

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**A STUDY ON PROJECT MANAGERS' WILLINGNESS TO TAKE RISK.**

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**MASTER OF SCIENCE IN PROJECT MANAGEMENT**

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## 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 duly acknowledged in the thesis.

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## **ABSTRACT**

The success of any project depends on effective risk management, and the precursor of effective risk management is determining the level of project risk tolerances. Risk is the distribution of possible outcome in terms of time, cost, and performance of an endeavor, and risk tolerance is the willingness of a person or the organization to accept or avoid such risk. Project managers in relation to their stakeholders are likely to have a direct view of the outcomes of projects and the extent to which such outcome could be materialized or achieved. Project managers' ability to take risk is relatively dependent on the job security and the organizational culture.

This study was aimed at examining why project managers take risk and to know the extent to which they are willing to take these risks. Quantitative research was used to collect data and the descriptive approach was deployed to help with the study findings.

A questionnaire was designed to be sent by mail or hand distributed to respondents.

It came to light that; project managers would always like to factor their experience with similar projects mostly in taking such decisions. Adequate project risk management practices which encourages sustainability was the most recognized benefit per the survey. It was followed by the greater expectation for project success and results maximized while the least considered benefit was to accelerate project delivery.

In conclusion, project managers are to ensure that their team gains expertise in their field to effectively work and guarantee success of projects.

It was suggested that organizations and top management should also provide their support to project management team throughout the life cycle of projects. Stakeholders should involve themselves more from beginning to end to ensure the issue of information dispersion is dealt with.

## TABLE OF CONTENT

<b>DECLARATION .....</b>	<b>ii</b>
<b>ACKNOWLEDGEMENTS.....</b>	<b>iii</b>
<b>ABSTRACT .....</b>	<b>iv</b>
<b>TABLE OF CONTENT .....</b>	<b>v</b>
<b>LIST OF TABLES .....</b>	<b>viii</b>
<b>LIST OF FIGURES .....</b>	<b>ix</b>
<b>ABBREVIATIONS .....</b>	<b>x</b>
<b>CHAPTER ONE.....</b>	<b>1</b>
<b>INTRODUCTION .....</b>	<b>1</b>
1.1 BACKGROUND STUDY .....	1
1.2 PROBLEM STATEMENT .....	4
1.3 RESEARCH QUESTIONS .....	5
1.4 RESEARCH AIMS AND OBJECTIVES .....	6
1.5 SIGNIFICANCE OF THE STUDY .....	6
1.6 RESEARCH METHODOLOGY .....	7
1.8 SCOPE .....	9
<b>CHAPTER TWO.....</b>	<b>10</b>
<b>LITERATURE REVIEW .....</b>	<b>10</b>
2.1 INTRODUCTION.....	10
2.2 OVERVIEW OF RISK MANAGEMENT .....	10
2.3 RISK TOLERANCE .....	13
2.3.1 Influencing Factors Specific to the Firm .....	14
2.3.2 Influencing Factors Specific to the Project Manager .....	14
2.3.4 Project Risk Management .....	16
2.4 THE RELEVANCE OF PROJECT MANAGEMENT .....	17
2.5 THE ROLES AND RESPONSIBILITIES OF PROJECT MANAGERS .....	18
2.5.1 Communication .....	18
2.5.2 Empowerment and Influencing .....	19
2.5.3 Planning and Goal Setting .....	19
2.5.4 Conflict Resolution .....	19

2.5.4 Problem Solving .....	20
<b>CHAPTER THREE .....</b>	<b>21</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>21</b>
3.1 INTRODUCTION .....	21
3.2 RESEARCH STRATEGY .....	21
3.3 RESEARCH DESIGN .....	22
3.4 RESEARCH APPROACH.....	22
<b>3.5 DATA COLLECTION .....</b>	<b>24</b>
3.5.1 Population of the Study .....	24
3.5.2 Sample Size and Sampling Technique .....	24
3.5.3 Sources of Data .....	25
3.5.4 Structure of the Questionnaire.....	25
3.6 DATA ANALYSIS .....	25
3.7 VALIDITY AND RELIABILITY .....	26
3.8 ETHICS .....	26
<b>CHAPTER FOUR .....</b>	<b>27</b>
<b>DATA PRESENTATION AND ANALYSIS .....</b>	<b>27</b>
4.0 INTRODUCTION .....	27
4.1 PROFILE OF RESPONDENTS .....	27
4.2 FACTORS INFLUENCING PROJECT MANAGER’S DECISION.....	28
4.3 BENEFITS OF PROJECT RISK MANAGEMENT PROCESS IMPLEMENTATION .....	30
4.4 CHALLENGES IN IMPLEMENTING PROJECT RISK MANAGEMENT PRACTICES. ....	32
<b>CHAPTER FIVE.....</b>	<b>34</b>
<b>SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS...34</b>	
5.1 INTRODUCTION .....	34
5.2 SUMMARY OF FINDINGS .....	34
5.2.1 Factors Influencing Project Manager’s Decision .....	35
5.2.2 The Benefits of Project Risk Management Process Implementation .....	35
5.2.3 The Challenges in Implementing Project Risk Management Practices .....	36

5.3 CONCLUSION .....	36
5.3.1 Factors that influence project managers' decision .....	36
5.3.2 Benefits of project risk management process implementation.....	36
5.3.3 Challenges in implementing project risk management practices. ....	37
5.4 RECOMMENDATIONS .....	37
5.4.1 Recommendations on the challenges associated with the Implementation of Project Risk Management Practices .....	37
5.5 LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH.....	38
 <b>REFERENCES .....</b>	 <b>40</b>
<b>APPENDICES .....</b>	<b>48</b>

## **LIST OF TABLES**

Table 4.1: Profile of Respondents .....	27
Table 4.2: Factors Influencing Manager's Decision .....	30
Table 4.3: Benefits of Project Risk Management Process Implementation. ....	31
Table 4.4: Challenges in implementing project risk management practices .....	33



## **LIST OF FIGURES**

Figure 4.1: Factors Influencing Manager's Decision.....	29
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## **ABBREVIATIONS**

RM:	Risk management
PMI	Project Management Institute
SPSS	Statistical Package for the Social Scientist
IT	information technology

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 BACKGROUND STUDY**

To make decisions that correspond with the organizational direction, it is important for a project manager to understand how much risk is too much. The concept of “Risk Tolerance” has not been well understood and to some extent overlooked by most project managers. In every business or project that is likely to be undertaken, the main stakeholders make various assessments. Among these would be an assessment of the risk that comes with project execution. Project managers for that matter do not just take any risk but make and accept decisions based on calculated risks. In making vital decisions for firms and projects, much information is needed in distinguishing and understanding risk. It is therefore of necessity to clearly define risk and risk tolerance.

Risk is explained as the “distribution of possible outcomes, their likelihood and their subjective values” thus in the classical decision theory (March and Shapira, 1987). When brought under the umbrella of project management, the definition would influence crucial variables such as time, cost, and performance among others. Project managers in relation to their stakeholders are likely to have a direct view of the outcomes of projects and the extent to which such outcome could materialized or achieved.

In assessing prospects that may seem risky or pose some amount of risk, Tversky and Kahneman (1992) identified some reference points that could affect risk-taking. It was further noted that without a clear and well established tool for risk analysis, risk tolerance becomes necessary, serving such purpose. Being it the firm, project manager or stakeholder, risk tolerance influences their take on the likelihood of outcomes. A project manager which seem to be the focus of this study, would consider largely the corporate culture and job security in shaping his or her risk tolerance. The firm would depend on

its financial stability and project diversification whereas stakeholder could be influenced by project objective. One could easily conclude that; risk tolerance is an area which is still witnessing developments as far as human dynamics is involved.

Scholars such as Pratt (1964), Arrow (1965) and Ross (1989) gave a much narrow explanation and conclusion on risk tolerance where they conceived that individuals who are directly involved in decision making are risk averse. A further look at risk tolerance would bring into consideration other variables that could affect decision while taking risk thus a complex phenomenon.

Project managers across various field as perceived by others do take up projects with higher risks which may not be true. They could only take big risk which may positively affect the firm probably in the long run and present opportunities. Nevertheless, we ask why some project managers could be inclined to risks which others may not thus risk being a probability that involves both bad and good outcomes. In a work by Wileman and Cicero (1970), two classes of risk which apply to project managers were identified. They identified project risk and professional risk. Project risk concerns itself with uncertainties in achieving project goals while professional risk on the other hand takes a look at uncertainties on the part of the manager in relation to future job prospects and compensations. Project risk receives much attention than professional risk in the context of risk management.

Risk management over the years has been identified as a crucial instrument when it comes to the execution of various projects and for that matter realizing majority if not all, the set objectives of these projects. All projects thus in various fields are recognized with a number of specific risks right from its inception to its completion. Normally, projects are being evaluated among other variables based on the associated risk hence

the ability of the company or project manager pursuing this project to handle it or otherwise abort the project. Project managers in Ghana from observation have to deal with risk associated with environmental, financial and contractual among other related risks. In Ghana, various sectors for instance the construction industry contributes significantly to its socioeconomic enhancement and it's characterized by making decisions based on risk assessment. Second to agriculture arguable, the construction sector provides various forms of employment opportunities to individuals (Jekale, 2004; Ofori, 2006).

Over the years, various sectors go into projects that contributes to nation building and also improving its corporate image but a look at their relative performance records unrelated figures compared to its contribution to physical product or economic development. Just like any other endeavor, these projects come with its associated risks and hindrances. Kartam and Kartam (2001) indicates that, the industry's business and activities, external forces and firm's system of control finds itself attached with a relatively higher level of risks.

Large projects as purported by Brunes and Lind (2011), when taken 86% of 250 of projects experiences overruns around 28%. Reasons such as geotechnical difficulties, incompetence among project consultants and managers, bad documentation, poor project management, improper price assessment and budgeting among others. However, whether a project is small, medium or large in size, there exists risks and other uncertainties. It is further noticed that, there is a direct proportional relationship between the risk associated with a project and two main factors: size and complexity of project. Project managers in their line of duty frequently face technical risks which further has an adverse effect such as difficulties in quality compliance, rise in cost, unexpected projects time overrun or

completion of project outside scheduled time on projects and firms (Mousa, 2005). In identifying potential project risks and to design counter measures, risk management plays an integral role in such process. It stresses on instances that would capitalize on benefits while minimizing the impact negative events (PMI, 2013). The Project Management Institute mentions Risk Management as part of its ten (10) knowledge areas. Elsan et. al., (2010) posits that risk exist in all projects whereas its level varies from one to another. This study however would rely on literature to explore the factors that influence project managers when faced with accepting or avoiding risks in executing projects.

## **1.2 PROBLEM STATEMENT**

Risks cannot be totally avoided, but the choice can be taken or made so that the said risk is minimized. In an economy comprising of various enterprises and organizational sectors that are project-driven, several factors could affect project managers in selecting projects with different risks and to commit the available resources into executing it. Upon strict assessment of project, project managers are responsible for the selecting and implementing of projects. Hiersheifer and Thakor (1992) identified that managers are likely to stop the execution of a project that are subjected to early and noticeable failure so as to maintain their reputation as excellent judges. An important issue that arises is, questioning the willingness of these project managers to accept or avoid risk associated with projects. What makes a project manager accept the risk associated to a project and carry on with it? What could possibly cause a project manager to avoid a risk thus not to pursue such project? These questions propel the essence of this study. It is however important to note that, when an industry's potentials are harnessed completed with management of challenges, it could record greater value in relation to its projects and at the end contribute largely to the organization within the industry.

Due to the nature of most businesses, it is almost impossible to undertake a zero risk project which can very complex and full unforeseen events. These risks and unforeseen events which calls on the expertise and knowledge of project managers to make sound and informed decisions. These risks and events or uncertainties can adversely affect projects (Mills, 2001; Flanagan et. al., 2006). In attempt to realize set objectives for projects while recognition factors such as quality, time, safety, cost and sustainability (environmental), project managers would apply Project Risk Management techniques. For the past decades, Ghana has witnessed a number of projects that facilitates developments which goes on to further provide the platform for other facilities in the economy to function. It is of essence to note that there isn't any project which is absolutely free from risk thence a project would fail if there isn't a critical review and assessment of risks and an absence of a workable strategy for managing risks (Mahendra et. al., 2013).

With risks being inherent in various projects, we ask ourselves if there exist a well-structured and systematic way of mitigating risk and most importantly the attitude of projects managements towards risk. What is the level of importance attached to implementing risk management practices at any given project? These among other crucial questions would stir the need for this study.

The study would seek to examine the factors that influences projects managers' willingness to accept risk drawing a study population from the Institute of Project Managers, Ghana.

### **1.3 RESEARCH QUESTIONS**

1. What are the factors that influence the decision in taking risk in a project? \*

2. What are the benefits associated with the implementation of project risk management practices by project managers?
3. What are the challenges faced by project managers with the implementation of project risk management practices?

#### **1.4 RESEARCH AIMS AND OBJECTIVES**

Generally, this study seeks to examine the willingness of project managers to accept or avoid risk in Ghana.

Specifically, the study seeks to;

1. Examine the factors that influence the decision in taking risk in a project.
2. Examine the benefits associated with the implementation of project risk management practices by project managers in the Kumasi Metropolis.
3. Identify the challenges faced by project managers in the Kumasi Metropolis with the implementation of project risk management practices.

#### **1.5 SIGNIFICANCE OF THE STUDY**

This study would seek to add to the knowledge base and literature of the role of project managers in relation to their project risk management. A few study has been conducted as far as this field is concerned in Ghana hence this study would provide specific findings about this topic while looking at the recommendations for formulate guidelines for effective and smooth project execution. This knowledge would be useful to both the management of the firms and all its stakeholders providing an in depth understanding of risk management practices and how decisions taken by project managers impact on the success and failure of projects. Policy makers in the Ghanaian industry can also resort to the findings of this study to make well informed decisions that impacts their policies.



In academia, this work would provide tutors and students with information that blends theory and practice hence a tool for effective learning and knowledge transfer. However, this study would provide a grounds for further research which would seek to explore more into the role played by project managers and project risk management practices.

## **1.6 RESEARCH METHODOLOGY**

The study methodology would use qualitative data analysis techniques and employ quantitative at instances where necessary. Both primary and secondary data would be used for this study while the primary data would have collected through the use of a self-administered questionnaire which is well structured, and the secondary data collected through already existing sources such as the internet, published and unpublished articles, minutes and previous works among others. A research design provides a snapshot of the techniques that would be used in attending to each research question (Saunders et. al., 2009). This study adopts a descriptive approach which would examine the factors that influences the willingness of project managers to take or avoid risk and their project risk management practices where a case study is used to provide emphasis on a specific research unit for greater understanding of events.

With sampling techniques, purposive sampling technique would be used to select workers who can provide the needed and accurate information for this study. Questionnaires would be used to collect data from respondents and where necessary, other forms of data collection like interviews would be used considering the convenience of the respondents. Analysis of data collected for the study would be aided by the use of the Statistical Package for the Social Scientist (SPSS Version 25) while expressing results in descriptive parameters.

## **1.7 ORGANIZATION OF THE STUDY**

The thesis starts with the first section that introduces the topic and its theoretical background. After the insight into the knowledge area the research is described, and the aim of the research is stated, which is supported by the research question and objective of the study. The scope and limitation are briefly discussed in this section too.

In the second section literature review is conducted and it is built upon the logic of the framework further developed from the theories available in current literature. The section starts with the overview of risk management. Furthermore, it examines the importance of the risk management in projects management and finally describes the relevance, roles and responsibilities of project managers.

The third section deals with the explanation of the research methodology from the scientific point of view. It starts with laying out the philosophical considerations and assumptions impacting the research. To justify the choice of the methods applied in this research also, the research design, strategy, approach, data collections and analysis were discussed. Ethical considerations were mentioned lastly in this section

Fourth section is dedicated to the practical methodology. It starts by exhibiting the profiles of the respondents. Influencing factors in project management decision with challenges in risk management practices was discussed.

Fifth section displays the empirical findings of survey. The findings from data are explained. Both risk management and challenges in implementing it are elaborated. Benefits of project risk management is highlighted in relation to the research. Conclusion and recommendations was under discussion in this section.

## **1.8 SCOPE**

This research focuses on the behavior of project managers who are part of the Project Management Institute (PMI), towards risk. Founded in 2011, PMI Ghana Chapter is a not-for-profit membership association chartered by the Project Management Institute, USA. Its brand promises to make project management indispensable for business results while its envisioned goal is nationwide, organizations will embrace, value and utilize project management and attribute their success to it.

## **1.9 LIMITATION**

In conducting this study, difficulty in getting respondents to respond to questionnaires and being accurate on responses could be experienced. This may be the competitive nature of their industry and having to deal with competitors using this information to gain any form of advantage over them. Issues regarding financial constraints could be raised since the study involves the distribution of questionnaires also its retrieval in addition to other cost involved. A combination of work task and lectures would pose some time constraints to the research hence a well-designed project schedule was used to reduce its effect.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

The concept of risk and its management has been identified as very crucial in the execution and success of various projects across all fields. This chapter presents a review of literature that relates to theories in making decisions where there could be uncertainty with regards to expected results and other major themes. An overview of risk management raises the curtain for this chapter followed by other major themes that would be reviewed under this study.

#### **2.2 OVERVIEW OF RISK MANAGEMENT**

Risk is a multi-facet concept. Risk is inherent and difficult to deal with, and this requires a proper management framework both of theoretical and practical meanings. Risk management is a formal and orderly process of systematically identifying, analysing and responding to risks throughout the life cycle of a project to obtain the optimum degree of risk elimination. In achieving predictable results or outcomes in projects, it becomes necessary to bring under consideration all influential factors and decision-making methods. It can be said that, various decision made came under an atmosphere of uncertainty characterized by risk taking. Ceric (2003) acknowledges the importance of a clear assessment through rationality and a given degree of uncertainty, the probability of an event taking place. The basis of this assessment would and should be based on historic data or even experience of the past.

Considering theories, the Expected Value can be identified as one of the earliest theories in making decision with an emphasis on risk. Surprisingly, this theory ignored the idea that, a particular “payoff” associated to one person would not be directly related to its

specific monetary worth (Tversky and Kahneman, 1979). Also, the concept of systematic bias in decision making introduced by Bernoulli presumed that individuals worked towards maximizing their utility and not what is considered expected value (Tversky and Kahneman, 1979). According to Von Neumann and Morgenstern (1953) who proposed the model of subjective utility, they did emphasize that one person may not necessarily have the same utility curve just like another, but the two chart identical normative axiom in determining their personally well-defined maximum subjective utility.

Some decisions made under risk consideration do adopt an internal conflict over trade-offs approach. The Prospect Theory as propounded by Tversky and Kahnemann (1979) did bring about a well-informed approach to clearly describe, predict and in addition explain choices made by individuals in this world full of uncertainties. This theory was structured to explain common pattern of choice among individuals and may have an intensive emotional impact following losses while a comparatively lesser gains given the same situation. It is somewhat argued that, decision makers would assess the value of outcomes and its corresponding weight for the decision itself to be taken.

Chapman (1983) puts risks as the likelihood of a loss or gain being it financial or economic, a damage or injury physical in nature or a delay as a result of the uncertainties surrounding the execution of a course. Scholars like Wideman (1986), Smith (1999), Kliem and Ludin (1997) and Godfrey (1996) among others have defined risk with most of them looking at probability attached to an events occurring and also looking at adverse impact on projects or objectives. The impact of risks on projects can likely be in the form of delay completion period, compromised quality and increased expenses. In computing the level of risk exposure, it can be done both qualitatively and quantitatively and should be noted that risk management is a very complex aspect of project management which

has to deal with getting to the foundation of the causes of risks and link them to how they might affect a project.

Another important aspect of risk is risk exposure which explains the result of the product of risk probability and risk impact. The type of exposure to risks that an organization is faced with are wide ranging and varying from one organization to another. Some factors that can expose projects to higher than normal risks include, staff expertise, newer project, time compression, resource availability and also team size. As a process, risk management seeks to dive into all matters regarding a project in order to realize all set objectives and aims taking into consideration its constraints (Clark, Pledger and Needler, 1990). Some major processes include; risk identification; this where risks which are likely to affect the project are determined and documented with their individual characteristics. Also, there is risk quantification. This is where risks and their interactions are evaluated and assessed to identify the range of possible outcomes. The third process is the risk response development. It involves defining enhancement steps for opportunities and responses to threats. Fourth process is the risk response control. This deals with responding to changes in risks over the course of the entire project.

Some tools and techniques that can be used for identifying risks include, brainstorming, use of specialists, questionnaire survey, workshops, feedback from similar projects, previous experience among others. Risk management has some advantages, and these include; less uncertainty, achievement of objectives, creation of value, etc.

Kerzner (2009) in explaining risk management posits that it involves planning, identifying, analysing, developing risk response and monitoring and controlling risks to

determine how risks have changed. Ceric (2003) further added that, for a process cyclical in nature demands an appreciation of a response to risk which may yield new happenings with a possibility of affecting the project thus necessary to be identified, analysed and followed by an anticipation for the best response.

### **2.3 RISK TOLERANCE**

In decision making, project managers or those responsible for such may be faced with the problem of misunderstanding the risk associated with the project to be undertaken. It can be said to be the degree of variability that one is willing to withstand. Risk has been termed intangible or invisible and thus the perception held by managers in connection to similar projects. According to March and Shapira (1987), risk involves “the distribution of possible outcomes, their likelihood and their subjective values”. Also, Tversky and Kahneman (1992) indicated that when evaluating risky prospects, the point of references used here by individuals in the process influences risk-taking. Risk tolerance can then be seen as an activity based on clear subjectivity and understanding of risks. Clearly, risk tolerance is a field which is still witnessing developments with its literature base. It is also the ability of a project manager to understand his ability and hence his willingness to stomach large blows in the execution of his project.

Jarett (2000) explains that, risk goes beyond being the probability of success while it deals with a probability set of premises. The level of understanding and ascribe definition of risk greatly affects a decision maker’s tolerance. Though much is said about the level of risk tolerance of project managers, top management or even shareholders, it becomes necessary to subject this to discussion due to the relevance of risk assessment to projects. It has been argued that, companies are widely seen to only pay lip service to ideas concerning innovation and promoting smart risk taking.

### **2.3.1 Influencing Factors Specific to the Firm**

Considering firms in general, it is anticipated that its tolerance to risk is subject to changes throughout the life cycle of the project in question. For instance, if the project being handled is critical, the organisation is willing to take more risks knowing how vital such risks are to the particular project. But if it (project) is not critical or important, then the firm may not be willing to take a lot of risks. There is an increase in commitment and investment for a project on the part of a company if it shows various signs of progression (Daw, 1999). Through this, earlier risks can be more disadvantageous compared to fewer risks characterized by the latter stages. Firms as seen may take multiple projects to lower their risk tolerance while this may not be the case of a project manager with a focus on only a single project. The level of risk tolerance a firm can accommodate depends on its financial and industrial status.

### **2.3.2 Influencing Factors Specific to the Project Manager**

When management creates an environment that exhibits a lack of or a perceived understanding of risks as presented by project managers, there exists a misconception on risk tolerance. Dow (1999) posits that, for project managers to simply identify risks within their firms or organization it is followed by questions concerning they being fit for their job. Kahneman and Tversky (1979) puts it this way, “*Project managers are extremely susceptible to unjustified optimism and unreasonable risk aversion*” thus less time and inadequate information at most times to use a forecast technique like that of the Bayesian in addition to other detailed probability analysis for an assessment of problems that affect them. They however, in dealing with numerous of such situations recognize themselves as prudent risk takers relying on just the information available which may



just be a part and their intuition. Project managers are then observed to think in the lines of “optimistic denial and uncontrollable uncertainty” (Kahneman and Lovallo, 1993). Any ascertained risk tolerance levels would be considered nullified if there is no proper recognition of primary risks. Project managers and even most employees would always weigh credits and blame when considering decisions to be made. The visibility and perceived impact of a project in general influences a project manager’s risk tolerance. Risk has been largely linked with negative components or outcomes of every project decision thus project managers need to be trained to desist from having a myopic view of risk that is it being bad. Risks presents opportunities and essential to making progress and its key to balance it (Kirkpatrick et. al., 1992).

### **2.3.2 Benefits of Project Risk Implementation**

Risk management provides benefits which do not only serve the project but also other parties such as the organisation and its customers. Risk management also provides a clearer view on the possible outcomes resulting from unmanaged risks and ways to avoid them. (Thomas 2009). One benefit of working with risk management is increased level of control over the whole project and more efficient problem solving processes which can be supported on a whole project. The risk management process also provides a procedure which can reduce possible and sudden surprises. (Cooper et al. 2005)

### **2.3.3 Challenges in implementing Project risk management practices.**

The level of risk is always related to the project complexity. (Darnell and Preston 2010). A project is subject to more risks based on its distinctive characteristics such as financial intensity, complex processes, long duration among others. Hayes et al. (1986) and Godfrey (1996) believe that the greatest degree of risk exists in the earliest phase of the

project when available information about the project is the least. It should be noted that if the staff on a project lack experience and enough knowledge, the project will be robbed of time. Lack of communication can also be the death of a project. The project manager has to ensure open communication or else he will suffer during the course of the project. Santoso et al. (2003) deduced about 130 risk factors and found that, communication is the highly ranked factor and has a probability of occurring. Another factor will be economic factors such as inflation as added by Frimpong et al that, inflation should be considered in risk studies, supply of labour, material supply, exchange rates, etc.

#### **2.3.4 Project Risk Management**

With organizations that undertake projects as part of their integral operations would be face with specific or potentials risks which could be managed in such a way that could help avoid or mitigate its impact. Uher (2003) posits project risk management as “a systematic way of looking at areas and consciously determining how each should be treated. It is a management tool that aims at identifying sources of risk and uncertainty, determining their impact and developing appropriate management responses”. Considered as a systematic blend of activities or process which looks at risk classification, risk identification, risk analysis and risk response. Risk management in a project encompasses identifying influencing factors that could potentially negatively impact a project’s cost schedule or quality baselines; quantifying the associated potential impact of the identified risk; and implementing measures to mitigate the potential impact. Some sources of risks in projects include but are not limited to; misunderstanding of contract and conditions, unskilled staff, political and legal problems, poorly defined roles and responsibilities, poorly coordinated work and changes and errors in the project. The

riskier the activity is, the costlier the consequences if the wrong decisions are taken. Reduction, transfer, avoidance and retention are the sub components of risk response (Berkeley et. al., 1991; Flanagan and Norman, 1993). Risk identification looks at identifying potential events and source of risk while recognizing the type of risks. This process also clarifies the responsibilities presented by risks. Carbone and Tippet (2004) explains that project risks identification and mitigation forms an integral part in the management of and the success of projects. While executing projects, the existence of variation would be as a result of risk that have not been managed in the initial stages of the project (Assaf and Al-Hejji, 2006).

According to The Project Management Institute (2004), its guide on the provisions made for project risk management (PRM) indicates that, increasing the likelihood and impact of favourable events and decreasing the effects of adverse events.

## **2.4 THE RELEVANCE OF PROJECT MANAGEMENT**

Organization have come to an understanding and a point of realization that, there are benefits associated with project management hence they seek to integrate it into their process as a key component. Reports shows an increase incidence with regards to project failure while advancing a company's scope in project management could significantly impact on its project completion objective and mitigate failures (Kerzner, 2005). It has been argued by Kerzner (2005) and Pennypacker and Grand (2003) that existence of a well-structured procedure that can be adopted to successfully complete a project can be recognized as a benefit of project management. This offers lower project costs as a result of using less resources. Anabari (2003) posits that monitoring processes accompanied with project management help ensure prioritization, forecasting and identification of components of projects that could need an early corrective action by comparing planned

and actual values.

## **2.5 THE ROLES AND RESPONSIBILITIES OF PROJECT MANAGERS**

Project managers are recognized as individuals who play boundless and specific roles from the inception and completion of projects. Primarily, project managers are linked with ensuring that all objectives of a desired project are achieved (PMI, 2008). A project manager could be an expert in project management or form part of a team. In either circumstances, there is the need to follow project management practices that are best and accepted. Jha (2013) recognizes the act of planning as vital to a project manager especially in the preconception periods thus emphasis should be on the preparation of a schedule that seeks to allocate the available resources efficiently towards achieving the goals set. Interestingly, Hopp and Spearman (2011) and Burdge and Robertson (2009) had differing ideas by stating the administration of a project as the primary role of a project manager. In the construction field, Egan (2012) added that it is the duty of the project manager to be consistent in refining the scope of project, meeting timelines and making resources available. Also, De Ridder and Vrijhoef (2013) posits that, the focus of project managers should be more on scheduling and managing project and also understanding the human resources made available, using of materials and management of logistics.

### **2.5.1 Communication**

A good leader is expected to exhibit a good sense of decision making abilities, intelligence and great communication skills (Drucker, 2010). So far as project managers remain and act as a link among several units as posited by Formoso and Soibelman

(2012), there is the need to communicate. Project managers are expected to get all agent informed, listen, comprehend and finally persuade others to keep project objectives in line with their collective actions.

### **2.5.2 Empowerment and Influencing**

Project managers themselves as explained by Barnes (2011) need to be empowered since they do not play roles of managers only but also the delegation function. Aside that, project managers are expected to empower their agents to work hard towards objectives, maintain discipline and also an enabling environment. In addition, there is the need for a project manager to play the role of influencing other agents and team members in difficult situations and also on the personal level (Bresnen and Marshall, 2011).

### **2.5.3 Planning and Goal Setting**

As a key element in leadership, project managers need to plan well in order to have a smooth execution of projects. Planning has been declared as the “creating expression” of a good leader (Turner, 2012).

### **2.5.4 Conflict Resolution**

One aspect of working in a group or team is the differences that exists among various aspects of life and work thus beliefs, ideas and opinions. Thereof, it is necessary for a leader and a project manager for that matter to be able to handle such circumstances since it could have an influence on the effectiveness of the team and even to the extent of project objectives (Wand and Hannafin, 2012).

#### **2.5.4 Problem Solving**

It is the role of a project manager to have an upper hand in solving problems both internally and externally by employing requisite skills in this area. It should be noted that problem solving is a skill necessary for all project managers since it would be required throughout all stages of a project. Project managers are expected to have the skill of making well informed judgements and make deductions and conclusions on problems (Skoyles, 2011; Crittenden, 2012).

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 INTRODUCTION**

Project managers play a crucial role when assessing the viability of a project to be undertaken. Mostly, their job demands that they define a level of risk that one their part can tolerate and this would normally reflect on the project they seek to accept or decline. This chapter presents an overview of how this study would be conducted expounding on the research approach and design choice used. The population for this study would be defined, sampling techniques and statistical techniques also explained.

#### **3.2 RESEARCH STRATEGY**

The overall approach adopted stipulated a quantitative approach. Quantitative Research is concerned with measurement in the collection and analysis of data (Bryman, 2004). According to Bryman (2004), measurement is important so as to distinguish between people in terms of characteristics in question, provide a consistent yardstick for gauging differences and provide a more accurate estimate of degrees relationship. The peculiar nature of quantitative approach in terms of its epistemological and ontological features, position it to mean more than the presence of mere numbers (Agbodjah, 2008). Creswell (2003) suggested that a quantitative strategy involves a situation where the researcher adopts a post-positivist claim in an investigation to develop knowledge and explore relationships among variables in terms of hypothesis or research questions, postulating objectivity as a hallmark necessitating validity, reliability and exclusion of bias. Since the quantitative strategy is characterized by answers to the question relating to what, how much, how many etc., which involves measurement (Bryman, 2004) largely, fits into this research.

### **3.3 RESEARCH DESIGN**

A research design according to Saunders et al., (2007) posits a research design as the framework that a study is being conducted within involving the use research instruments such as questionnaire, interviews and others that aid in data collection being it qualitative or quantitative or both and finally provide a description of data. For a research of this nature, the descriptive approach would be used making use a case study to help realize the objectives. A descriptive research design denotes a scientific manner which defines a phenomenon through observation, case study or survey. A study of this nature involves gathering event-descriptive data and then organizes, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984). A descriptive research may not necessarily provide accurate predictions but rather help confirm situational suggestions and also explains them (Jackson, 2009). A descriptive research can fall under qualitative or quantitative category. Using such an approach would offer the researcher flexibility in choosing the desired research instrument and affords the researcher the chance for extensive research into other matters that could develop as the study is being conducted.

### **3.4 RESEARCH APPROACH**

Research approach refers the step by step procedures and action plans adopted for a research from the stage of general assumption up to data interpretation (Creswell, 2013). According to Creswell (2009), the type of research approach adopted is underpinned by the philosophical paradigm of the study, thereby suggesting the general approach to solving the research problem while answering the research question (Kwofie, 2015). Two main approaches have been identified and named as the Deductive and Inductive research approach.



The Deductive approach deals with what is already known as existing theories or ideas about a subject by identifying the theory and testing through observation to confirm the theory (Creswell, 2013). This approach involves a top-down approach in the formulation of the theory and testing of hypothesis while maintaining the independence of the researcher. That is to say that, the process starts from the identification of the relevant theories and the use of scientific study through observations to confirm these theories. The research is therefore used to test specific propositions (Creswell, 2003).

On the contrary, the inductive approach used mainly in theory building begins with the study of specific instances of societal issues, through the identification and development of patterns from the analysis of data gathered (Creswell, 2013). It employs a down-up approach where through the study of specific issues to the broad generalization of the specific situation, qualitative research approach for data collection and analysis are subjective in nature (Kwofie, 2015). According to Saunders et al. (2009), the inductive approach most often relies on the collection of qualitative data. Fisher (2010) also emphasized that theories are derived from the generalization of the specific phenomenon in the inductive reasoning.

This research is based on deductive approach as it involves the use of already existing theories together with quantitative methods to make inference into mergers and acquisition. That is the study first reviews literature as a theoretical guide, and then collects data from participants. Hereafter, statistical techniques will be used to draw diverse meanings and interpreted within the context of the already existing theoretical framework. The results of this deductive method will be observations and findings unlike the inductive, which will be theories.

### **3.5 DATA COLLECTION**

#### **3.5.1 Population of the Study**

A population as defined by Polit and Hungler (1999) looked at an aggregate of all members, objects or subjects that depicts a set of specification. For the purpose of this study, the entire members of the PMI Ghana Chapter would constitute our population and as at the time this study was conducted, the institute had a total of Three Hundred and Ninety-two (392) members with three hundred and eighty-eight (388) being individual members, four (4) student members and two (2) other members.

#### **3.5.2 Sample Size and Sampling Technique**

A sample has been defined by Polit et al. (2001) as “a proportion of a population”. Normally, it becomes difficult or impossible to study a whole population in a research hence need to study a representative constituent. Sampling techniques are population reduction methods used to restrict data collection to a subgroup of a population since it is almost impossible to collect data from every single individual or units within a population in most cases (Saunders *et al.*, 2009). Sampling Techniques have been classified into probabilistic and non-probabilistic or judgmental sampling (Bryman, 2004; Saunders *et al.*, 2009). According to the authors, the difference is that, in the case of probability sampling technique, the chance or likelihood of each unit being selected from the population is the same hence the population is known whereas in the non-probability sampling, the chance of selecting a sample from the population is not known. Because the target population of the PMI CHAPTER IN Ghana is too large, 50 members of the chapter were selected for in-depth study. This was done using random sampling. Random sampling is a type of probability sampling method would be used to select members under the chapter.

### **3.5.3 Sources of Data**

The main sources of data for the study was the field survey. The field survey was carried out using both open-ended and close-ended structured questionnaire.

### **3.5.4 Structure of the Questionnaire**

The structured interview questionnaire is shown in Appendix A. A questionnaire was designed to be sent by mail or hand distributed to respondents. The questionnaire was tested with a pilot survey for clarity, ease of use, and value of the information that was gathered. The questionnaire had four sections, each contributing to achieve the main aim of the study. For the first section, focus was to get information on the details of the participant. The second section (B) on the other hand sought to identify the factors that influence project managers' decision when considering projects. The third section (C) also looked at the benefits of project risk management process implementation. The final section (D) focused on the challenges faced in implementing risk management practices. Further details on the questionnaire designed for the study can be retrieved from the appendixes of this study.

## **3.6 DATA ANALYSIS**

After the collection of data, a series of statistical calculations were used to process to draw conclusions for the discussions. This section present the statistical analysis run. For this process, the Statistical Package for Social Science Version 25.0 was used.

Descriptive Statistics has been described as a data analysis tool used to present graphical and numerical summary of data for the ease of classification and interpretation as to where the centre of the data is and how the rest vary from the centre (Jaggi, 2003). It therefore enables the researcher to numerically and graphically describe and compare

variables for the purpose of interpretation. Descriptive statistics, therefore, simplifies large data in the simplest way (Janes, 1999). Additionally, descriptive statistics postulate the basic features of a data of a study showing simple summaries of the data (Trochim, 2006). This study therefore employed percentages for the analysis of the background information while the mean scores as a measure of central tendency.

### **3.7 VALIDITY AND RELIABILITY**

Validity and reliability describes how collection of the data or how the conduction of the analysis brings reliable findings (Saunders *et al.* 2009). The study ensured validity by reducing subject or participant error, subject or participant bias, observer error and observer bias. This was achieved by strictly adhering to sampling techniques to ensure all elements in the sampling frame had equal chances of being selected.

### **3.8 ETHICS**

The involvement of human participants creates ethical issues that need to be considered to ensure the ethical and moral compliance of the study (Farrell, 2011). For this reason, no data was collected from vulnerable teams and the research was carefully designed to avoid creating any type of physical or psychological damage. Additionally, the respondents were informed about the aim of the research and how their personal data were going to be used, as well as full consent was. Furthermore, the option of withdrawing until the deadline of the survey was also available and clearly stated in the covering letter. All data collected were treated with respect and confidentiality, while the questionnaire was hosted in a reliable and secure platform that was chosen.

## CHAPTER FOUR

### DATA PRESENTATION AND ANALYSIS

#### 4.0 INTRODUCTION

This chapter presents the results and discusses the findings of this study. The results are presented mainly in tables, charts and in graphs in order to give a pictorial view. The analysis commences with the profile of the respondents, with much emphasis on gender, department of work within organization. After this, the chapter presents members' responses, in charts and graphs as appropriate. A total of 50 questionnaires were sent out, but a total of 34 questionnaires administered to respondents were retrieved.

#### 4.1 PROFILE OF RESPONDENTS

**Table 4.1: Profile of Respondents**

<b>Variable</b>	<b>Classification</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Gender</b>	Male	29	85
	Female	5	15
	<b>Total</b>	<b>34</b>	<b>100.0</b>
<b>Department</b>	Project Manager	34	100
	<b>Total</b>	<b>34</b>	<b>100.0</b>
<b>Period of Membership</b>	Less than a year	3	9
	1 – 3 years	15	44
	4 years and above	16	47
	<b>Total</b>	<b>34</b>	<b>34</b>
<b>Level of Membership</b>	PMI Membership	34	100
	<b>Total</b>	<b>34</b>	<b>100</b>
<b>Number of Years At Work</b>	Less than 1 year	4	12
	1-3 years	5	15
	4-6 years	7	21
	7-9 years	9	26
	10 years and above	9	26
	<b>Total</b>	<b>34</b>	<b>100.0</b>

**Source: Field Data, 2018**

This table shows the gender, department of work, period of membership and the number

of years respondents have worked in their organisation. Males form a larger proportion of the population recording 85% (29) while females were 15% (5). All respondents were stationed in departments with the role of “Project Manager” with all of the being a PMI Member. The respondents had a total of 16 individuals forming the majority (47%) who have been members of this institute for four years and above. Forty – four (44) respondents had been members between 1 – 3 years whereas 3 respondents representing 9% had been members in less than a year. The respondents for this study had nine (9) individuals who have been at their work post for both 7 – 9 years and 10 years and above. For a period of 4 – 6 years, seven respondents, 1 – 3 years five respondents and less than a year had the least with four respondents representing 12%.

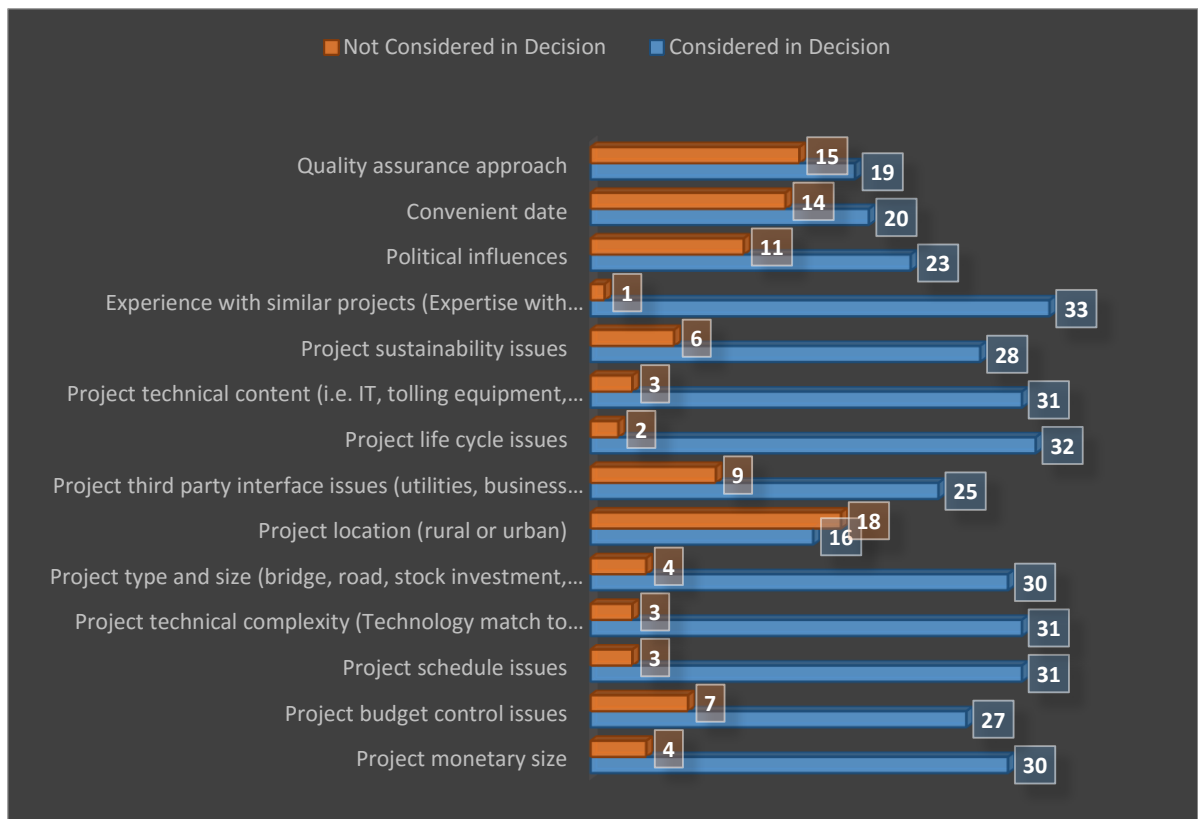
#### **4.2 FACTORS INFLUENCING PROJECT MANAGER’S DECISION**

This section sought to identify various factors that influence the respondent’s decision regarding project risk management issues. Parameters were set for respondents to choose either “Considered in Decision” or Not Considered in Decision”. Responses were given according to their level of perception of the various variables predetermined by the researcher. It was established that, project managers would always like to factor their experience with similar projects mostly in taking such decisions, project monetary size, project schedule issues, project life cycle issues, project technical complexity but they tend to focus more on similar project experience. This stands to prove that, project managers weigh their ordeal in other projects similar to what they are working on and try to correct errors in new project. This helps them to know and decide how to tackle these risks as it arises.

It is clear since this sector or industry deals with and demand a lot of expertise. This had a frequency of 33 while the project life cycle was also next to be considered with 32

responses for it. Project location recorded the variable that could not be factored by most project managers since it had a frequency value of 16 representing 47% of the respondents. Figure 4.1 shows a graphical view of their responses indicating the tallest bar indicating most considered with table 4.2 showing the counts.

**Figure 4.1: Factors Influencing Manager’s Decision**



**Source: – SPSS Data Analysis 2018**

**Table 4.2: Factors Influencing Manager's Decision**

<b>Item</b>	<b>Considered in Decision</b>	<b>Not Considered</b>
Project monetary size	30	4
Project budget control issues	27	7
Project schedule issues	31	3
Project technical complexity (Technology match to project)	31	3
Project type and size (bridge, road, stock investment, etc.)	30	4
Project location (rural or urban)	16	18
Project third party interface issues (utilities, business access, railroads, etc.)	25	9
Project life cycle issues	32	2
Project technical content (i.e. IT, tolling equipment, seismic features).	31	3
Project sustainability issues	28	6
Experience with similar projects (Expertise with Application Experience)	33	1
Political influences	23	11
Convenient date	20	14
Quality assurance approach	19	15

**Source: Field Data, 2018**

### **4.3 BENEFITS OF PROJECT RISK MANAGEMENT PROCESS**

#### **IMPLEMENTATION**

This section sought to identify the benefits associated with implementing project risk management process. A Likert Scale was used in addition to the variables that were predetermined by researcher. The results show that, the most ranked benefit of implementing project risk management process is that, it encourages sustainability. This



variable scored a mean index of 4.71 indicating a very strong figure. It was followed by “A greater expectation for project success and results to be maximized” having a mean of 4.26 with responses of 29 for “Agree”. The least beneficial variable was “Accelerate project delivery period” with the lowest mean of 3.31 though it could pass the benchmark of 2.5 for most mean index analysis. This is then the least benefit as expressed by respondents towards the process. Reducing project life cycle was significant with a score of 3.88, communication among stakeholders is elevated also had 3.68.

**Table 4.3: Benefits of Project Risk Management Process Implementation.**

<b>Variable</b>	<b>Mean Score</b>	<b>Rank</b>
Encourage sustainability	4.71	<b>1</b>
Accelerate project delivery period	3.31	<b>7</b>
Reduce project life cycle cost	3.88	<b>3</b>
Communication among all stakeholders is elevated	3.68	<b>5</b>
A greater expectation for project success and results maximized	4.26	<b>2</b>
Important risk are seen and directed to the right people at the right time	3.53	<b>6</b>
Ensures stability in project earnings	3.82	<b>4</b>

**Source: Field Survey 2018**

The Mean Scores of the various variables were calculated using its formula. The formula used here would be as stated below and same for subsequent analysis based on this approach

$$\text{Mean Index} = \frac{\sum a_i x_i}{N}$$

Where:

a<sub>i</sub>- constant expressing the weight of each response (1 to 5)

x<sub>i</sub>- frequency of the response

N- Total number of responses

Responses were given weights thus 1 – 5 reflecting Strongly Disagree to Strongly Agree respectively.

#### **4.4 CHALLENGES IN IMPLEMENTING PROJECT RISK MANAGEMENT PRACTICES.**

This section looks at the objective of identifying the challenges associated with implementing project risk management practices. As seen, “insufficient ongoing project information for decision making” was recognized as the most pressing challenge with a mean index value of 3.29 thus 28 responses for “Agree”. It was followed by the lack of practical experience which had a value of 3.09 indicating 21 counts for “Strong Agree”. The “Lack of organisational support” based on this study wasn’t recognized as a challenge in implementing project risk management practices. It had the least mean of 0.79 having twenty-nine (29) responses for strongly disagree. Other variables proved insignificant using a benchmark of 2.5 for example “Lack of expertise from RM team” which had a mean score of 1.59 and also “Political and financial instability” having the same 1.59 for its mean index score. This shows that insufficient ongoing project information for decision making is a great challenge when considering the implementation of project risk management.

**Table 4.4: Challenges in implementing project risk management practices**

<b>Variable</b>	<b>Mean Score</b>	<b>Rank</b>
Unsupportive culture	2.94	<b>4</b>
Lack of information and knowledge	2.94	<b>4</b>
Lack of practical experience	3.09	<b>2</b>
Lack of policy and procedures	2.21	<b>6</b>
Lack of expertise from the RM team	1.59	<b>7</b>
No guidelines on the standard procedure of managing risk	3.06	<b>3</b>
Insufficient ongoing project information for decision making	3.29	<b>1</b>
Lack of transparency and communication with project stakeholders	1.47	<b>9</b>
Political and financial instability	1.59	<b>7</b>
Lack of organisational support	0.79	<b>10</b>

**Source: Field Data 2018**

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 INTRODUCTION**

In carrying out projects, stakeholders and especially those assigned to manage such projects are faced with a number of factors to consider when making that decision that could either lead to success of the project or its failure. There are benefits associated with this process while there exist challenges also. Companies and various organizations have in place project managers and experts who are dedicated to the evaluation of projects and also taking vital decisions on their behalf.

This study aimed to realizing the tendency of project managers' risk tolerance toward projects. As professionals and experts in their field, the study took a look at various risk factors that are mostly considered when undertaking a project. It further looked at the benefits and challenges associated with the implementation of project risk management practices. This final chapter presents a summary of the findings to the research objectives, the researcher's conclusion and recommendations to interested stakeholders.

#### **5.2 SUMMARY OF FINDINGS**

This section would provide a succinct review of the findings of this study following the objectives of this studies as they are presented. Below are the findings per the survey.

In summary, Insufficient project data and information for decision making was the paramount challenge in implementing risk management process according to the survey. The readily availability of adequate data before and during are sometimes regarded highly in the sphere of project management as their capacity of backing up decisions taken by project manager is enormous. A good project manager can understand the need of these effective tools which can be used all through the life cycle of project

management. It is imperative that, per the survey, lack of sufficient information adversely affect the success of the project. Secondly, lack of experience and the availability of structured procedure in risk management contributes to a proportional amount to project failures. This is solely true as most organization may have policies available but are not project managers do not adhere to them. It was identified that, some project managers lack experience in executing project. These individuals are hired by organizations solely to reduce cost. Knowledge gap, unsupportive culture, and lack of clear policy and procedure in project management were also key factors that contributed to the challenges in implementing risk management process. Other findings include political and financial instability, lack of transparency on the parts of stakeholders and the overall support of the organization also affects the management and delivery of projects.

### **5.2.1 Factors Influencing Project Manager's Decision**

This objective was the core aim on which this study strived on looking at factors that could influence the decisions of project managers in carrying out projects. It was seen that, project managers while considering a project would factor their similar projects' experience. This is very crucial since it can be used to determine various aspects of the projects. Though some projects may be carried out at unfavorable conditions, our results showed that the location of project are least considered and may not have a great impact on the project manager's decision.

### **5.2.2 The Benefits of Project Risk Management Process Implementation**

A second object was set which looked at the benefits associated with the implementation of project risk management process. Respondents were asked questions and were tasked to respond on a basis of Likert Scale. It was identified that, the benefit of project risk

management practices encouraging sustainability was the most recognized benefit. It was followed by the greater expectation for project success and results maximized while the least considered benefit was accelerating project delivery.

### **5.2.3 The Challenges in Implementing Project Risk Management Practices**

The third and final objective was to identify various challenges associated with the process of implementing project risk management. Insufficient ongoing project information for decision making was the most pressing challenges since the inability to access vital information could render the progress of the project stagnant. Information is crucial to be able to determine the next line of action any activity. The lack of practical experience was also identified as a challenge that can significantly affect the process. Lack of expertise from RM team and political and financial instability were recognize. If the staff lacks direct experience and knowledge of the subject, people will find it hard to learn as they go on thereby slowing down the project and introducing errors.

## **5.3 CONCLUSION**

In knowledge with the findings of the study;

### **5.3.1 Factors that influence project managers' decision**

It can be stated that the factors that affect project managers risk management decisions, that is experience with similar projects (expertise with application experience) and also project life cycle issues are very crucial and this needs to be made by considering various elements of the project under analysis.

### **5.3.2 Benefits of project risk management process implementation**

Project managers also agree that risk management also encourages sustainability and greater expectation for project success and results maximization are benefits gained from risk management implementation processes.

### **5.3.3 Challenges in implementing project risk management practices.**

With the challenges, it was stated that insufficient ongoing project information for decision making is the most pressing challenge. It is therefore very important that vital information linked to a particular project should be made available to all stakeholders who qualify to have this information. Project managers should also be determined to gain more knowledge and understanding of subject area that poses risk during project management and execution.

## **5.4 RECOMMENDATIONS**

Following the findings and conclusions arrived at in the conduct of this study, the following suggestions are recommended for consideration.

### **5.4.1 Recommendations on the challenges associated with the Implementation of Project Risk Management Practices**

- During the planning stage, a full risk assessment about the project should be made as an effective measure to curb risks.
- Stakeholders should involve themselves from the start to the end of a project. This would ensure the issue of information asymmetry is dealt with.
- Risk management should be considered a primary tool to assess projects.
- Organizations and top management should also provide their support to project management team throughout the life cycle of projects. Most companies follow

top to down approach, but the down to top approach should be used so that employees' voices are heard.

- Doing the right at the right time via the right people yields desired outcomes. This can be employed during effective project management.
- Challenges associated with Issues related to learning and hiring the right resources could influence implementation of best practices. It is therefore recommended that competent project risk consultants with good understanding of basic principles in project risk management contribute greatly to the success of any project and its delivery. Finney and Corbett (2007) posited that a project champion, balanced team, and empowered decision makers are critical for project success.
- User training, education and developing project management skills and capabilities are also essential (Somers & Nelson, 2004). Therefore, for implementing best practices, project organization must have capable and efficient project managers, PMO staff, consultants, and project team members with required knowledge, and skills.
- Also assessing people capabilities as early as possible in the project can drive the project to success (Chemuturi, 2013)

## **5.5 LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH**

Although this study provides important insights into the relationship between risk identification and the willingness to accept it, the sample size can be increased in future studies. More organizations somehow run projects with little or no risk management experience which can affect the delivery of the project. This study may lack some generalizability with regards to the application of the findings to risk identification and



acceptance even though the project managers past experienced may be considered but not relied on.

Secondly, this research did not examine or consider the risk associated within the industries the Project Managers were sampled. The risk tolerance policies of each organization sampled should also be conceded in future studies as the policies may affect the willingness to take risk.

## REFERENCES

- Abu Mousa, J. (2005). Risk Management In Construction Projects From Contractors And Owners" Perspectives. *Master of Science in Construction Management. The Islamic University of Gaza, Palestine.*
- Agbodjah, L. S. (2008). A Human Resource Management Policy Development (HRMPD) Framework for Large Construction Companies Operating in Ghana.
- Arrow, K. J. (1965). *Aspects of the theory of risk-bearing*. Yrjö Jahnssonin Säätiö.
- Assaf, S. A., & Al-Hejji, S. (2006). Causes of delay in large construction projects. *International journal of project management*, 24(4), 349-357.
- Available at: <http://www.socialresearchmethods.net/kb/statinf.php> [Accessed May 22, 2016].
- Boston: Beacon Press.
- Bryman, A. (2004). Qualitative research on leadership: A critical but appreciative review. *The leadership quarterly*, 15(6), 729-769.
- Carbone, T. A., & Tippett, D. D. (2004). Project risk management using the project risk FMEA. *Engineering Management Journal*, 16(4), 28-35.
- Cerić, A. (2003). A framework for process-driven risk management in construction projects.
- Chapman, C. B., & Cooper, D. F. (1983). Risk engineering: Basic controlled interval and memory models. *Journal of the Operational Research Society*, 34(1), 51-60.
- Chapman, C., & Ward, S. (2004). Why risk efficiency is a key aspect of best practice projects. *International Journal of Project Management*, 22(8), 619-632.

CIV2013-0639

- Clark, R. C., Pledger, M., & Needler, H. M. J. (1990). Risk analysis in the evaluation of non-aerospace projects. *International Journal of Project Management*, 8(1), 17-24.
- Creswell, J. W. (2003). Research design: Qualitative, quantitative, and mixed methods design.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Daw, C. (1999). Risk training - the neglected part of project management. The Training Report. Crownhill Publishing.
- De Ridder, H., & Vrijhoef, R. (2013). Developing a value-price-cost leverage model for integrated value chain and life cycle management of built objects. In *Proceedings from CIB Student Chapters Symposium, Hong Kong*.
- Drucker, P. F. (2010). The Drucker Lectures.
- Egan, J. (2012). Rethinking construction in the India (Construction Task Force, India Department of the Environment Transport and the Regions HMSO, London). (PDF) *The Role of the Project Manager in Construction Projects in India*.
- Ehsan, N., Mirza, E., Alam, M., & Ishaque, A. (2010, July). Notice of Retraction Risk management in construction industry. In *Computer Science and Information Technology (ICCSIT), 2010 3rd IEEE International Conference on* (Vol. 9, pp. 16-21). IEEE.
- England: Wiley.
- Farrell, D. M. (2011). *Electoral systems: a comparative introduction*. Macmillan International Higher Education.

- Fisher, C. (2010). *Researching and writing a dissertation: an essential guide for business students*. Pearson Education.
- Flanagan, R. & Norman, G. (1993). *Risk management and construction*. Oxford, England: Blackwell Scientific.
- Flanagan, R., Norman, G., & Chapman, R. 2006. *Risk management and construction* 2<sup>nd</sup> ed.
- Formoso, C. T., Soibelman, L., De Cesare, C., & Isatto, E. L. (2002). Material waste in building industry: main causes and prevention. *Journal of construction engineering and management*, 128(4), 316-325.
- Glass, G. V., & Hopkins, K. D. (1984). Inferences about the difference between means. In *Statistical methods in education and psychology* (pp. 249-253). Prentice-Hall, Inc, Englewood Cliffs, NJ.
- Godfrey, P. S. (1996). *Control of risk a guide to the systematic management of risk from construction*. CIRIA.
- Godfrey, P. S. (1996). *Control of risk a guide to the systematic management of risk from construction*. CIRIA.
- Guide, A. (2001). Project Management Body of Knowledge (PMBOK® GUIDE). In *Project Management Institute*.
- Guide, A. (2001). Project Management Body of Knowledge (PMBOK® GUIDE). In *Project Management Institute*.
- Hirshleifer, D., & Thakor, A. V. (1992). Managerial conservatism, project choice, and debt. *The Review of Financial Studies*, 5(3), 437-470.
- Hopp, W. J., & Spearman, M. L. (2011). *Factory physics*. Waveland Press.
- Hughes, W., Champion, R., & Murdoch, J. (2015). *Construction contracts: law and management*. Routledge.

- ICE (2005). RAMP - Risk Analysis and Management for Projects: A Strategic Framework for Managing Project Risk and its Financial Implications, 2<sup>nd</sup> ed. London: Thomas Telford Publishing.
- International Journal of Innovative Technology and Exploring Engineering (IJITEE), Vol. 3(5), pp.139-142.
- Jackson, T. (2009). Prosperity Without Growth. Economics for a Finite Planet. London (Earthscan) 2009..
- Jaggi, S. (2003). Descriptive statistics and exploratory data analysis. Indian Agricultural Statistics Research Institute. Retrieved May 24, 2015.
- Janes, J. (1999). Descriptive statistics: where they sit and how they fall. *Library hi tech*, 17(4), 402-409.
- Jarrett, E. L. (2000). The role of risk in business decision-making, or how to stop worrying and love the bombs. *Research-Technology Management*, 43(6), 44-46.
- Jekale, W. (2004). Performance for public construction projects in developing countries: Federal road and educational building projects in Ethiopia. *Norwegian University of Science & Technology*.
- Jha, K. N. (2013). Factors for the success of a construction project: An empirical study (Doctoral thesis, Indian Institute of Technology, Delhi, India).
- Jha, K. N., & Chockalingam, C. T. (2009). Prediction of quality performance using artificial neural networks: Evidence from Indian construction projects. *Journal of Advances in Management Research*, 6(1), 70-86.
- Kahneman, D., & Lovallo, D. (1993). Timid choices and bold forecasts: A cognitive perspective on risk taking. *Management science*, 39(1), 17-31.
- Kahneman, D., & Tversky, A. (1979). On the interpretation of intuitive probability: A reply to Jonathan Cohen.

- Kahneman, D., & Tversky, A. (2013). Choices, values, and frames. In *Handbook of the Fundamentals of Financial Decision Making: Part I* (pp. 269-278).
- Kartam, N. A., & Kartam, S. A. (2001). Risk and its management in the Kuwaiti construction industry: a contractors' perspective. *International journal of project management*, 19(6), 325-335.
- Kerzner, H., & Kerzner, H. R. (2017). *Project management: a systems approach to planning, scheduling, and controlling*. John Wiley & Sons.
- Kerzner, H., & Kerzner, H. R. (2017). *Project management: a systems approach to planning, scheduling, and controlling*. John Wiley & Sons.
- Kirkpatrick, R. J., Walker, J. A., & Firth, R. (1992). Software development risk management: an SEI appraisal. *SEI Technical Review*, 92.
- Kliem, R. L., & Ludin, I. S. (1997). *Reducing project risk*. Gower Publishing, Ltd..
- Kliem, R., & Ludin, I. (1999, January). Tools and tips for today's project manager. Project Management Institute.
- Kwofie, E. T. (2015). *Contribution of unique features of mass housing projects to project team communication performance* (Doctoral dissertation).
- Lambert, R. A. (1986). Executive effort and selection of risky projects. *The Rand Journal of Economics*, 77-88.
- Larson, E. W., Gray, C. F., Danlin, U., Honig, B., & Bacarini, D. (2014). *Project management: The managerial process* (Vol. 6). Grandview Heights, OH: McGraw-Hill Education.
- Levy, S. M. (2012). *Japanese construction: an American perspective*. Springer Science & Business Media.
- Lind, H., & Brunes, F. (2015). Explaining cost overruns in infrastructure projects: a new framework with applications to Sweden. *Construction Management and Economics*, 33(7), 554-568.

- Mahendra, P. A., Pitroda, J. R., & Bhavsar, J. J. (2013). A study of risk management techniques for construction projects in developing countries. *International Journal of Innovative Technology and Exploring Engineering*, 3(5), 139-142.
- March, J. G., & Shapira, Z. (1987). Managerial perspectives on risk and risk taking. *Management science*, 33(11), 1404-1418.
- March, J.G., Shapira, Z., 1987. Managerial perspectives on risk and risk taking. *Management Science*, 33(11), 1404–1418.
- Mills, A. (2001). A systematic approach to risk management for construction. *Structural survey*, 19(5), 245-252.
- Morgenstern, O., & Von Neumann, J. (1953). *Theory of games and economic behavior*. Princeton university press.
- Morgenstern, O., & Von Neumann, J. (1953). *Theory of games and economic behavior*. Princeton university press..
- Morgenstern, O., & Von Neumann, J. (1953). *Theory of games and economic behavior*. Princeton university press.
- Oxford: Blackwell Publishers.
- (PDF) *The Role of the Project Manager in Construction Projects in India*.
- PMI, A. (2013). Guide to Project Management Body of Knowledge: PMBoK Guide. ed. Pennsylvania-USA: Project Management Institute..
- Polit Denise, F., & Hungler Bernadette, P. (1999). Nursing research principles and methods.
- Pratt, J. W. (1988). Aversion to one risk in the presence of others. *Journal of Risk and Uncertainty*, 1(4), 395-413.
- Ross, S. A. (1981). Some stronger measures of risk aversion in the small and the large with applications. *Econometrica: Journal of the Econometric Society*, 621-638.

Salford, UK: University of Salford.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Pearson education.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Pearson education.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Pearson education.

Shibani, A., & Sukumar, D. (2015). The Role of the Project Manager in Construction Projects in India. *Chinese Business Review*, 14(6), 298-324.

Skoyles, E. R. (2011). *Project management on site*. London: Mitchell Publications.

Smith, N. J., Merna, T., & Jobling, P. (2009). *Managing risk: in construction projects*. John Wiley & Sons.

Trochim, W. M. (2006). Inferential statistics. *Research methods knowledge base*, 4.

Turner, R. G. (1986). *Construction economics and building design: a historical approach*. Van Nostrand Reinhold Company.

Tversky, A., & Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and uncertainty*, 5(4), 297-323.

Tversky, A., & Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and uncertainty*, 5(4), 297-323.

Uher, T.E. (2003). Risk management in the conceptual phase of a project Uncertainty, *Construction Management and Economics*, Vol. 7(2) pp. 103-113.

Wang, F., & Hannafin, M. J. (2005). Design-based research and technology-enhanced learning environments. *Educational technology research and development*, 53(4), 5-23.



Wideman, R. H. (1986). *U.S. Patent No. 4,606,964*. Washington, DC: U.S. Patent and Trademark Office.

Wilemon, D. L., & Cicero, J. P. (1970). The project manager—Anomalies and ambiguities. *Academy of Management Journal*, 13(3), 269-282.

Websites:

[http://conferinta.management.ase.ro/archives/2017/pdf/5\\_9.pdf](http://conferinta.management.ase.ro/archives/2017/pdf/5_9.pdf)

[http://erepository.uonbi.ac.ke/bitstream/handle/11295/93082/Nzioka\\_Risk%20management%20practices%20and%20implementation%20challenges%20at%20kenya%20electricity%20generating%20company%20ltd.pdf?sequence=1&isAllowed=y](http://erepository.uonbi.ac.ke/bitstream/handle/11295/93082/Nzioka_Risk%20management%20practices%20and%20implementation%20challenges%20at%20kenya%20electricity%20generating%20company%20ltd.pdf?sequence=1&isAllowed=y)

[http://web.usm.my/jcdc/vol21\\_2\\_2016/JCDC%2021\(2\)%20Art%205\\_early%20view.pdf](http://web.usm.my/jcdc/vol21_2_2016/JCDC%2021(2)%20Art%205_early%20view.pdf)

<http://www.acrn-journals.eu/resources/jfrp201403a.pdf>

<https://www.researchgate.net/publication/258841416> - ATINER's Conference Paper Series

[https://www.researchgate.net/publication/276059340\\_Best\\_Practices\\_and\\_Implementation\\_Challenges\\_in\\_Effective\\_Project\\_Management](https://www.researchgate.net/publication/276059340_Best_Practices_and_Implementation_Challenges_in_Effective_Project_Management)

## APPENDICES

### RESEARCH STUDY QUESTIONNAIRE.

My name is Abigail Elikplim Otoo, a student of Kwame Nkrumah University of Science and Technology pursuing a master's Degree in Project Management. I would be much grateful if you would fill this questionnaire for a research on **A Study on Project Managers' Willingness to Take Risk**. This work is purely for academic purposes and the data collected and the results will not be used in any way to jeopardize the interest of your unit or organization.

#### SECTION A: PROFILE OF RESPONDENTS

*Kindly tick (✓) your appropriate option.*

1. Sex: Male [ ]      Female [ ]
2. Which department of your organization do you work? \_\_\_\_\_
3. How long have you been a member in this chapter?  
Less than 1 year [ ]      1 - 3 years [ ]      4 years and above [ ]
4. What is your level of membership? \_\_\_\_\_
5. How long have you worked in this organization?  
Less than 1 year [ ]    1 - 3 years [ ]      4 – 6 years [ ]    7 – 9 years [ ]    10  
years and above [ ]

**SECTION B: FACTORS THAT INFLUENCE PROJECT MANAGERS’  
DECISION**

<i>Factors</i>	<b>Considered in Decision</b>	<b>Not Considered in Decision</b>
6. Project monetary size	<b>1</b>	<b>2</b>
7. Project budget control issues	<b>1</b>	<b>2</b>
8. Project schedule issues	<b>1</b>	<b>2</b>
9. Project technical complexity (Technology match to project)	<b>1</b>	<b>2</b>
10. Project type and size (bridge, road, stock investment, etc.)	<b>1</b>	<b>2</b>
11. Project location (rural or urban)	<b>1</b>	<b>2</b>
12. Project third party interface issues (utilities, business access, railroads, etc.)	<b>1</b>	<b>2</b>
13. Project life cycle issues	<b>1</b>	<b>2</b>
14. Project technical content (i.e. IT, tolling equipment, seismic features)	<b>1</b>	<b>2</b>
15. Project sustainability issues	<b>1</b>	<b>2</b>
16. Experience with similar projects (Expertise with Application Experience)	<b>1</b>	<b>2</b>
17. Political influences	<b>1</b>	<b>2</b>
18. Convenient date	<b>1</b>	<b>2</b>
19. Quality assurance approach	<b>1</b>	<b>2</b>

*Others, specify*

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**SECTION C: BENEFITS OF PROJECT RISK MANAGEMENT PROCESS IMPLEMENTATION**

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
20. Encourage sustainability					
21. Accelerate project delivery period					
22. Reduce project life cycle cost					
23. Communication among all stakeholders is elevated					
24. A greater expectation for project success and results maximized					
25. Important risk are seen and directed to the right people at the right time					
26. Ensures stability in project earnings					

*Are there any other benefits associated with the implementation of project risk management practices? Yes [ ] No [ ] If **Yes** kindly specify*

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**SECTION D: CHALLENGES IN IMPLEMENTING PROJECT RISK  
MANAGEMENT PRACTICES**

<i>Challenges of Using Social Media</i>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
27. Unsupportive culture					
28. Lack of information and knowledge					
29. Lack of practical experience					
30. Lack of policy and procedures					
31. Lack of expertise from the RM team					
32. No guidelines on the standard procedure of managing risk					
33. Insufficient ongoing project information for decision making					
34. Lack of transparency and communication with project stakeholders					
35. Political and financial instability					
36. Lack of organisational support					

Others, kindly specify

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