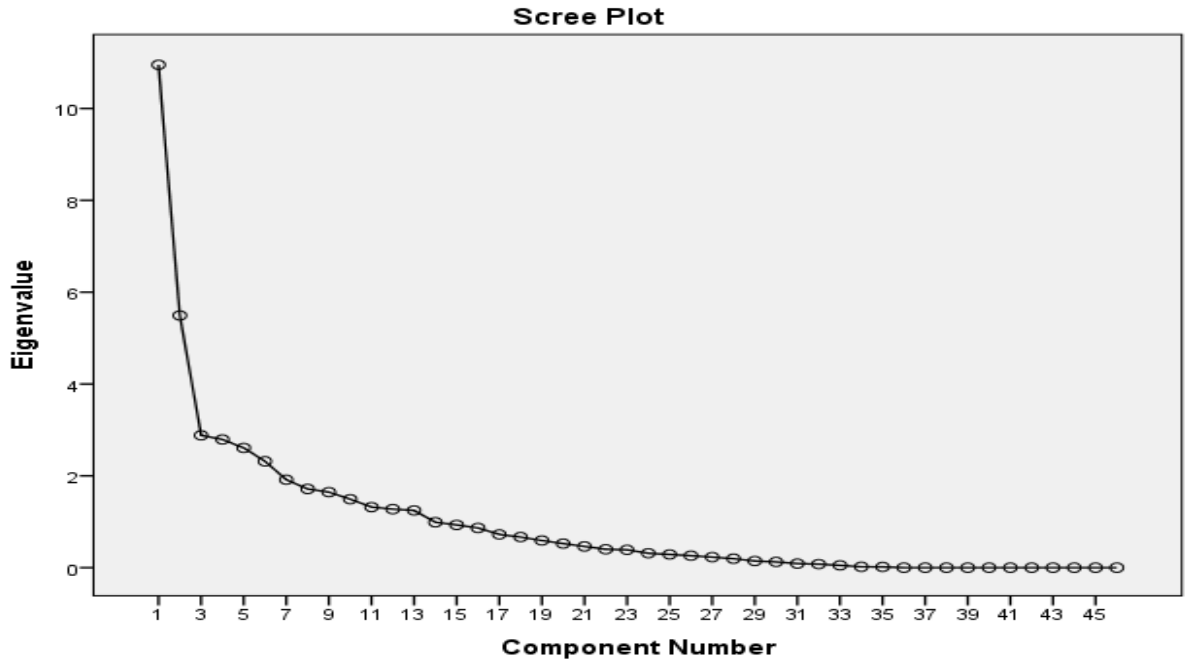
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.746
Bartlett's Test of Sphericity	Approx. Chi-Square	121.200
	df	28
	Sig.	.000

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.951	23.807	23.807	10.951	23.807	23.807	6.379	13.868	13.868
2	5.492	11.940	35.747	5.492	11.940	35.747	4.154	9.030	22.898
3	2.882	6.265	42.012	2.882	6.265	42.012	3.819	8.302	31.200
4	2.793	6.071	48.084	2.793	6.071	48.084	3.138	6.822	38.023
5	2.609	5.671	53.755	2.609	5.671	53.755	3.120	6.783	44.806
6	2.316	5.035	58.789	2.316	5.035	58.789	2.591	5.632	50.438
7	1.915	4.163	62.953	1.915	4.163	62.953	2.563	5.572	56.010
8	1.714	3.727	66.680	1.714	3.727	66.680	2.149	4.673	60.683
9	1.644	3.575	70.254	1.644	3.575	70.254	2.060	4.479	65.161
10	1.491	3.242	73.496	1.491	3.242	73.496	2.017	4.384	69.546
11	1.319	2.868	76.364	1.319	2.868	76.364	1.904	4.140	73.685
12	1.274	2.771	79.134	1.274	2.771	79.134	1.900	4.130	77.815
13	1.247	2.710	81.844	1.247	2.710	81.844	1.853	4.029	81.844
14	.989	2.149	83.993						
15	.931	2.024	86.017						
16	.865	1.879	87.897						
17	.725	1.575	89.472						
18	.666	1.449	90.921						
19	.591	1.285	92.205						
20	.524	1.139	93.344						
21	.462	1.004	94.348						

22	.400	.869	95.217						
23	.389	.845	96.062						
24	.314	.684	96.746						
25	.289	.627	97.373						
26	.261	.568	97.941						
27	.229	.499	98.440						
28	.196	.426	98.866						
29	.145	.315	99.181						
30	.125	.272	99.453						
31	.089	.193	99.645						
32	.077	.168	99.813						
33	.050	.110	99.923						
34	.019	.042	99.965						
35	.016	.035	100.000						
36	7.156E-16	1.556E-15	100.000						
37	4.038E-16	8.779E-16	100.000						
38	3.428E-16	7.453E-16	100.000						
39	2.264E-16	4.922E-16	100.000						
40	4.543E-17	9.876E-17	100.000						
41	-1.444E-16	-3.139E-16	100.000						
42	-3.554E-16	-7.727E-16	100.000						
43	-4.868E-16	-1.058E-15	100.000						
44	-6.869E-16	-1.493E-15	100.000						
45	-1.002E-15	-2.177E-15	100.000						
46	-1.859E-15	-4.041E-15	100.000						

Extraction Method: Principal Component Analysis.



Communalities

	Initial	Extraction
I understand my emotional feelings	1.000	.885
I understand my strength and weakness	1.000	.858
I have self-confidence while doing the job	1.000	.803
I have ability to keep my disruptive emotions	1.000	.789
I am transparent when reporting the necessary information for stockholder.	1.000	.599
I have adaptable or flexible behavior while doing the job and handling changes	1.000	.853
I always address the project goals and objectives	1.000	.810
I always try to take an initiative for a new production system or a new idea	1.000	.901
I always hopeful in doing the day-to-day jobs/activities	1.000	.798
I understand team members' and stakeholders' feelings and give response to improvement relationship.	1.000	.871
I have the ability to read groups' emotion flow and relationship network within the project.	1.000	.926
I am serving the project stockholders based on the requirement as well as their amended interest.	1.000	.770
I am inspirational leader to influence others i.e., within the project or outside the project.	1.000	.917
I usually helping others to advance different skills.	1.000	.798
I usually analyze and manage project changes and change-requests.	1.000	.861

I usually building bonds within the project team and outside the project	1.000	.881
I am collaborative with project team members and other stakeholders	1.000	.888
I always investigate facts on the project management	1.000	.861
I always take an action based on the appropriate information and assumptions	1.000	.867
On the bases of strategic plan / contract agreement, I always develop/ set objectives	1.000	.870
I usually identify supportive or none supportive ideas for project accomplishment.	1.000	.867
I always follow the PMbook or Prince-2 steps to manage different stages of the project	1.000	.782
I always identify changes on the project and request change orders	1.000	.901
I have clear vision and understanding on project life cycle	1.000	.770
I always follow project closeout procedures properly which clearly indicate on project plan document.	1.000	.831
I always directing and managing the project and give a guidance for team members	1.000	.788
I always communicate with team members and project stakeholder	1.000	.812
I usually encourage creative ideas and influence others.	1.000	.755
I always identify risks of the project and its stakeholders and take immediate action or categorize based on severity.	1.000	.643
I always managing costs according to the resource priority schedule.	1.000	.666
I usually try to negotiate and resolve when conflict of interest happened with different stakeholders.	1.000	.838
I always follow creative or critically think about problems happened on the project.	1.000	.806
I always track duties of each team members and managing according to the schedule.	1.000	.879
I usually tracking my weakness and strength.	1.000	.651
I always passionate while I am working with team members and other stakeholders.	1.000	.798
I have sense pride and obligation to contribute for project success	1.000	.822
I am satisfied by the means of utilizing my profession and contribute to the project success.	1.000	.599
I understand my roles and responsibilities and mainly focused on job specification details.	1.000	.819
I usually link the concepts of individual, group and organization with project aspect.	1.000	.831
I usually work on team members competency improvement to achieve the goal of the project.	1.000	.846
I completed the project within specified scheduled time frame	1.000	.885
I completed the project on or lower than the budgeted cost	1.000	.882
I completed the project based on agreed quality check lists and according to the project scope	1.000	.824
I always satisfy my team members based on my day-to-day project management style	1.000	.860
I always satisfy stockholders based on their interest or requirements on the project	1.000	.832

I was able to accomplish the project purpose	1.000	.854

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component												
	1	2	3	4	5	6	7	8	9	10	11	12	13
On the bases of strategic plan / contract agreement, I always develop/ set objectives	.803												
I always follow project closeout procedures properly which clearly indicate on project plan document.	.723												
I always identify changes on the project and request change orders	.688	-.359				.366							
I have clear vision and understanding on project life cycle	.683	-.313							.311				
I am inspirational leader to influence others i.e., within the project or outside the project.	.654	-.344				-.316							
I usually analyze and manage project changes and change-requests.	.651	-.469											
I usually helping others to advance different skills.	.609	-.506											
I always investigate facts on the project management	.608					-.309				-.351			
I have self-confidence while doing the job	.608		.312										
I completed the project on or lower than the budgeted cost	.588		-.440	-.339									
I completed the project based on agreed quality check lists and according to the project scope	.581	-.322											.350
I always take an action based on the appropriate information and assumptions	.579	-.452											
I understand my roles and responsibilities and mainly focused on job specification details.	.576	.492											

I always follow creative or critically think about problems happened on the project.	.543	.503											
I always address the project goals and objectives	.530		.322			.352					-.335		
I usually identify supportive or none supportive ideas for project accomplishment.	.528			.364									-.509
I always track duties of each team members and managing according to the schedule.	.523							-.412	-.364		.447		
I usually building bonds within the project team and outside the project	.509	-.481											.373
I am satisfied by the means of utilizing my profession and contribute to the project success.	.507	.460											
I am serving the project stockholders based on the requirement as well as their amended interest.	.459	-.448	.355				.322						
I usually try to negotiate and resolve when conflict of interest happened with different stakeholders.	.453	-.382					.449						
I always follow the PMbook or Prince-2 steps to manage different stages of the project	.416	-.318		-.361									
I always communicate with team members and project stakeholder	.417	.549										.431	
I usually link the concepts of individual, group and organization with project aspect.	.440	.546											
I always managing costs according to the resource priority schedule.	.336	.511							-.448				
I am transparent when reporting the necessary information for stockholder.		.507							-.306				
I have ability to keep my disruptive emotions	.450	.491						.381					

I have the ability to read groups' emotion flow and relationship network within the project.	.334	-.304	.620							.336			
I understand team members' and stakeholders' feelings and give response to improvement relationship.	.388	-.363	.607										
I always satisfy stockholders based on their interest or requirements on the project	.381		-.512		.449								
I usually tracking my weakness and strength.			.506	-.328									
I am collaborative with project team members and other stakeholders	.540			.632									
I have sense pride and obligation to contribute for project success	.394	.481		.483									
I always directing and managing the project and give a guidance for team members	.342	.360		.403			.302						
I usually work on team members competency improvement to achieve the goal of the project.	.448	.336			.603	.357							
I understand my strength and weakness	.351				.569								-.325
I was able to accomplish the project purpose	.374		-.449		.515		-.301						
I always satisfy my team members based on my day-to-day project management style	.339	.467			.509								
I always try to take an initiative for a new production system or a new idea	.456			-.342		-.498							
I always passionate while I am working with team members and other stakeholders.		.334		.470		-.471							
I always identify risks of the project and its stakeholders and take immediate action or categorize based on severity.	.322					-.442						-.304	

I usually encourage creative ideas and influence others.						.410	-.385	.339					
I completed the project within specified scheduled time frame	.312			-.377	-.343	.382							
I have adaptable or flexible behavior while doing the job and handling changes							.690					-.304	
I always hopeful in doing the day-to-day jobs/activities	.375	.476						-.502					
I understand my emotional feelings	.445								.582	-.366			

Extraction Method: Principal Component Analysis.

a. 13 components extracted.

Rotated Component Matrix[a]

	Component												
	1	2	3	4	5	6	7	8	9	10	11	12	13
I always identify changes on the project and request change orders	.820												
I completed the project based on agreed quality check lists and according to the project scope	.788												
I completed the project on or lower than the budgeted cost	.764									.354			
I have clear vision and understanding on project life cycle	.733												
I usually analyze and manage project changes and change-requests.	.712						.511						
On the bases of strategic plan / contract agreement, I always develop/ set objectives	.630				.461								
I am inspirational leader to influence others i.e., within the project or outside the project.	.615							-.370	.324				.312
I usually building bonds within the project team and outside the project	.545			.397						-.448			

I usually helping others to advance different skills.	.529			.313			.479					
I always follow the PMbook or Prince-2 steps to manage different stages of the project	.529				.363			-.358				-.344
I always take an action based on the appropriate information and assumptions	.507						.317		.460	-.415		
I always satisfy my team members based on my day-to-day project management style		.845										
I usually work on team members competency improvement to achieve the goal of the project.		.804										
I always satisfy stockholders based on their interest or requirements on the project	.332	.684									-.395	
I usually link the concepts of individual, group and organization with project aspect.		.658	.334					.403				
I am transparent when reporting the necessary information for stockholder.		.603										
I was able to accomplish the project purpose	.410	.543								-.376		-.427
I am satisfied by the means of utilizing my profession and contribute to the project success.		.443	.396									
I always directing and managing the project and give a guidance for team members			.837									
I always hopeful in doing the day-to-day jobs/activities			.710			.333						
I have sense pride and obligation to contribute for project success			.704									
I always communicate with team members and project stakeholder			.600						.511			

I understand my roles and responsibilities and mainly focused on job specification details.		.348	.549		.430								
I always follow creative or critically think about problems happened on the project.			.529		.355	.478							
I always passionate while I am working with team members and other stakeholders.			.454		.430	-.391							
I have the ability to read groups' emotion flow and relationship network within the project.				.909									
I understand team members' and stakeholders' feelings and give response to improvement relationship.				.750		.327							
I am serving the project stockholders based on the requirement as well as their amended interest.	.507			.592									
I usually try to negotiate and resolve when conflict of interest happened with different stakeholders.				.479			.373	-.463					
I always try to take an initiative for a new production system or a new idea					.768								
I always identify risks of the project and its stakeholders and take immediate action or categorize based on severity.					.681								
I always follow project closeout procedures properly which clearly indicate on project plan document.	.487				.574								
I have ability to keep my disruptive emotions					.541			.365					
I always address the project goals and objectives	.302					.774							
I have self-confidence while doing the job						.677							

I usually tracking my weakness and strength.				.331		.570							
I usually identify supportive or none supportive ideas for project accomplishment.							.849						
I am collaborative with project team members and other stakeholders	.394						.522			-.437			
I usually encourage creative ideas and influence others.								.800					
I understand my strength and weakness		.348		.366				-.562					.369
I always investigate facts on the project management					.343				.725				
I completed the project within specified scheduled time frame										.827			
I always track duties of each team members and managing according to the schedule.											.848		
I have adaptable or flexible behavior while doing the job and handling changes												.893	
I understand my emotional feelings													.868
I always managing costs according to the resource priority schedule.		.315	.330						.304		.336		-.365

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 14 iterations.