EXPLORING LEADERSHIP QUALITIES OF PROJECT MANAGERS FOR SUCCESSFUL PROJECT EXECUTION

BY

Deborah Kuzagbe

(Bachelor of Arts, French and Psychology)

A thesis presented to the Department of Construction Technology and Management, College of Arts and Built Environment, Kwame Nkrumah University of Science and Technology, Kumasi in partial fulfillment of the requirements for the award degree of

MASTER OF SCIENCE IN PROJECT MANAGEMENT

November, 2019.

DECLARATION

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma at Kwame Nkrumah University of Science and Technology, Kumasi or any other educational institution, except where due acknowledgement is made in the thesis.

| KUZAGBE, DEBORAH (PG5337418) | | |
|------------------------------|-----------|------|
| (Student's Name and ID) | Signature | Date |
| Certified by | | |
| PROF. EDWARD BADU | | |
| (Supervisor) | Signature | Date |
| Certified by | | |
| PROF. BERNARD.K BAIDEN | | |
| (Head of Department) | Signature | Date |

ABSTRACT

Strategic means of achieving organizational goals is to undertake projects and organizations spend huge sums of money to execute projects. However, recent studies show that most projects fail or are abandoned despite advances in knowledge in project management. Therefore, this study aimed at exploring leadership qualities of project managers for successful project execution. The research had three (3) objectives; to identify key leadership qualities of project managers, to identify key factors for successful project execution and to establish the relationship between leadership qualities and factors for successful project execution. Extensive literature review was conducted based on each objective and variables were identified. The study adopted a quantitative research method and thus, a structured questionnaire was developed and distributed to project managers whiles sixty (60) responses were retrieved for the analysis. The data were analyzed using mean score ranking and regression analysis. With the success criteria, the highest ranked success criterion was schedule success factor, followed by quality success factor, health and safety success factor and cost success factor. With the leadership qualities, the highest ranked leadership quality was managerial qualities dimension. With the relationship between leadership qualities and project success, schedule success factor, relationship with stakeholders and health and safety success factor has significant positive relationship with leadership qualities. Based on the findings, it was recommended that, project managers must enhance their leadership qualities to improve on the success factors realized on projects. Also, project managers must also enhance their managerial leadership qualities in terms of managing resources, efficient communication and achieving objectives as a way of improving on leadership abilities.

Keywords: Leadership qualities, project successes

| ECLARATIONII |
|--------------------------------|
| BSTRACTIII |
| IST OF TABLESVIII |
| IST OF FIGURESIX |
| CKNOWLEDGEMENTS X |
| EDICATIONXI |
| HAPTER ONE1 |
| NTRODUCTION1 |
| 1.1 BACKGROUND OF THE STUDY |
| 1.2 STATEMENT OF THE PROBLEM |
| 1.3 RESEARCH AIM |
| 1.4 RESEARCH OBJECTIVES |
| 1.5 RESEARCH QUESTIONS |
| 1.6 JUSTIFICATION OF THE STUDY |
| 1.7 SCOPE OF THE STUDY |
| 1.8 MEHODOLOGY |
| 1.9 STRUCTURE OF THE STUDY |
| CHAPTER TWO |
| ITERATURE REVIEW9 |
| 2.1 INTRODUCTION |
| 2.2 Leadership |

TABLE OF CONTENT

| 2.2.1. Leadership Theories | |
|--|-------------------|
| 2.2.2. Leadership Competencies | |
| CONSCIENTIOUSNESS | |
| REFERS TO THE LEADERS' COMMITMENT TO A COURSE O | F ACTION IN SPITE |
| OF CHALLENGES AND APPLYING WORDS AND DEEDS IN EN | COURAGING HIS |
| TEAM TO FOLLOW HIS COURSE. | |
| 2.3 PROJECT MANAGEMENT | |
| 2.3.1. Project Management Success factor | |
| 2.3.2 Project Execution and Success | |
| 2.3.3 Project Management vs. Project Leadership | |
| 2.3.4 Project Manager as a Leader | |
| 2.4 KNOWLEDGE GAP IN LITERATURE | |
| 2.5 CHAPTER SUMMARY | |
| CHAPTER THREE | |
| RESEARCH METHODOLOGY | |
| 3.1 Introduction | |
| 3.2 RESEARCH STRATEGY | |
| 3.3 Research Design | |
| 3.4. SOURCES OF DATA | |
| 3.5 POPULATION OF STUDY | |
| 3.6 SAMPLE SIZE AND SAMPLING TECHNIQUE | |
| 3.7 DATA COLLECTION INSTRUMENT | |

| 3.7.1 Questionnaire Design | |
|---|----|
| 3.8 Reliability and Validity of Test | |
| 3.9 DATA ANALYSIS TECHNIQUE | 30 |
| CHAPTER FOUR | 31 |
| DATA ANALYSIS AN DISCUSSION OF RESULTS | |
| 4.1 INTRODUCTION | |
| 4.2 BACKGROUND OF RESPONDENTS | |
| 4.2.1. Job Sector of Respondents | |
| 4.2.2. Job Function of Respondents | |
| 4.2.3 Academic Qualification of Respondents | |
| 4.2.4. Practical Experience of Respondents | |
| 4.2.5. Level of Knowledge in Project Leadership | |
| 4.3 MEAN SCORE RANKING AND REGRESSION ANALYSIS | |
| 4.3.1 Success Factors | |
| 4.3.2 Leadership Qualities | |
| 4.3.3 Relationship between Leadership Qualities and Project Success | |
| 4.4 CHAPTER SUMMARY | 41 |
| CHAPTER FIVE | 43 |
| SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION | 43 |
| 5.1 INTRODUCTION | 43 |
| 5.2 SUMMARY OF FINDINGS | 43 |
| 5.2.1 Objective one: To identify key leadership qualities of project managers | 43 |

| 5.2.2 Objective two: To identify key factors for successful project execution | 44 |
|---|-----------|
| 5.2.3 Objective three: To establish the relationship between leadership qualities and | d factors |
| for successful project execution | |
| 5.3 STUDY LIMITATIONS AND FUTURE STUDIES | 45 |
| 5.4 CONCLUSION | 45 |
| 5.5 RECOMMENDATIONS | 46 |
| REFERENCES | 47 |
| APPENDIX | 56 |
| QUESTIONNAIRE | 56 |

LIST OF TABLES

| TABLE 2.1 SUMMARY OF LEADERSHIP THEORIES AND IDEAS | 13 |
|---|----|
| TABLE 2.2 SUMMARY OF TYPES OF MANAGERIAL COMPETENCIES | 15 |
| TABLE 2.3 SUMMARY OF TYPES OF INTELLECTUAL COMPETENCIES | 16 |
| (DULEWICZ AND HIGGS, 2005) | 16 |
| TABLE 2.4 SUMMARY OF TYPES OF EMOTIONAL COMPETENCIES | 16 |
| (DULEWICZ AND HIGGS, 2005) | 16 |
| TABLE 4.1 RANKING OF SUCCESS CRITERIA | 37 |
| TABLE 4.2 RANKING OF LEADERSHIP QUALITIES | 39 |
| TABLE 4.3 RELATIONSHIP BETWEEN LEADERSHIP QUALITIES AND PROJECT SUCCESS | 41 |

LIST OF FIGURES

| FIGURE 1.1: RANKING OF CAUSES OF PROJECT FAILURES | 4 |
|---|------|
| FIGURE 1.2 STRUCTURE OF THE REPORT (SOURCE: AUTHOR'S CONSTRUCT, 2019) | 8 |
| FIGURE 4.1 JOB SECTOR OF RESPONDENTS | . 32 |
| FIGURE 4.2 JOB FUNCTION OF RESPONDENTS | . 33 |
| FIGURE 4.3 ACADEMIC QUALIFICATIONS OF RESPONDENTS | . 34 |
| FIGURE 4.4 LEVEL OF PRACTICAL EXPERIENCE OF RESPONDENTS | . 35 |
| FIGURE 4.5 KNOWLEDGE ON PROJECT LEADERSHIP | . 36 |

ACKNOWLEDGEMENTS

The successful completion of this thesis is attributed to many. Firstly, I am grateful to the Almighty God for his grace and strength to complete this thesis. To my supervisor, Professor Edward Badu for their guidance and direction in my work. I am also indebted to Mr. Ernest Ansah, who encouraged me to pursuit the programme and whose pieces of advice helped me carry on. I appreciate the support of my family, especially my husband, Mr. Seth Andre Kpordugbe and many, who made my work easy by taking up my responsibilities whiles I worked on my academic work.

DEDICATION

This thesis is dedicated to all my family members, especially to Mawuena Audrey Kudzo,

our bundle of joy.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

A PricewaterhouseCoopers (PwC) research of over 10,640 projects from 200 companies in 30 countries and from several industries found that only 2.5 percent of companies successfully completed hundred percent of their projects (Hardy-Vallee, 2012). In another study, eighty percent of high performing project organisations stated that the most key skill required of their people when managing complex projects was leadership (Hodgkins, 2016). They explained that they needed leaders who could own the project vision; who could foster collaboration, who could make sense of uncertainty, inspire and motivate their teams to achieve the required project outcomes that allowed the intended benefits to be delivered and hoped for legacy to be realized (Hodgkins, 2016).

The concept of project leadership has been discussed by scholars in project management for some time now. The word "project management" has gradually moved to "project leadership"(Ahmed et al., 2013). Project managers are not expected to only manage projects but to lead it to its successful completion (Bodepudi, 2018). In developing countries, projects fail not only because of lack of competency or knowledge in project management, but also for mismanagement, corruption, poor policy planning and implementation (Damoah et al., 2015). In South Africa, for example, delivery of road infrastructure was hindered by lack of accountability and corruption by leadership in the public sector (Gqaji et al., 2016). A study on the causes of government project failures in Ghana recorded that poor leadership was the biggest cause of project failure, followed

by poor management and administrative practices, low resources and external forces (Damoah et al., 2015). The study also disclosed that monitoring and evaluation, corruption, including non-transparency, unaccountability, budget overruns, poor communication between different stakeholders and planning are recurring factors for project failures (Damoah et al., 2015).

With these challenges, it is obvious that the project manager has a role to play in the successful execution of a project. A new style of leadership is necessary for the 21st century, one that enjoys success against the expected delivery triangle of time, budget, and quality, but also positions the organization to be able to share and retain knowledge and contribute to organizational sustainability. According to the Cambridge dictionary, quality is a characteristic or feature of someone or something. Key factor of this change would be the project manager's role. However, if the leadership qualities of a project manager are key to the success of a project, the key leadership qualities to possess as a project manager needs to be identified.

1.2 STATEMENT OF THE PROBLEM

The International Centre for Complex Project Management (ICCPM) stated in its report, Hitting a Moving Target "It is clear that the situation has to be addressed radically and comprehensively; if we do what we have always done, we will get what we have always got – and there are too many examples that prove what we have got is not good enough"(Cavanagh and Findlay, 2012). Leading a project has become a daunting task. A good project leader is expected to provide vision, execution, direction and planning and must deliver well on both leading and managing of projects (Shenhar, 2004).

The demand for project managers is expected to rise significantly in the next decade, but companies currently struggle to adequately fill the role (Dixon, 2017). Project managers needto develop as authentic leaders to successfully operate in increasingly s complex working environment (Toor and Ofori, 2008). Identified causes of project failure show that the project manager has a role to play in the success of projects. Among the top five causes of project failures identified by Project Management Institute (PMI, 2018) are;

- a) Change in the organizational priorities (39%)
- b) Change in project objectives (37%)
- c) Inaccurate requirements gathering (35%)
- d) Inadequate vision (29%)
- e) Poor communication (29%)
 - See Figure 1.1

Inaccurate requirements gathering, inadequate vision and poor communication directly fall under the project managers' control. Many projects fail to reach their optimum level of success factor, not because of lack of resources, equipment or systems, but purely because of the human factors were not adequately addressed (Burke and Barron, 2007). According to Archer et al. (2010), good leaders develop through a never-ending process of self- analysis and utilization of education, training and experience to improve.

Various theories like traits, behavioral, contingency, situational and visionary theories have been developed to address this challenge. Different leadership styles have been examined to see their impact on the success of projects. However, the problem remains the same. In this study, the researcher aims at identifying leadership qualities of projects managers that can affect the success of a project.

Q: Of the projects started in your organization in the past 12 months that were deemed failures, what were the primary causes of those failures? (Select up to 3)

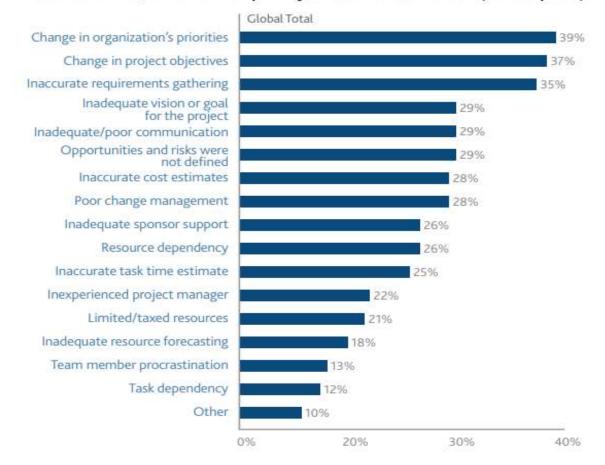


Figure 1.1: Ranking of causes of project failures

(Source: PMI's Pulse of the Profession, 2018)

1.3 RESEARCH AIM

The aim of this study was to discover leadership qualities of project managers for successful project implementation.

1.4 RESEARCH OBJECTIVES

Three (3) objectives were examine which were;

- 1. To identify key leadership qualities of project managers
- 2. To identify key success factors for project execution
- 3. To determine the relationship between leadership qualities and factors for successful project execution.

1.5 RESEARCH QUESTIONS

The research sought to find answers to the following questions:

- 1. What are the leadership qualities that leads to successful execution of projects?
- 2. What are the key success factors for project execution?
- 3. What is the relationship between leadership qualities of project managers and successful project execution?

1.6 JUSTIFICATION OF THE STUDY

This research aimed at providing information for project managers on key leadership qualities needed for the success of any project. It sought to bring to the attention of researchers, government agencies, managers, recruitment agencies, qualities they should look out for in project managers when engaging their services or recruiting project managers. It was also to encourage project

managers to develop critical leadership qualities identified in the survey for career progression. The study gave insights on factors that affected leadership qualities of project managers and thus, led to the success of projects in most job sectors in Greater Accra.

1.7 SCOPE OF THE STUDY

Contextually, the research was limited to identifying leadership qualities and success factors for projects. The researcher tested for the relationship between the two variables. Target population for the study were project managers, projects sponsors. senior managers engaged in different types of projects with knowledge and adequate experience in the field of project management. Geographically, project managers from various sectors of the economy like consultancy, governmental agencies, municipal assemblies, manufacturing, service delivery and agriculture, construction and international agencies in Greater Accra who were members of the Project Management Institute (PMI), Ghana Chapter.

1.8 MEHODOLOGY

A quantitative research method was adopted for the study. An online questionnaire developed by the researcher from extensive literature review relevant to the research objectives was used to collect data. Sampling population were people engaged in the management of projects working in the public and private sectors undertaking different types of projects ranging from construction to development. A convenience sampling technique was adopted for the sample size. Data was analysed using percentages, mean score ranking and multiple regression analysis. Statistical Package for Social Sciences (SPSS) was the tool used for analysis. Results were discussed and recommendations were made on the findings.

1.9 STRUCTURE OF THE STUDY

The study was grouped into five parts. The background of the study was discussed in **Chapter one.** The aims and objective of this research was outlined in the same chapter. The researcher presented the scope, justification, limitation and the research methodology of the study in this chapter. **Chapter two** discussed literature review related to the researcher's objectives. **Chapter three** emphasised the research design, methodology and data collection instruments adopted by the researcher. **Chapter four** analysed information collected by the researcher for interpretation and discussions. **Chapter five** concluded and made recommendations for the study. A diagram of the breakdown of the study into chapters is shown in figure 1.2.

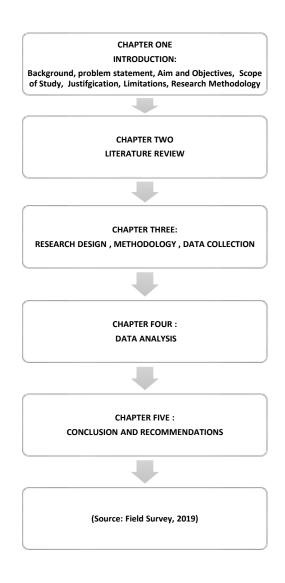


Figure 1.2 Structure of the report (Source: Author's construct, 2019).

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

Strategic means of achieving organizational goals is to undertake projects and organizations spend huge sums of money to execute projects. However, recent studies show that most projects fail or are abandoned despite advances in knowledge in project management (Anantatmula, 2010). With increase in knowledge in project management practices, it is expected that there are higher rates in the execution of successful projects. It is therefore clear that acquiring knowledge of the processes, tools and techniques of project management is not enough for the successful execution of projects (Ingason and Jonasson, 2009). Other areas need to be considered for their possible effects on the success of projects.

The subject of leadership and, that of the project manager has been the centre of discussion in literature for some years now. Theories have been developed around the subject of project leadership, leadership styles and competencies. These have been examined to ascertain their impact on projects. The following subsections aimed at discussing relevant literature on the subject of leadership and project management.

2.2 LEADERSHIP

Leadership is seen as critical in projects, and success factor of leadership has been cited as one of the critical success factors in determining the success or failure of a project (Nixon et al., 2012). Although, calls have been made for research into the field of leadership in projects for a

decade now, there is still limited literature on the subject of leadership of projects (Ahmed et al., 2013).

Leadership has been defined in terms of different aspects such as skills, personality, behavior, group process, power relationship and transformational processes (Bass, 1990, Northouse, 2010). Bass (1990) for example, defines leadership as "the interaction between two or more members of a group that often involves structuring or restructuring of the situation and the perceptions and expectations of the members". Northouse (2010) defines leadership as " a process whereby an individual influences a group of individuals to achieve a common goal". Nahavandi (2009) defines charismatic leaders as having high enthusiasm, strong ideals an excellent communication skills that engender loyalty, devotion and commitment from followers.

The Association of Project Management (APM, 2019) defines leadership as the "ability to establish vision and direction, to influence and align others towards a common purpose, and to empower and inspire people to success". However, the basic function of leadership is to produce change and set a direction to cope with change (Ahmed et al., 2013).

Leadership styles are classified into four groups according to Project Management Body of Knowledge (PMBOK, 2017). These are autocratic, directing, democratic or participative, and laissez-faire leadership styles. The PMBOK (2017) also considers other leadership styles like servant leader, transactional, transformational, charismatic, interactional and situational leadership styles.

2.2.1. Leadership Theories

The concept of leadership has evolved over the last eighty (80) years with researchers developing theories around the subject (Dulewicz and Higgs, 2005). The years between the 1940's to the 1990's experienced the evolution of these theories. Six leadership theories within these periods are presented in Table 2.1.

a) Traits Theory

This theory emphasised that leaders have some physical personality characteristics and values that are consistent in all situations and make leaders effective. Traits theorist' focused on the differences between leaders and followers in their researches (Bass, 1990). However, research done to develop reliable and valid measurement on traits of leaders revealed that; only few traits appeared to distinguish leaders from followers, and very little relationship existed between traits and effectiveness of leaders (Fleenor, 2006).

b) Behavioral Theory

Behavioral theorists emphasized the behavior of leaders and focused on what they do and not who they are (Northouse, 2010). Behavioral theorists believed that great leaders are made, not born. Researchers from this theory believed that different competencies are required for different situations (Turner and Muller, 2005)

c) Contingency Theory: This theory focused on situational variables that would determine which leadership style a leader would adopt in a particular situation (Fiedler,1993). Contingency theorists believed that no single leadership style is appropriate in all situations. According to this theory, a leader's effectiveness is dependent on whether their qualities and style fit the specific needs of a given environment (Lamb, 2013).

- d) Visionary/ Charismatic Theory: This theory developed in the 1980's to 1990's was defined by the concern for processes and relationship. It involves two types of leadership: transformational, which is related to relationships and communication: and transactional which is related to processes (Muller and Turner, 2007) It stated that different leadership styles had different impact on followers in terms of stress, responsibility and momentum.
- e) Emotional Intelligence Theory: This theory assumed that, for one to lead, he must be able to manage his emotions and that of his followers. A leader or manager's ability to manage his emotions to situations differentiates him from others, not his intelligence (Muller and Turner, 2007). Goleman (1998) assumes that emotional competencies are not inherent but are learned and worked on to achieve great results. This theory encompasses four elements, namely; self awareness (self confidence), self management (self control), social awareness /(empathy), social skills (influence).

Competency Theory: This theory surfaced in the 2000's. It took into consideration all the earlier theories such as traits, behavioral and intelligence theories and developed the competency theory. It recognizes that the daily task of a manager requires both good leadership and managerial capabilities (Parry, 2004).

| Era | Theory | Main idea |
|---|---------------------------|---|
| 500 BC | Confucius | Relationships, values, process, moderation |
| 300 BC | Aristotle | Relationships, values, process |
| 1938 | Barnard | Relationships versus process |
| 1930- 1940s | Trait | Effective leaders show common traits; leaders born not made |
| 1940- 1950s | Behaviour or style | Effective leaders adopt certain styles or behaviours Leadership skills can be developed |
| 1960- 1970s | Contingency | What makes an effective leader depends on the situation |
| 1980- 1990s | Visionary/ Charismatic | Transformational: concern for relationships versus Transactional: concern for process |
| 2000s | Emotional Intelligence | Emotional intelligence (EQ)- greater impact on performance than intellect/intelligence (IQ) |
| 2000s SOURCE: Muller & Turner (2007) | Competency | Effective leaders exhibit certain competencies: traits, behaviours and styles Emotions, process, intellect Different profiles of competence better in different situations |

Table 2.1 Summary of leadership theories and ideas

(Source : Muller and Turner (2007)

2.2.2. Leadership Competencies

In recent times, project management have emphasized the importance of project management competencies on project success (Geohegan and Dulewicz, 2008), but not the impact of project managers' leadership qualities on project success(Ahmed et al., 2013).

Leadership competencies are the skill set, knowledge and behaviour through which different institutions assess and develop their leaders within the organization (Ahmed et al., 2013). Leaders

do not have to be people who are highly intellectual or successful, but they need to be of the "right stuff" such as honesty, integrity, drive, self-confidence, vision, cognitive abilities, which cannot be found in anyone (Ahmed and Bach, 2014). The Oxford dictionary defines a quality as a distinctive attribute or characteristics possessed by someone or something. Competence is a quality or state of ability, effectiveness, sufficiency or success (Elliot et al., 2017).

Few studies have identified competencies relevant to project managers (Geohegan and Dulewicz, 2008).For instance, Turner et al. (1996) identified six traits of project leaders including intelligence, communication and problem solving. However, they could not link it to project success. Representative of the competency school of thought, Dulewicz and Higgs (2005). developed fifteen (15) leadership competencies. These competencies were grouped into three groups: Managerial competences (MQ), Intellectual competencies (IQ) and Emotional competencies (EQ).

a) Managerial Competencies (MQ)

Managerial competencies involve the ability to consistently motivate one's team, encouraging the team to achieve excellence and quality in projects, and improving standards and productivity. According to literature, managerial competencies have five (5) dimensions which are presented in Table 2.2.

b) Intellectual competencies (IQ)

Intelligence competencies refer to the project manager's intelligence, ability to understand his work, problem solving, systematic thinking and recognizing patterns and applying relevant concepts (Etikan, 2016). Three dimensions of intellectual competencies are identified and presented in **Table 2.3**.

c) Emotional competencies (EQ)

Emotional competencies include the ability to perceive, identify and manage one's emotion and that of others. Emotional competencies consist of seven dimensions which are presented in Table 2.4

| Managerial Competencies (MQ) | Description/ Details |
|------------------------------|--|
| Managing Resources | Involves planning, organizing and coordinating resources |
| | effectively and efficiently. Establishing clear objectives |
| | and converting long term goals into action plans and |
| | monitoring and evaluation. |
| Engaging communication | Relates to clear communication of vision and instructions |
| | by the leader. This communication should give focus and |
| | inspiration to the team. |
| Empowering | Encourages staff to solve problems, produce innovative |
| | ideas and proposals. |
| Developing | Refers to a leader's ability to believe in the potentials of |
| | his team and building up these potentials. The ability to |
| | identify, develop, invest and coach the potentials of team |
| | members. |
| Achieving | The ability to take up risks as opportunities to have a |
| | competitive advantage and take decisions |

Table 2.2 Summary of types of managerial competencies

(Dulewicz and Higgs, 2005)

Table 2.3 Summary of types of intellectual competencies

| Intellectual Competencies (IQ) | Description/Details |
|--------------------------------|---|
| Critical Analysis and Judgment | The ability to gather relevant information probe facts, |
| | identify merits and demerits, make sound judgments and |
| | decisions , and being aware of the consequences of the |
| | decision made. |
| Vision and imagination | The ability to be innovative and imaginative. Having a |
| | clear vision of the future and predicting the impact of |
| | decision taken. |
| Strategic and Business | The leader's ability to identify threats and opportunities in |
| Perspective | the long and short terms. |

(Dulewicz and Higgs, 2005)

Table 2.4 Summary of types of emotional competencies

| Emotional | Description/ Details |
|---------------------------|--|
| Competencies (MQ) | |
| Motivation | A leader's drive and energy to achieve results and make |
| | an impact. |
| Conscientiousness | Refers to the leaders' commitment to a course of action in |
| | spite of challenges and applying words and deeds in |
| | encouraging his team to follow his course. |
| Self-Awareness | A leader's ability to know his strengths and weakness and |
| | managing them where necessary |
| Emotional Resilience | The leaders ability to maintain constant success factor in |
| | different situations |
| Intuitiveness | The ability of the leader to make sense out of ambigious |
| | or incomplete information by using rational and emotional |
| | perception. |
| Interpersonal Sensitivity | Taking other peoples needs and perception into account to |
| | help solve their challenges. |
| Influencing | Persuading others to change their point of view and listen |
| - | to the leader, giving a reason for change. |

(Dulewicz and Higgs, 2005)

Several studies have been done on the three leadership dimensions to ascertain their influence on projects. Dulewicz and Higgs (2005), identified different profiles of leadership competences in organizational change projects of different complexities. (Muller and Turner, 2010) undertook a

study to identify the leadership competency profile of successful project managers in projects of different types. Results from both studies supported the assumption that IQ (i.e. critical analysis and judgment and EQ (i.e. influence, motivation and conscientiousness) had high expressions in successful project managers of different project types. In other study, Dulewicz and Higgs showed that intellectual competence accounted for 27% of leadership success factor managerial competence accounted for 16% and emotional competence accounted for 36%.

2.3 PROJECT MANAGEMENT

Project Management Institute (PMI, 2008) defines a project as a temporary endeavor undertaken to create a unique product, service or result. It has a beginning and an end and is unique in terms of project team, type of projects and organization. A project works with a budget, on schedule and in a defined scope. Examples of projects include the construction of roads, development of new softwares and improving on an existing product or service etc. Projects are undertaken to fulfill business and organizational needs (Herman and Siegelaub, 2009).

The management of a project is the application of tools, techniques, knowledge and skills to project activities to meet project objectives (PMI, 2019). These tools, skills, techniques and knowledge are applied throughout the various project management processes; initiating, planning, executing, monitoring and controlling, and closing. These processes are key to ensure that their requirements of the project are duly met with cost, schedule, quality and scope. Project management is applied on projects to optimize effectiveness and efficiency. Effectiveness, as doing the right things and efficiency as doing things rights (Judgev and Muller, 2005).

Project managers are responsible for managing projects. Projects managers lead the project team and the project to meet required objectives. These art of managing a project is found in all industries where market demands are huge and customer needs are priority. In a traditional project management, the focus is operational success factor and meeting time and budget goals, but today's business challenges and fierce global competition requires new ways to improve competitiveness (Tekic and Gajic, 2012).

2.3.1. Project Management Success factor

According to (Lavagnon, 2009), several authors assume that everyone knows the meaning of "project success" and "project failure" but there is only one certainty in project management that success is ambiguous, inclusive and a multidimensional concept whose definition is tied to the context or the viewpoint of the stakeholder. The various viewpoints and perspectives is the major reason for the same project to be considered successful by one and unsuccessful by another (Lim and Zain, 1999). For internal stakeholders (owner, developer, contractor), project success is basically regarded as the achievement of some pre-determined goals which may include parameters such as time, cost and quality. However, external stakeholders (end users, general public) do not necessarily have similar pre-determined goals regarding project success and thus the perception of project success or failure differs from one person to another. Success factors are components of a project that have to be in place to ensure the completion of the project, simply put, they create an enabling environment for the project to exist in the first place (Anonymous, 2018). In this research, project success factor will be measured with regards to cost, schedule, quality, health and safety, relationship with project stakeholder, project scope and environmental success factor.

According to Salter and Torbett (2003), project cost is the simplest way of assessing project success. It measures the cost of a project for the beginning to the completion of a project. Project schedule is the duration for the completion of a project. The timing of a project is normally scheduling to allow the product or service to be used by a data determined by the client.

According to Egemen and Mohamed (2005), completing a project to meet the requirements of quality is one of the major criteria in measuring project success. Quality is achieved when the legal, aesthetic and functional requirements of a product or service of the customers/client is achieved (Tang et al., 2005). Quality involves meeting or exceeding the expectations of clients. According to Ling et al., (2009), quality is the output of the service provided or work done. Arditi and Lee (2004) defined quality as the ability to conform to a quality plan designed to satisfy client's needs.

The World Health Organization (WHO, 1948) defines health as the state of complete physical, mental and social wellbeing and not merely the absence or infirmity. The International Labour Organization (ILO) (2001), defines health and safety as the prevention and maintenance of the mental and social well-being of workers and the prevention of illness caused by working conditions.

Relationship with project stakeholders basically describes the existence or non-existence of disputes among project stakeholders. Many researchers' regard dispute as a major success criterion (Chan and Chan, 2004, Jha and Lyer, 2007) and hence, contractors have to ensure they have a

cordial relationship with stakeholders. In order to ensure that projects are completed with good relationship with stakeholders, owners/sponsors need must be clearly defined. Also, there must be effective communication and top management support with regular feedback

Project scope can be defined as all the features and functions that are to be included in a product or service (PMI, 2000). The scope of a project forms part of the macro category of project success criteria as it starts at the conception stage to executing stage. Thus, project scope describes the totality of a project. Many researchers have indicated the significance of project scope in the achievement of project success (Collins and Baccarini, 2004, Ward, 1995, Kerzner, 2006). According to (Mirza et al., 2013), a major contribution to unsuccessful projects is the lack of understanding of project scope.

Recent studies have shown the significance of environmental success factor in accessing the success of a project (Chan et al., 2004). The inclusion of environmental success factor can be attributed to the huge awareness of sustainability in the construction industry which encompass social, economic and environmental aspects. The environmental category of sustainability focuses on environmental hazards and degradation. According to Hussain (2011), over concentration on the human own needs will consequently lead to severe outcomes like global warming, depletion of green lands, destruction of the ozone layer.

2.3.2 Project Execution and Success

According to PMBOK (2013) a project life cycle involves five process groups namely; initiating process groups, the planning process group, the executing process group, the monitoring and

controlling process group and the closing process group. It is at the executing stage that the actual deliverables agreed by stakeholders of a project are produced. To improve project execution success factor, reasons why planners and promoters deliberately underestimate cost and risks and overestimates their benefits to increase likelihood of projects approval and funding needs to be understood (Flyvbjerg et al., 2003). Projects with higher complexity tend to have a larger project cost or schedule overruns (Mirza and Ehsan, 2017). For an operational plan to be implemented, issues like procurement and shipping, training, briefing, safety measures for personnel, sustainability of project, exit strategy and evaluation processes must be addressed (Anonymous, 2014).

A project is considered a success if the project management is a success and the project product is a success (Hodgkins, 2016). Different stakeholders of a project such as the project manager, team members, CEO, customers, functional managers have a different perspective on project success (Ramos and Mota, 2016). Conversely, different stakeholders interpret project success differently (Beleiu et al., 2015). For a project to be successful,(Bart, 1993) proposes that formal control should be minimal and creativity should play a critical role in project execution.

2.3.3 Project Management vs. Project Leadership

The concept of management and leadership evolved in project management in the 19th century (Higgs, 2003). Project management is the planning and organization of project activities through decision making to enhance the efficiency and effectiveness of projects (Ahmed et al., 2013). On the other hand, project leadership is the process of leading people to achieve project objectives

and motivation, and guiding people to develop their potentials and achieve challenging tasks (Anantatmula, 2010).

Leadership and management are two different concepts which are often used interchangeably Leaders do the right things and managers do things right (Lunenburg, 2011). Managers set goals and budgets, allocate resources, solve problems and monitor results. Leaders set and communicate direction, develop vision, align stakeholders and project team to the vision. In a changing global world, managing a project is not enough, taking charged of a project and setting the pace is much more preferred to ensure project execution. Managers and leaders play different valuable roles in success of an organisation. In Africa, the discipline of project management is still immature on the continent and as a result project failure occurs all too often (Pinto and Walker, 1998). Researchers argue that these two concepts are different , however, there is an overlap between them (Bass, 2010) and the degree of overlapping between them is a point of disagreement (Yulk, 2010).

Project leadership is the ability to lead one's self while leading others in the project work(Strider, 2002). Good leaders are not necessarily good managers, and bad leaders are not always bad managers (Lunenburg, 2011). However, strong leadership and strong managerial skills are optimal effectiveness .To achieve project objective in the 21st century, strong leadership would be required for change, innovative thinking, problem solving skills and team motivation (Anantatmula, 2010). A project leader needs to create an environment for empowering team members , in addition to planning, executing and controlling the project, providing best working environment for his team

as leading the team work during project implementation is not a substitute for project management (Strider, 2002).

2.3.4 Project Manager as a Leader

The project manager's role has changed from managing to leading projects, therefore demanding for requisite skills and competences (Ahmed et al., 2014). The subject of a project manager as a leader has not been explored much by researchers, although an area of much importance. Different studies assert that the role of the project manager has an effect on project success (Yang et al., 2011), but ignores the impact of the project managers leadership qualities as a success factor to projects (Turner and Muller, 2005). Leaders manage change whiles managers manage complexity (Raelin, 2004) but it has become necessary to have both skills to manage the fast growing challenging environment of the 21st century (Ahmed et al., 2013). He manages resources of the project, ensures work is deliver on time and quality, engages stakeholders of the project to ensure project meets requirements. Aside these, the project manager has to deal with situational issues that would arise along the project and manage himself as well. Managing himself requires building his personality and controlling his emotions. A project leader is expected to create vision, bring together resources, give motivation and inspiration to stakeholders to do the right things too meet project objectives. In recent times, the role and responsibilities of a project manager has become more complicated with complex and challenging projects, higher customers' demands, technological advancements and virtual teams (Hale, 2018).

Turner et al. (1996) identified six traits of effective project managers. They concluded that effective project managers have exceptional intelligence and problem-solving skills. Among the

other traits discovered were behavioral and motivational traits. However, the study did not link any relationship between project success and these traits.

Andersen et al. (1987) stated that the project managers qualities are key when selecting a project manager. They shared common views with the behavioral theorists that recognized personality traits as a factor of effectiveness The limitation of this study is that it did not link the impact of personality traits on project success. Pinto and Walker (1998) identified technical, administrative and leadership skills of the project manager as key and recognised credibility, tolerance, communication, flexibility as qualities of an effective project manager. However, they also did not prove the relationship between these skills and project success. Crawford and Pollack (2007) defined project management competencies as a combination of knowledge, skills and personality qualities that lead to outstanding results. He asserts that project manager is in itself a factor for successful project delivery (Geohegan and Dulewicz, 2008). However, Crawford and Pollack (2007) concluded that although leadership appears consistent in the highest ranking category, among project management competencies factors, it did not appear in the highest ranking category for project success factors.

Literature on project management qualities provide evidence that a project manager needs certain leadership qualities to be effective in executing projects. However, there is limited literature on the subject.

2.4 KNOWLEDGE GAP IN LITERATURE

The literature review showed that some studies have been done to examine the project managers' leadership role and success factors of projects. Few researches on project leadership has been done in Ghana. For instance, Kwofie et al. (2015) recognized the importance of project management competencies of architects in the Ghanaian construction industry. However, there is a gap in literature in project management regarding the leadership competencies of project managers in Ghana, especially project managers across all industries. There is also a literature gap on how these two variables, leadership qualities and success factors of projects are related.

In this study, the leadership qualities of project managers and success factors of projects in Greater Accra, Ghana was investigated. The relationship between the two variables were examined.

2.5 CHAPTER SUMMARY

The chapter discussed the concepts of leadership, its theories and its competencies. It further discussed some aspects of project management like project management success factor/factors, project execution and success, project management versus project leadership and the project manager as a leader. It identified the knowledge gap in literature which serves as the basis for this research.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Research methodology is the general approach the researcher takes in carrying out a research paper (Leedy and Ormrod, 2001). This chapter discussed the research methodology of the study. It outlined the research design, the population of study, sampling technique, instrument for data collection, validation and reliability of questioaire, the type of data analysis of the research.

3.2 RESEARCH STRATEGY

The three common approaches for conducting research are quantitative, qualitative and mixed methods (Williams, 2007). A quantitative approach was adopted for this research. The intent of quantitative research was to establish, confirm, or validate relationships and to develop generalization to contribute to theory (Leedy and Ormrod, 2001). It involved the collection of data so that information could be quantified and subjected to statistical treatment in order to support or refute research question or hypothesis (Creswell, 2003).

3.3 RESEARCH DESIGN

According to Burns and Grove (2005), a research design gives the blueprint for conducting a study which maximises control over factors that can interfere with validity of results.

An online survey research design technique was chosen for this research. A survey research is defined as the collection of information from a sample of individuals through their responses to questions (Check and Schutt, 2012).

3.4. SOURCES OF DATA

Questionnaires were used for the collection of primary data for analysis and interpretation.

3.5 POPULATION OF STUDY

The target population of this research include project managers in , Greater Accra, Ghana. This population consists of people who have attained some working experience and knowledge over the years on projects as project managers, and could identify leadership qualities required of project managers for the success of projects from the Project Management Institute (PMI, 2019), there were four hundred and seventy-eight (478) registered project managers in the Ghana Chapter.

3.6 SAMPLE SIZE AND SAMPLING TECHNIQUE

The sampling technique adopted for this study was the convenient sampling technique. This technique was suitable for a population in which every constituent was qualified to answer the questionnaire hence the researcher selected respondents based on ease of accessibility. Using the convenient sampling technique, eighty-three (83) questionnaires were distributed however, sixty (60) were received representing a response rate of 72.29%.

The goal of sampling size is to obtain a sufficient sample that is representative of the population of interest (Ponto, 2015). A subset of the target population is the sample. The target population were project managers. Using the Yamane formula (Yamane, 1967), the sample size attained was 83. Mathematically, the formula was given below:

$$n=\frac{N}{1+N(e)^2}$$

 $n = \frac{478}{1+478(0.10)^2} = 83.$

Where,

n = the sample size

N= the estimated proportion of characteristics in the population

e = the level of precision desired = 0.10

3.7 DATA COLLECTION INSTRUMENT

Data collection techniques include interviews, observations (direct and participant), questionnaires and relevant documents (Hollweck, 2016). The researcher designed a structured questionnaire as a data collection instrument for the study. The objective of the questionnaire was to gather relevant information from respondents concerning key leadership qualities of project managers and success factors for project execution.

3.7.1 Questionnaire Design

The researcher reviewed information from existing literature relevant to the research objectives for the development of the questionnaire. The closed ended questionnaire had three (3) sections labeled A, B and C. The questionnaire had a cover page, stating the purpose of the study, method of responding and confidentiality of results. **Section A** covered the personal data of the respondents including their job sector, job function, years of practical experience, level of education, and level of project leadership knowledge.

Section B covered the project success criteria where respondents were to rate project success criteria like cost, schedule, quality, health and safety, scope and environmental etc. success factor using the Likert scale from 1 to 5 where 1 was interpreted as extremely low significant of the success factor and 5, extremely significant on success factor chose by respondents.

Section C consisted of leadership qualities adopted from extensive literature review. Respondents were to rate the intellectual, emotional and managerial competences of project managers on the Likert scale from 1 to 5, 1 as the extremely low significant and 5 as the extremely significant. A sample questionnaire can be found in the Appendix.

3.8 RELIABILITY AND VALIDITY OF TEST

Reliability refers to the degree to which the results obtained by a measurement and procedure can be replicated(Bolarinwa, 2015). Validity expresses the degree to which a measure measures what it purports to measure (Field, 2005). Data reliability and validity of items on the questionnaires were tested using Cronbach's alpha of SPSS.

The Cronbach's alpha reliability ranges from 0 to 1. The output was interpreted using George and Maller (2003)'s rule which states that any output greater that 0.7 is acceptable, below such was unacceptable. The closer the coefficient is to 1.0, the greater the internal consistency reliability of

the item in the scale. All dimensions on the questionnaire reached an acceptable level of .975 internal consistencies.

3.9 DATA ANALYSIS TECHNIQUE

An key aspect of ensuring data integrity is the accurate and appropriate analysis of research findings. Data collected were analyzed to identify key leadership qualities of project managers and success factors of projects, and the correlation between these variables. Data analysis was done using percentages, mean score ranking and regression analysis. The tool adopted for these analyses was Statistical Package for Social Sciences (SPSS) software.

CHAPTER FOUR

DATA ANALYSIS AN DISCUSSION OF RESULTS

4.1 INTRODUCTION

Having addressed the introduction, literature review and research methodology sections for this study, this chapter aimed at analyzing data gathered. The data was analyzed according to the research objectives. Results of the analysis was interpreted in this chapter.

Out of eighty-three (83) questionnaires administered, sixty (60) were retrieved and used for data analysis. The questionnaire used had a 72.29 % response rate. The questionnaire adopted for the study was based on extensive literature review on project success factors and leadership qualities.

The leadership qualities were deduced from the Leadership Dimension Questionnaire (LDQ) developed by Higgs and Dulewicz (2015). The LDQ is a standard and rigorously validated leadership measurement instrument. The project success factors were deduced from secondary data including literary works by Alexandrova (2013).

4.2 BACKGROUND OF RESPONDENTS

4.2.1. Job Sector of Respondents

The findings of the study showed that 58.33% (majority) of the respondents were from the private sector as compared to other sectors like public and not for profit organisations. Therefore, the findings represent the views of majority of project managers working in the private sector. Figure 4.2.1. shows the pictorial findings on the job sector of respondents.

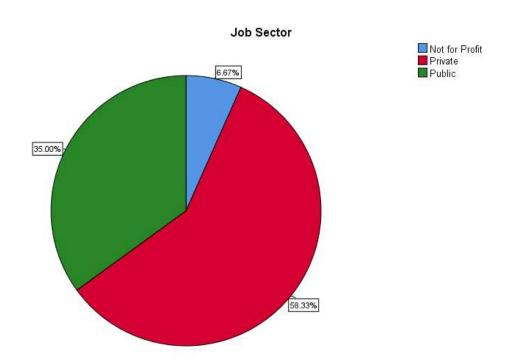


Figure 4.1 Job sector of Respondents

(Source, Field Survey 2019)

4.2.2. Job Function of Respondents

Figure 4.2 displays the job functions of respondents. 30% of the respondents who represent the majority of the respondents were into construction, followed by 21.6% representing those working in other service industries and general management.

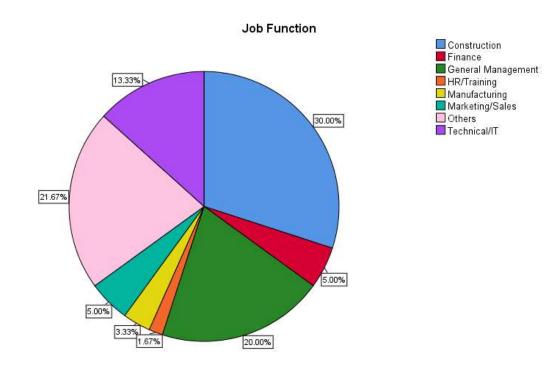


Figure 4.2 Job Function of Respondents

(Source: Field survey, 2019).

4.2.3 Academic Qualification of Respondents

Figure 4.3 also gave an indication of the respondents having enough academic knowledge to respond to the questionnaire. The responses from questionnaire disclosed that respondents are trained people from different levels of education. 43% of respondents to the survey had tertiary education experience with only 5% having other qualifications.

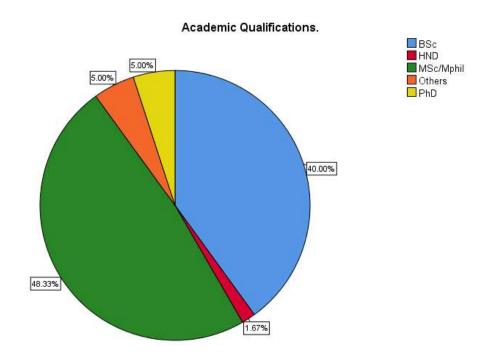


Figure 4.3 Academic Qualifications of Respondents

(Source: Field survey, 2019).

4.2.4. Practical Experience of Respondents

Years of experience gives an indication of the level of knowledge accumulated over time. From the data collected, results showed that respondents had substantial working experience in managing projects. 60% of respondents had between six (6) to twenty (20) years of practical experience in managing projects. 41.7% had one to five years of practical experience. Hence, they had enough knowledge accumulated over time to provide reliable information.

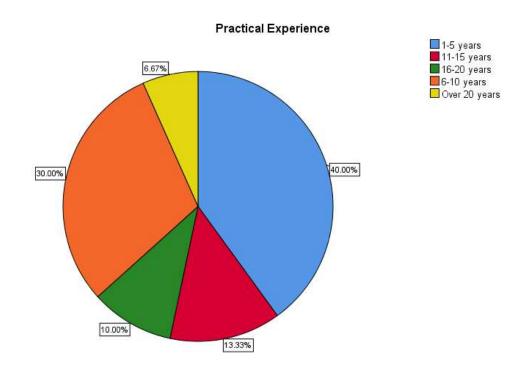


Figure 4.4 Level of Practical Experience of Respondents

(Source: Field survey, 2019)

4.2.5. Level of Knowledge in Project Leadership

Figure 4.5 indicated that more than 95% of the respondents had adequate knowledge in project leadership.

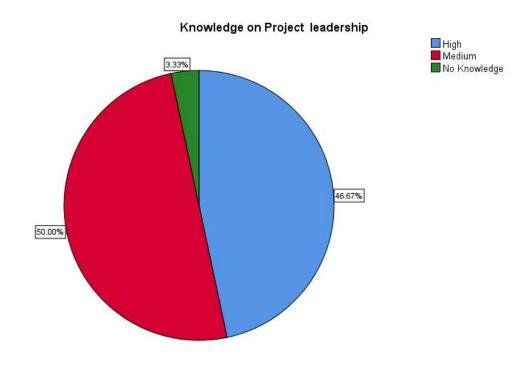


Figure 4.5 Knowledge on project leadership

(Source: Field survey, 2019).

4.3 MEAN SCORE RANKING AND REGRESSION ANALYSIS

This section discussed the analysis on the objectives of the study; to identify key leadership qualities of project managers, to identify key factors for successful project execution and to establish the relationship between leadership qualities and factors for successful project execution. Mean score ranking was used in analyzing the first two (2) objectives whiles the last objective was analyzed using multiple regression analysis. Details of the analysis are discussed in subsequent sections.

4.3.1 Success Factors

To achieve this objective, literature review was conducted which identified seven (7) success criteria. Based on this, the respondents were asked to rate the significance of each success criteria to projects. Their responses were analyzed using mean scores in conjunction with standard deviation. Generally, the standard deviations were below 1 which indicates a low variability between the responses given by the respondents. A summary of the responses is shown in Table 4.1.

From the analysis, the highest ranked success criterion was schedule success factor, followed by quality success factor, health and safety success factor, and cost success factor. Chan and Chan (2004) defined project schedule as the duration for completing a project. The time of a project is normally arranged to allow the product or service to be used by a date determined by the client. Hence, it was deemed the most significant criteria in measuring project success factor.

| Description | | Mean |
|-------------|---|------|
| | 0 | |

Table 4.1 Ranking of Success Criteria

| Description | Mean | Std. Deviation | Rank |
|---------------------------------------|------|----------------|-------------------|
| Schedule success factor | 4.32 | 0.833 | 1 ST |
| Quality success factor | 4.23 | 0.871 | 2^{ND} |
| Health and Safety success factor | 4.22 | 0.904 | 3 RD |
| Cost success factor | 4.18 | 0.813 | 4 TH |
| Relationship with project stakeholder | 4.15 | 0.899 | 5^{TH} |
| Project scope | 4.13 | 0.747 | 6 TH |
| Environmental success factor | 3.73 | 0.918 | 7 TH |

Source: Field survey, (2019)

According to Egemen and Mohamed (2005), finishing a project to meet the quality standards required is one of the major criteria in measuring project success. Quality is achieved when the legal, aesthetic and functional requirements of a project of the customers/client is achieved(Tang et al., 2005). Numerous studies have indicated the significance of quality success factor in the measuring of project success hence ranked second. The International Labour Organization (ILO) (2001), defines health and safety as the prevention and maintenance of the mental and social wellbeing of workers and the prevention of illness caused by working conditions(Alli.B.O, 2001). Current projects put more emphasis on the health and safety of projects executed hence deemed a very critical factor in measuring project success. Cost success factor is very key to client hence ranked among the top four significant success factor criteria in projects. This is due to fact that, it is the simplest way of assessing the success factor of a project (Salter and Torbett, 2003).

4.3.2 Leadership Qualities

In achieving this objective, an extensive literature review was conducted in which fifteen (15) leadership qualities were identified. Based on this, the respondents were asked to rate the significance of each leadership quality to projects. Their responses were analyzed using mean scores in conjunction with standard deviation. Generally, the standard deviations were below which indicates a low variability between the responses given by the respondents. A summary of the responses is shown in Table 4.2. From the analysis, the highest ranked leadership quality was managerial qualities dimension, followed by emotional qualities and intellectual qualities dimension. Managerial competencies involve the ability to consistently motivate one's team, encouraging the team to achieve excellence and quality in projects, and improving standards and productivity. With the managerial construct, managing resources was ranked first, followed by

achieving objectives and engagement in effective communication.

Emotional competencies include the ability to perceive, identify and manage one's emotion and that of others. Under the emotional construct, motivation was ranked first followed by influencing and self-awareness. Intelligence competencies refer to the project manager's intelligence, ability to understand his work, problem solving, systematic thinking and recognizing patterns and applying relevant concepts (Etikan, 2016).

With regards to the intellectual construct, critical analysis and judgment was ranked first followed by strategic and business perspective.

| Description | Mean | Std. Deviation | Rank |
|------------------------------------|------|----------------|-----------------|
| Intellectual Qualities Dimensions | 3.94 | - | 3 RD |
| Critical analysis and judgment | 4.03 | 0.901 | 1 ST |
| Vision and imagination | 3.85 | 0.899 | 3 RD |
| Strategic and business perspective | 3.93 | 0.954 | 2 ND |
| Emotional Qualities Dimensions | 3.90 | - | 2 ND |
| Self-awareness | 3.93 | 0.880 | 3 RD |
| Emotional Resilience | 3.83 | 0.924 | 5 TH |
| Intuitiveness | 3.72 | 0.865 | 7 TH |
| Interpersonal Sensitivity | 3.77 | 0.890 | 6 TH |
| Influencing | 4.05 | 0.832 | 2^{ND} |
| Motivation | 4.15 | 0.954 | 1 ST |
| Conscientiousness | 3.85 | 0.840 | 4 TH |
| Managerial Qualities Dimensions | 4.10 | - | 1 ST |
| Managing Resources | 4.22 | 0.922 | 1 ST |
| Engaging Communication | 4.13 | 1.016 | 3 RD |
| Empowering | 4.00 | 0.957 | 4 TH |
| Developing | 3.98 | 0.911 | 5 TH |
| Achieving | 4.15 | 0.917 | 2^{ND} |

Table 4.2 Ranking of leadership qualities

Source: Field survey, (2019).

4.3.3 Relationship between Leadership Qualities and Project Success

In achieving this objective, an extensive literature review was done in which the effects of leadership on project success was discussed. Based on this, the respondents were asked to rate the significance of leadership quality in the achievement of project success. From the analysis, it had a mean of *4.01*. Hence, the respondents deemed leadership qualities to be of huge significance to project success. The role of the project manager is to ensure the achievement of high project success factor. However, the project manager's role has changed from managing to leading projects, therefore demanding for requisite skills and competences (Ahmed et al., 2014). This improves the probability of the achievement of high project success factor.

The respondents were further asked to rate the criticality of leadership qualities on project success criteria. Their responses were analyzed using multiple regression. A summary of the responses is shown in Table 4.3.

From the analysis, schedule success factor, relationship with stakeholders and health and safety success factor has significant positive relationship with leadership qualities. Rees et al. (1996) identified six traits of effective project managers. They concluded that effective project managers have exceptional intelligence and problem-solving skills. Among the other traits discovered were behavioral and motivational traits. Crawford and Pollack (2007) defined project management competencies as a combination of knowledge, skills and personality qualities that lead to outstanding results. He asserts that project managers competencies and project success are interrelated and the competence of the project manager is in itself a factor of successful project delivery.

| Description | t-value | Sig value |
|---------------------------------------|---------|-----------|
| Cost success factor | (0.328) | 0.744 |
| Schedule success factor | 2.027 | 0.048 |
| Quality success factor | 0.607 | 0.547 |
| Health and Safety success factor | 2.401 | 0.020 |
| Relationship with project stakeholder | 1.890 | 0.064 |
| Project scope | (0.412) | 0.682 |
| Environmental success factor | (1.389) | 0.171 |

Table 4.3 Relationship between leadership qualities and project success

(Source: Field survey, 2019).

4.4 CHAPTER SUMMARY

This chapter analyzed and discussed data with the aid of mathematical tools for analysis and tables for displaying results. The data collected were analyzed using percentages, mean score ranking and regression analysis. Sixty (60) questionnaires were used for the analysis. The first part of the analysis concentrated on the background of the respondents where percentages were used in the data analysis. The subsequent part of the analysis concentrated on the objectives of the study. The respondents background was satisfactory to continue further analysis on their responses on the objectives on the study. With the success criteria, the highest ranked success factor and cost success factor, followed by quality success factor, health and safety success factor and cost success factor. With the leadership qualities, the highest ranked leadership quality was managerial qualities dimension, followed by emotional qualities and intellectual qualities dimension. With the relationship between leadership qualities and project success, schedule success factor, relationship with stakeholders and health and safety success factor has significant positive relationship with leadership qualities.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 INTRODUCTION

This chapter provides a summary of how the aim of the study was achieved. Strategic means of achieving organizational goals is to undertake and organizations spend huge sums of money to execute projects. However, recent studies show that most projects fail or are abandoned despite advances in knowledge in project management. Therefore, this study aimed at exploring leadership qualities of project managers for successful project execution. The study had three (3) objectives which were to identify key leadership qualities of project managers, to identify key factors for successful project execution and to establish the relationship between leadership qualities and factors for successful project execution. Extensive literature review was conducted based on each objective and a number of variables were identified. The study adopted a quantitative research method and thus, a structured questionnaire was developed and distributed to project managers whiles sixty (60) were retrieved for the analysis. The data collected was coded and entered into the Statistical Package of Social Scientist (SPSS) version 20. The data were analyzed using mean score ranking for both objective one and two. The multiple regression technique was adopted for the objective three (3). The summary of findings is discussed in the subsequent section.

5.2 SUMMARY OF FINDINGS

This section discusses the summary of the findings based on each objective.

5.2.1 Objective one: To identify key leadership qualities of project managers

In other to achieve the objective one, an extensive literature review was conducted based on the

objective and a number of variables were identified pertaining to leadership qualities. The Leadership Dimension Questionnaire (LDQ) developed by Dulewicz and Higgs (2005) included intellectual qualities, emotional qualities and managerial qualities. Based on the LDQ, a structured questionnaire was developed and distributed to 83 participants of which 60 was retrieved for the analysis. From the analysis, the highest ranked leadership quality was managerial qualities dimension, followed by emotional qualities and intellectual qualities dimension.

This finding goes contrary to the findings of Muller and Turner (2010) that supported the assumption that Intellectual competences and emotional competence had higher expressions in successful project managers. Also, the study does not support the assumption that intellectual and emotional competencies are more significant than managerial competence as the findings of the research by Dulewicz and Higgs (2000) states.

5.2.2 Objective two: To identify key factors for successful project execution

In other to achieve the objective two, an extensive literature review was conducted based on the objective and a number of variables were identified pertaining to project success. The variables identified included project cost success factor, schedule success factor, quality success factor among others. Based on the literature review, a structured questionnaire was developed and distributed in which 60 was retrieved for the analysis.

The data were analyzed using mean score ranking in conjunction with standard deviation. From the analysis, the highest ranked success criterion was schedule success factor, followed by quality success factor, health and safety success factor and cost success factor.

5.2.3 Objective three: To establish the relationship between leadership qualities and factors for successful project execution

In other to achieve the objective three, based on the literature review, a structured questionnaire was developed and distributed in which 60 was retrieved for the analysis.

From the analysis, it was clear that, schedule success factor, relationship with stakeholders and health and safety success factor has significant positive relationship with leadership qualities.

5.3 STUDY LIMITATIONS AND FUTURE STUDIES

This section discusses the limitations to this study.

Further research can be conducted using two dependent variables instead of one as used in this study.

5.4 CONCLUSION

Strategic means of achieving organizational goals is to undertake and organizations spend huge sums of money to execute projects. However, recent studies show that most projects fail or are abandoned despite advances in knowledge in project management. Therefore, this study aimed at to exploring leadership qualities of project managers for successful project execution. With this aim, three (3) objectives were set in other to achieve the objectives. The first objective was achieved using an extensive literature review and data collected from the respondents. For this objective, it was realized that, managerial qualities dimension is the most significant leadership qualities among project managers. Also, the second objective was achieved through an extensive review of literature and data collected from the respondents. With this objective, it was realized that collected from the respondents. With this objective, it was realized that collected from the respondents. With this objective, it was realized that collected from the respondents. With this objective, it was realized that collected from the respondents. With this objective, it was realized that collected from the respondents. With this objective, it was realized that, schedule success factor is the most significant success criteria among project managers.

Finally, the objective three was achieved with extensive literature review and data collected from the respondents. With the multiple regression analysis used, it was realized that, schedule success factor, relationship with stakeholders and health and safety success factor has significant positive relationship with leadership qualities. Based on this, it can be concluded that, leadership of project managers is very significant in the achievement of project success. Therefore, project managers must exhibit some leadership traits to ensure that, they are able to meet the requirements of the client and achieve high project success factor

5.5 RECOMMENDATIONS

Based on the findings and conclusions, the following recommendations were made;

- 1. Project managers must enhance their leadership qualities for project optimization.
- Project managers must enhance their managerial qualities in terms of managing resources, engaging communication and achieving objectives such as seeing risks as opportunities for improving on their general leadership abilities.
- 3. Clients should endeavor to select project managers who have good managerial qualities.

REFERENCES

- Ahmed, A. D. & Bach, C. 2014. Major Traits/Qualities of Leadership. International Journal of Innovation and Scientific Reserach, 3, pp.47-53.
- Ahmed, R., Amzi, N. & Masood, M. T. 2013. *The Essence of Project Leadership is significant to Project Management*, Intechopen.
- Ahmed, R., Amzi, N. & Masood, M. T. 2013. Leadership is Vital for Project Managers to Achieve Project Efficacy. *Research Journal of Recent Sciences*, 2, pp. 99-102.
- Ahmed, R., Amzi, N. & Masood, M. T. 2014. Mapping Project managers leadership competencies and styles to project success. A theorectical framework. *The Journal of Modern Project Management*, 2, pp.38-55.
- Alexandrova, M. 2013. Critical Success factors of Project Management: Empirical Evidence Supported by EU Programmes, University of National and World Economy, Sofia, Bulgaria.
- Alli.B.O 2001. Fundamental principles of occupational health and safety, ILO.
- Anantatmula, V. S. 2010. Project Manager Leadership Role in Improving Project Performance. Engineering Management Journal, 22, 13-22.
- Andersen, S. E., Grude, V. K. & Tor, H. 1987. Goal Directed Project Management : Effective techniques and strategies, London
- Philadelphia, Kogan Page.
- Anonymous 2014. Implementation, Execution and Completion of projects. *Scandinavian Journal of Public Health*, 42, 123-129.

Anonymous. 2018. How to Identify Critical Success Factors in Project ManagemenI. Available

from: www.nutcache.com.

APM 2019. Leadership. In: MANAGERS, A. F. P. (ed.).

- Archer, M.-M., Verster, J. J. P. & Zulch, B. G. Leadership in Construction Management: Ignorance and Challenges. 5th Built Environment Conference, 18-20 July, 2010 2010 Durban, South Africa.
- Arditi, D. & Lee, D.-E. 2004. Service Delivery Performace of design / build contractors using quality function deployment. *Construction Mnagement and Economics*, 22, 123-127.
- Bart, C. K. 1993. Controlling new products R&D projects. R&D Management, 23, 187-97.
- Bass, B. M. 2010. The Bass Handbook of Leadership: Theory, research and managerial appllications, NY:, Simon & Schuster.
- Bass, M. B. 1990. *Bass and Stodghill Handbook of Leadership, Theory, Research, and Application,* New York, The Free Press.
- Beleiu, L., Cristan, E. & Nistor, R. 2015. Main Factors influcing Project Success. Interdisciplinary Management Research, 11, 59-72.
- Bodepudi, M. 2018. Roles and Responsibilities of Project Manager and Project Mnagement Team [Online]. [Accessed].
- Bolarinwa, O. A. 2015. Principles and methods of validity and reliability testing of questionnaires used in social and health science researches. *Nigerian Postgraduate Medical Joural*, 22, 195-201.
- Burke, R. & Barron, S. 2007. *Project Management Leadership*, United Kingdom, Burke Publications.
- Burns, N. & Grove, S. K. 2005. The Practice of NUrsing Research : Conduct, Critique and

Utilisation, Elsevier and Saunders.

Cavanagh, M. R. & Findlay, J. 2012. Hitting a Moving Target

- Complex Project and Programme delivery in an Uncertain World. Australia: International Centre for Complex Project Management.
- Chan, A. P. C. & Chan, A. P. L. 2004. Key performance indicators for measuring construction success. *Benchmarking: An international Journal*, 11, 203-221.
- Chan, A. P. C., Scott, D. & Chan, A. P. L. 2004. Factors affecting the success of a construction project. *Journal of Construction Engineering Management*, 130, 153-155.
- Check, J. & Schutt, R. K. 2012. *Research Methods in Education*, Thousand Oaks CA, Sage Publications.
- Cleland, D. I. 1995. Leadership and Project Management Book of Knowledge. International Journal Of Project Management, 13, 83-88.
- Collins, A. & Baccarini, D. 2004. Project Success, A survey. 5, 211-231.
- Crawford, L. & Pollack, J. 2007. How Generic are Project Knowledge and Practice. *Project Management Journal*.
- Creswell, J. W. 2003. *Research Design: Qualitative,Quantitative and Mixed Methods Approaches,* Thousand Oaks : CA, Sage Publications.
- Damoah, I., Akwei, C. & Mouzughi, Y. 2015. *Causes of government project failure in developing countries- Focus on Ghana*.
- Dixon, L. 2017. Medium.com. Available: https://meduim.com [Accessed December 6].
- Dulewicz, V. & Higgs, M. 2000. Emotioanl Intelligence : A review and evaluation study. *Journal* of *Mnagerial Psychology*, 15, pp. 341- 368.

- Dulewicz, V. & Higgs, M. 2005. Assessing leadership dimensions, styles and organisational context. *Journal of Managerial Psychology*, 2, pp. 195-123.
- Dulewicz, V. & Higgs, M. 2005. Assessing Leadership styles and organisational Context. *Journal* of Managerial Psychology, 20.
- Egemen, M. & Mohamed, A. N. 2005. Different approaches of clients and consultants to contractors' qualifications and selection. *Journal of Civil Engineering and Management* 11, 267-276.
- Elliot, A. J., Dweck, C. S. & Yeager, D. S. 2017. *Handbook of Competence and Motivation: Theor and application*, Guilford Publications.
- Etikan, I. 2016. Comparison of Convenience Sampling and Purposive Samling. *American Journal of Theorectical and Applied Statistics*, 5, 1-4.

Field, A. P. 2005. *Discovering Statistics using SPSS*, SAGE Publication Inc.

- Fleenor, J. W. 2006. Trait Approach to Leadership. *Encyclopedia of Industrail and Organisational Psychology.* Sage Publication.
- Flyvbjerg, B., Holm, M. S. & Buhl, S. 2003. How common and how large are cost overruns in transport infrastructure projects. *Transport Reviews*, 23, 71-88.
- Geohegan, L. & Dulewicz, V. 2008. Do Project Managers' Leadership Competencies Contribute to Project Success? *Project Management Journal*, 39, pp. 58-67.
- Goleman, D. 1998. The Emotionaaly Inte;;igent workplace. In: GOLEMAN, C. C. A. D. (ed.) Emotional Intelligence: Issues in Paradigm Building. Consortuim for Research on Emotional Intelligence in Organisations.

Gqaji, A., Gerwel Proches, C. & Green, P. 2016. Perceived Impact of public sector leadership on

road infrastructure service delivery. *Investments Management and Financial Innovations*, 13, 51-59.

Hale, K. 2018. Complex Project Management - What it is, and what success looks like. Business2Community [Online].

Hardy-Vallee, B. 2012. The Cost of Bad Project Management.

- Herman, B. & Siegelaub, J. M. 2009. Is this really worth the effort? The need for a business case.*PMI Global Conference*. North America, OrlandoFL. Newtown Square: Project Management Institute.
- Higgs, M. 2003. " How can we make sense of leadership in the 21st century? *Leadership and Organisational Development Journal*, 24, pp.273-284.
- Higgs, M. & Dulewicz, V. 2015. Leadership Dimension Quesionnaire, UK, VDA Assessment and Development Consultant.
- Hodgkins, P. 2016. IPMA International Project Management Association.
- Hollweck, T. 2016. Robert K. Yin (2014). Case Study Research Design and Methods (5th ed.). Thousand Oaks:CA:sAGE.282 pages. *The Canadian Journal of Program Evaluation*.
- Ingason, H. T. & Jonasson, H. I. 2009. Contemporary Knowledge and Skills Requirements in Project Management. *Project Management Journal*, 40, 59-69.
- Jha, N. K. & Lyer, K. C. 2007. Commitment, coordination, competence and the iron triangle. International Journal of Project Management, 25, 527 - 540.
- Judgev, K. & Muller, R. 2005. A retrospective look at our evoling project success. *Project Management Journal*, 36, 19-31.

Kerzner, H. 2006. Project Manageent Best Practices: Achieving Global Excellence, New York.

Kwofie, E. T., Adinyira, E. & Botchway, A. E. 2015. Identification of the critical project management competencies of architects in the Ghanaian construction industry. *International Journal of Construction Management*, 15, 288-289.

Lamb, R. 2013. How can managers use participative leadership effectively?

- Lavagnon, I. 2009. Project sucess as a topic in project management journals. *Project Management Journal*, 40, 6-19.
- Leedy, P. D. & Ormrod, J. E. 2001. *Practical research:planning and design*, Upper Sadle River,NJ: Merrill Prentiice Hall, SAGE Publications.
- Lim, C. S. & Zain, M. 1999. Criteria for project success: An explorary re-examination. International Journal of Project Management, 17, 243-248.
- Lunenburg, F. C. 2011. Leadership versus Management: A key distinction At Least in Theory. Internatiional Journal of of management, business and administration, 14, 1-4.
- Mirza, E. & Ehsan, N. 2017. Quantification of project execution complexity and its effects on performance of infrastructure development projects. *Engineering Management Journal*, 29, pp108-123.
- Mirza, N. M., Pourzolfaghar, Z. & Shahnazari, M. 2013. Significance of Scope in Project Success. *Procedia Technology*, 9, 722-729.
- Muller, R. & Turner, R. 2007. Matching the Project Manager's Leadership Style to Project Type. International Journal of Project Management, 25, 21-32.
- Muller, R. & Turner, R. 2010. Leadership competency profiles of successsful project managers. International Journal of Project Management, 28, pp. 437-448.
- Nahavandi, A. 2009. The Art and Science of Leadership, Pearson.

Nixon, P., Harrington, M. & Parker, D. 2012. Leadership performance is significant to project success or failure: a critical analysis. *International Journal of Productivity and Performance Management*, 61, pp. 204 - 216.

Northouse, P. G. 2010. Leadership: Theory and Practice, London, Sage Publications.

Parry, K. 2004. The seven sins and the seven virtues of leadership: which path do we follow? *The Leading Matters Symposuim Series*. Australia.

Pinto, J. K. & Walker, J. W. 1998. Leadership Skills for Project Managers.

- PMBOK 2013. A guide to the Project Management Body of Knowledge, Project Management Institute.
- PMBOK 2017. A Guide to Project Manangement Body of Knowledge (PMBOK), USA, Project Management Institute (PMI).

PMI 2000. Project Management Body of Knowledge (PMBOK).

PMI 2008. A guide to Project Management Body of Knowledge, USA, PMI.

- PMI. 2019. What is Project Management? Available: <u>www.pmi.org</u>.
- PMI, P. o. t. P. 2018. Success in Disruptive Times: Expanding the value Delivery Landscapre to address the High cost of Low Performance. 10th Global Project Management Survey. Project Management Institute.
- Ponto, J. 2015. Understanding and Evaluating Survey Research. Journal of Advanced Practitioner in Oncology, 6, 168-171.
- Raelin, J. A. 2004. Don'tbother putting leadership into people. *Academy of Management Executive*, 18, pp.131-135.

Ramos, P. & Mota, C. 2016. Perception of success and failure Factors in Information Technology

Projects " A study from Brazilian Companies. *Procedia- Social and Behavioral Sciences*, 119, 349=357.

- Rees, D., Turner, J. R. & Tampoe, M. 1996. On being a manager and a leader. *In:* TURNER, J.R., GRUDE, K. V. & THURLOWAY, L. (eds.) *The project manager as change agents*.McGraw-Hill.
- Salter, a. & Torbett, R. 2003. Innovation and performance in engineering design. *Journal of Construction Management and Economics*, 21, 573-580.
- Shenhar, A. 2004. Strategic Project Leadership Toward a strategic approach to project management. *R&D Management*, 34, pp. 569-578.

Strider, W. 2002. Powerful Project Leadership, Vienna, Management Concepts.

- Tang, S., Ahmed, S., Aoieong, R. & Zheng, D. 2005. A comparison of quality management sysytems in the construction industry of Hong Kong and the USA. *International Journal of Quality and Reliability Management*, 22, 149-161.
- Tekic, A. & Gajic, S. 2012. The Role of Strategic Project Management in Achieving Organisational Success.
- Toor, S. & Ofori, G. 2008. Leadership for future construction industry: Agenda for authentic leadership. *International Journal of Project Management*, 26, 620-630.
- Turner, J. R., Grude, K. V. & Thurloway, L. 1996. The project manager as a change agent, Lon McGraw Hill.
- Turner, R. & Muller, R. 2005. The Project Manager's Leadership Style as a Success Factor on Projects: A literature Review. *Project Management Journal*, 36, 49-61.
- Ward, J. A. 1995. Project pitfalls, Information Systems Management. 12, 1, 74-76.

WHO 1948. WHO Constitution.

Williams, C. 2007. Research Methods. The Journal for Business and Economic Research, 5.

Yamane, T. 1967. Statistics, An Introductory Analysis, New York, Harper and Row.

Yang, L.-R., Huang, C.-F. & Wu, K.-S. 2011. The association among project manager's leadership style, teamwork and project success. *International Journal of Project Management*, 29, pp.258-267.

Yulk, G. A. 2010. Leadership in organisation, (NG: Prentice Hall), Pearson.

APPENDIX

QUESTIONNAIRE

To whom it may concern Dear Madam,

Invitation to participate in a research on exploring leadership qualities of project managers for successful project execution.

I wish to request for your assistance as an experienced practitioner with substantial knowledge in projects to complete the attached questionnaire.

Currently, I am undertaking a Master of Science (MSc.) in the Department of Building technology of the Kwame Nkrumah University of Science and Technology under the supervision of Professor Edward Badu. The research topic is "**Exploring Leadership Qualities of Project Managers for Successful Project Execution**".

This research aims at identifying leadership qualities of project managers for the successful execution of projects in Ghana. Your expert knowledge and experience would be required for this research to identify those leadership qualities that can affect the success of projects.

The questionnaire would take ten to fifteen minutes. All responses would be treated with strict confidentiality and used only for academic purposes. Your views are valuable for the success of this research. After the research, we are willing to share a summary of the outcomes with practitioners in Ghana and anyone who might show interest. For any enquirer, please contact Kuzagbe, Deborah {Tel: **0248856259**, email address: <u>debby1kuzzy@gmail.com</u>}.

Sincerely,

KÐ

Kuzagbe Deborah, MSc student Professor Edward Badu, Supervisor Department of Building Technology, KNUST, Ghana

Leadership qualities of project managers for successful project execution Questionnaire Survey

Key Instructions:

- 1. Please duly fill this questionnaire with reference to your latest experience about project managers' leadership qualities and project success.
- 2. Section C of the questionnaire involves writing of appropriate rate (Details in section D)
- 3. If you wish to have a copy of the report on research findings, please provide your email address: Click or tap here to enter text.

Section A: Background of respondent

| Q.1 | Job Sector: | Private 🗆 | Public 🗆 | Not for Pro | fit 🗆 |
|--|------------------|--------------|-----------------------|----------------|---------------|
| Q.2 | Job Function: | | | | |
| | General Manag | gement 🗆 | Marketing/Sales □ | HR/Training □ | Finance 🗆 |
| | Construction |] Manufact | turing / Operations 🗆 | Technical/IT □ | Others \Box |
| Q.3 Pl | ease indicate yo | ur academic | e qualifications. | | |
| | HND \Box ; | BSc \Box ; | MSc/Mphil □; | PhD \Box ; | Others \Box |
| Q.4 Please indicate your years of practical experience in managing projects. | | | | | |
| 1-5yrs | □; 6-10 | yrs□; | 11-15yrs□; | 16-20yrs□; | Over 20yrs□ |
| Q.5 Please rate your knowledge on leadership by project managers? | | | | | |
| | No knowledge | □; Mediu | ım □; High □ | | |

Section B: Project success criteria

Question: Project success criteria: How <u>significant</u> are the following project success criteria in projects?

Please, rate the significance of each factor with respect to projects under which they are listed. 1 = extremely low significance; 2 = very low significance; 3 = Moderate significance; 4 = Very significance; 5 = extremely significant.

| | | Level of Significance |
|-----|---------------------------------------|-----------------------|
| No. | Success criteria | Low <<< |
| | | >>>Extreme |
| 1 | Cost success factor | □1; □2; □3; □4; □5 |
| 2 | Schedule success factor | □1; □2; □3; □4; □5 |
| 3 | Quality success factor | □1; □2; □3; □4; □5 |
| 4 | Health and Safety success factor | □1; □2; □3; □4; □5 |
| 5 | Relationship with project stakeholder | □1; □2; □3; □4; □5 |
| 6 | Project scope | □1; □2; □3; □4; □5 |
| 7 | Environmental success factor | □1; □2; □3; □4; □5 |

SECTION C: Leadership Qualities

Question: Project manager leadership qualities: How <u>significant</u> are the following leadership qualities of project managers essential to successful execution of projects in Ghana? Please, rate the significance of each factor with respect to the leadership qualities under which they are listed. 1 = extremely low significance; 2 = very low significance; 3 = Moderate significance; 4 = Very significant; 5 = extremely significant.

| | Project Manager leadership qualities criteria | Level of Significance | | | |
|-----|---|--|--|--|--|
| No. | | Low <<< | | | |
| | | >>>Extreme | | | |
| | Intellectual Qualities Dimensions | | | | |
| 1 | Critical analysis and judgment | $\Box 1; \Box 2; \Box 3; \Box 4; \Box 5$ | | | |
| 2 | Vision and imagination | $\Box 1; \Box 2; \Box 3; \Box 4; \Box 5$ | | | |
| 3 | Strategic and business perspective | $\Box 1; \Box 2; \Box 3; \Box 4; \Box 5$ | | | |
| | Emotional Qualities Dimensions | | | | |
| 1 | Self-awareness | $\Box 1; \Box 2; \Box 3; \Box 4; \Box 5$ | | | |
| 2 | Emotional Resilience | $\Box 1; \Box 2; \Box 3; \Box 4; \Box 5$ | | | |
| 3 | Intuitiveness | \Box 1; \Box 2; \Box 3; \Box 4; \Box 5 | | | |
| 4 | Interpersonal Sensitivity | $\Box 1; \Box 2; \Box 3; \Box 4; \Box 5$ | | | |
| 5 | Influencing | $\Box 1; \Box 2; \Box 3; \Box 4; \Box 5$ | | | |
| 6 | Motivation | \Box 1; \Box 2; \Box 3; \Box 4; \Box 5 | | | |
| 7 | Conscientiousness | \Box 1; \Box 2; \Box 3; \Box 4; \Box 5 | | | |
| | Managerial Qualities Dimensions | | | | |
| 1 | Managing Resources | $\Box 1; \Box 2; \Box 3; \Box 4; \Box 5$ | | | |
| 2 | Engaging Communication | \Box 1; \Box 2; \Box 3; \Box 4; \Box 5 | | | |
| 3 | Empowering | $\Box 1; \Box 2; \Box 3; \Box 4; \Box 5$ | | | |
| 4 | Developing | \Box 1; \Box 2; \Box 3; \Box 4; \Box 5 | | | |
| 5 | Achieving | $\Box 1; \Box 2; \Box 3; \Box 4; \Box 5$ | | | |

Section D: Relationship between leadership qualities and factors for successful project execution

Q.3 Please how significant leadership quality is in the achievement of project success.

Not significant \Box ; Slightly significant \Box ; Moderate \Box ; Significant \Box ; Very significant \Box

Question: Please, rate the <u>criticality</u> of leadership qualities on the listed project success criteria . 1 = extremely low criticality; 2 = very low criticality; 3 = Moderate criticality; 4 = Very critical; 5 = extremely critical.

| | | Level of criticality |
|-----|---------------------------------------|----------------------|
| No. | Success criteria | Low <<< |
| | | >>>Extreme |
| 1 | Cost success factor | □1; □2; □3; □4; □5 |
| 2 | Schedule success factor | □1; □2; □3; □4; □5 |
| 3 | Quality success factor | □1; □2; □3; □4; □5 |
| 4 | Health and Safety success factor | □1; □2; □3; □4; □5 |
| 5 | Relationship with project stakeholder | □1; □2; □3; □4; □5 |
| 6 | Project scope | □1; □2; □3; □4; □5 |
| 7 | Environmental success factor | □1; □2; □3; □4; □5 |

--This is the end of the survey---Thank you for your time