



ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

SCHOOL OF COMMERCE

**ASSESSMENT OF RISK MANAGEMENT PRACTICE IN ADDIS
ABABA CITY ADMINISTRATION HOUSING DEVELOPMENT
PROJECT: THE CASE OF ADDIS ABABA CITY SAVING
HOUSES DEVELOPMENT ENTERPRISE (40/60 SCHEMES)**

A Research Project Work Submitted to the School of Graduate Studies of Addis
Ababa University in Partial Fulfillment for Master of Arts in Project Management

By: Ali Mohammed

Advisor: Solomon Markos (Dr.)

June 2018

ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
SCHOOL OF COMMERCE

This is to certify that the research project presented by Ali Mohammed entitled: “Assessment of Risk Management Practice in Addis Ababa City Administration Housing Development Project: The Case of Addis Ababa City Saving Houses Development Enterprise (40/60 Schemes)” and submitted in partial fulfillment of the requirements for the degree of Masters of Art in Project Management complies with the regulation of the University and meets the accepted standards with respects to originality and quality.

Signed by Examining Committee

Examiner(Internal)..... SignatureDate.....

Examiner(External)..... SignatureDate.....

Advisor..... SignatureDate.....

Chair of Department or Graduate Program Coordinator

STATEMENT OF DECLARATION

I, Ali Mohammed, declare that this research project entitled “Assessment of Risk Management Practice in Addis Ababa City Administration Housing Development Project: The Case of Addis Ababa City Saving Houses Development Enterprise (40/60 Schemes)” is the outcome of my own effort and study. All sources of materials used for the study have been duly acknowledged. This study has not been presented for a degree in any university.

Ali Mohammed

Signature: _____

Date: _____

STATEMENT OF CERTIFICATION

This is to certify that Ali Mohammed has carried out this project work on the topic entitled “Assessment of Risk Management Practice in Addis Ababa City Administration Housing Development Project: The Case of Addis Ababa City Saving Houses Development Enterprise (40/60 Schemes)” under my supervision. This work is original in nature and it is sufficient for submission for the partial fulfillment for the award of Degree of Master of Art in Project Management. .

Solomon Markos, (PHD)

Signature:_____

Date:_____

ACKNOWLEDMENT

First of all I would like to thank ALLAH for granting me strength to fulfill my study on the right time. My sincere thanks is extended to my advisor Dr Solomon M. for his unreserved support and guidance given to me from the start of the preparation of my proposal to the completion of this research paper. Moreover I would like to extend my gratitude to Addis Ababa City Saving Houses Development Enterprise for their instantaneous response given to me to conduct my research in the two of available 40/60 Condominium sites. Also I would like to thank staffs and management of two branch offices (Hayat & Bulbula) for their invaluable support provided to me during data collection.

This paper is dedicated to my beloved late mother, Keria Temam, who always showed me to feel confident and gave her entire life to facilitate for my proper upbringing. A wonderful mom and my mentor. Your kindness & deep love will stay with me forever.

Table of Contents

CHAPTER ONE: INTRODUCTION	1
1.1. Background to the Study.....	1
1.2. Statement of the Problem.....	2
1.3. Research Questions.....	3
1.4. Objective of the study	4
1.4.1. Specific Objectives:	4
1.5. Significance of the Study	4
1.6. Delimitations and Scope of the study	4
1.7. Limitations of the Study.....	5
1.8. Operational Definitions.....	5
CHAPTER TWO: LITERATURE REVIEW	7
2.1 Definition of Terms.....	7
2.1.1. Project	7
2.1.2. Project Management	7
2.1.3. Project Risk and Risk Management	8
2.2. Project Management Knowledge Areas.....	8
2.3. Project Management Approach as a Function of Risk.....	11
2.4. Certainty, Risk, and Uncertainty.....	11
2.4.1. Decision-making under certainty	12
2.4.2. Decision-Making under Risk	12
2.4.3. Decision-making under Uncertainty	12
2.5. Factor that can expose project to higher risk	12
2.6. Project Risk Management processes.....	13
2.6.1. Plan Risk Management	13
2.6.2. Identify Risks	14
2.6.3. Risk Analysis	14

2.6.4. Plan Risk Responses	16
2.6.5. Control Risks	16
CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY	17
3.1. Research Design and Approach	17
3.2. Data Type, Sources and Method of Data Collection.....	17
3.3. Target Population and Sampling Design	17
3.3.1. Sampling Technique	18
3.3.2. Sampling Size	18
3.4. Data Analysis and Presentation.....	18
3.5 Ethical Issues	18
3.6 Validity and Reliability.....	19
3.7 Organization of the study.....	19
CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION	21
4.1 Introduction.....	21
4.2 Response Rate.....	21
4.3 General information of respondents.....	21
4.4 Response about project risk management in general	23
4.5 Risk planning related response	27
4.6 Risk identification related response	30
4.7 Risk analysis related response	33
4.8 Risk response related responses.....	35
4.8.1 Risk avoidance related responses.....	37
4.8.2 Risk transfer related responses.....	40
4.8.3 Risk reduction related responses.....	42
4.8.4 Risk acceptance related responses	44
4.9 Risk monitor & control related responses.....	45
4.10 Organizational risk management culture related responses	47

CHAPTER FIVE: FINDINGS, CONCLUSIONS AND RECOMMENDATIONS.....	50
5.1 Introduction.....	50
5.2 Summary of the findings.....	50
5.3 Conclusions.....	53
5.4 Recommendations.....	54
References.....	56
ANNEXES.....	A
Annex 1: Questionnaire for Survey	A
Annex 2: Informed Consent Form for Interview Participants	F
Annex 3: Interview Guide for the Project Manager.....	G

List of Tables

Table 3.1 1 Reliability and Validity.....	19
Table 4.1 1 Age of the respondents	21
Table 4.2 1 Gender of the Respondents	22
Table 4.3 1 Highest level of education achieved	22
Table 4.4 1 Total years of work experience acquired.....	22
Table 4.5 1 Work experience on the project	23
Table 4.6 1 Response regarding policy/guideline and standards	23
Table 4.7 1 Response regarding assigned person and treatment of risk management.....	24
Table 4.8 1 Response regarding who handles uncertainties within the project	25
Table 4.9 1 Response to risk management plan.....	27
Table 4.10 1 Response to expert judgment & risk management treatment	28
Table 4.11 1 Response to environmental factor & training for team members	29
Table 4.12 1 Response to Risk Management Plan Incorporation	30
Table 4.13 1 Response to Team Members Role in Risk Identification	30
Table 4.14 1 Response to method used in identifying risk	31
Table 4.15 1 Response to Sources of Risk in the Project	32
Table 4.16 1 Response to Characteristics of Risk.....	33
Table 4.17 1 Response to measurement system to analyze the risk	33
Table 4.18 1 Response to document updating after assessment	34
Table 4.19 1 Response to the techniques used to assess the probability of risk occurrence in the project	34
Table 4.20 1 Response to the strategy to respond to risks	35

Table 4.21 1Response to the different factor consideration while responding to risks	36
Table 4.22 1Response to risk response strategies	37
Table 4.23 1 Response to contingency plan to avoid delays	37
Table 4.24 1Response to use of detailed work plan.....	38
Table 4.25 1Response to availability of protection and safety system	39
Table 4.26 1Response to availability of regular inspection	39
Table 4.27 1Response to Availability of training program for employee	40
Table 4.28 1Response to outsourcing to reduce schedule impact	40
Table 4.29 1 Response to purchase of insurance premium & entering legal agreement ..	41
Table 4.30 1Response to periodic meeting & quality assurance techniques	42
Table 4.31 1Response to adherence to signed contract & Planning for crisis meetings ..	43
Table 4.32 1 Response to taking no action for good.....	44
Table 4.33 1Response to risk monitor, control & review	45
Table 4.34 1Response to availability of information & control risk to meet objectives ..	46
Table 4.35 1Response to utilization of recognized training method & funding	47
Table 4.36 1Response to communication of risk to the employee or stakeholder	48
Table 4.37 1Statistics for major variables.....	49

Abstract

This study tried to assess the practice of project risk management in Addis Ababa City Saving Houses Enterprise (AAC SHE). The researcher has used descriptive research design. The data collection tools were questionnaire & semi structured interview. The sample size of the study was 40 individuals who were selected through purposive sampling. The response rate was 100%. The sample size was selected through purposive sampling and a questionnaires with an item of 49 was distributed to the team members and individuals who are involved with the projects. The findings of the study revealed that there is no well organized policy or guideline that recommend how to manage risks in the projects. The project doesn't usually follows a defined or standard risk management process. Majority of respondents believed risk management is not treated as a continuous process in the project. The finding of the result showed irregularity as far as handling of uncertainties that occur within the project. Careful plan is not designed for the projects to overcome or handle uncertain events that may take place. Even though few respondents reported the Enterprise use of risk identification such as expert judgment, checklist, document review, information gathering, & assumption analysis, most of them disagree the existence of the practice of these method in the project. According to the respondents the majority source of risk in the project was human risk followed by technical and financial risks. Majority of respondent disagree the existence of well developed strategy to respond to uncertainties if they occur. The Enterprise lags behind in the practice of risk monitoring and control within the project. Furthermore, risk management culture is very low in the enterprise. Generally, the outcome of the research confirmed that risk management practice is implemented to some extent but there is a gap between the theory of project risk management which should be applied and the actual practice that is performed by the two condominium project sites. Therefore, possible recommendations are outlined at the end of this project work on what actions should be taken to improve the practice.

Key words: Risk identification, Risk management, Risk monitoring & control

CHAPTER ONE: INTRODUCTION

1.1. Background to the Study

Every project manager understands risks are inherent in projects. No amount of planning can overcome risk, or the inability to control chance events. In the context of projects, risk is an uncertain event or condition that, if it occurs, has a positive or negative effect on project objectives (GRAY, Project Management the Managerial Process Fifth Edition, 2011).

Risk management is the means by which uncertainty is systematically managed to increase the likelihood of meeting project objectives (Verzuh, 2003, p. 180). According to GRAY (2011), Risk management is a proactive approach rather than reactive. It is a preventive process designed to ensure that surprises are reduced and that negative consequences associated with undesirable events are minimized. It also prepares the project manager to take action when a time, cost, and/or technical advantage is possible. Successful management of project risk gives the project manager better control over the future and can significantly improve chances of reaching project objectives on time, within budget, and meeting required technical (functional) performance.

Verzuh (2003) stipulate that the purpose of project risk management is to identify the unknowns on the project and reduce the potential for damage.

According to (Kerzner, 2001) the risk management process include: a formal planning activity, analysis to quantify the likelihood and predict the impact on the project, a handling strategy for selected risks, and the ability to monitor the progress in reducing these selected risks to the desired level.

Project Management Institute (2013) depict that Project Risk Management includes the processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project. The objectives of project risk management are to increase the likelihood and impact of positive events, and decrease the likelihood and impact of negative events in the project.

The researcher tried to review various researches conducted in the area. In fact there are numerous studies conducted by students and few academicians on Addis Ababa Housing Development projects however, almost all of them didn't touch the subject matter the Researcher

intends to study. Furthermore, we often hear most projects including Addis Ababa Housing Development Project are not completed on time, quality and budget. Due to shortage of studies on this topic in the specified organization the researcher takes this as an advantage and will try to look the gap in light of the topic under study. Therefore, the present research will attempt to assess the risk management practice in Addis Ababa City House Saving Enterprise 40/60 Schemes.

1.2. Statement of the Problem

As Brandon (2006) stipulated Risks are inevitable in projects, and if a Project Manager does not practice sound risk management, that Project Manager may constantly be in a crisis-management mode. Risk (p. 157 & 158) is the possibility of suffering loss. In a given project, the loss may involve increased costs, longer completion times, reduced scope, reduced quality, reduced realization of proposed benefits, or reduced stakeholder satisfaction.

Risk management is increasingly seen as one of the main jobs of project managers (Sommerville, 2003 as cited in Brandon (2006) p. 157).

Some potential risk events can be identified before the project starts—such as equipment malfunction or change in technical requirements. Risks can be anticipated consequences, like schedule slippages or cost overruns (GRAY, Project Management the Managerial Process Fifth Edition, 2011).

Risk management can be justified on almost all projects. The level of implementation can vary from project to project, depending on such factors as size, type of project, who the customer is, relationship to the corporate strategic plan, and corporate culture. Risk management is particularly important when the overall stakes are high and a great deal of uncertainty exists. In the past, we treated risk as a "let's live with it." Today, risk management is a key part of overall project management. It forces us to focus on the future where uncertainty exists and develop suitable plans of action to prevent potential issues from adversely impacting the project (Kerzner, 2001).

Risk management attempts to recognize and manage potential and unforeseen trouble spots that may occur when the project is implemented. Risk management identifies as many risk events as possible (what can go wrong), minimizes their impact (what can be done about the event before

the project begins), manages responses to those events that do materialize (contingency plans), and provides contingency funds to cover risk events that actually materialize (GRAY, Project Management the Managerial Process Fifth Edition, 2011).

If risk management is set up as a continuous, disciplined process of planning, assessment (identification and analysis), handling, and monitoring, then the system will easily supplement other systems as organization, planning and budgeting, and cost control. Surprises that become problems will be diminished because emphasis will now be on proactive rather than reactive management (Kerzner, 2001, p. 904).

Many studies have undertaken in fragmented aspects to assess and evaluate the implementation of the Integrated Housing Development Program focusing on one or two specific towns, mainly focused on its contributions toward addressing housing shortages, slum reduction and job opportunity. The program has also been criticized on un-affordability of the houses for low-income residents, for lack of clear and updated compensation and relocation schemes, as well its inability to network the urban poor access to loans from financial institutions to make them afford the down payment to purchase the condominium houses. Many researchers are assumed about the quality, life span and structures of the condominium buildings, construction finishing and infrastructure. This study looked it from the side of the organization in terms of risk management practice which is one of the main factor for poor quality, cost and schedule overrun.

Even though it is widely acknowledged in literature that project risk management can help to successfully bring the project to completion project stakeholders i.e. project managers, project team and sponsors may be interested to understand this linkage for example of what are the risk management process (Risk planning, Risk identification, Risk analysis, Risk response planning & Control risks) with the relative contribution of each of the techniques of risk management and especially risk response plans and how they impact on success of the project in terms of meeting the planned project duration. With in mind this study described the practice of risk management in the Addis Ababa Housing development project especially 40/60 scheme.

1.3. Research Questions

A research question summarizes the significant issue that the research investigated. It is the fundamental core of a research project, study, or review of literature. The following are some of the research questions that the study seeks answers to:

1. Does the organization have a risk management plan?
2. How the organization identify risks?
3. To what extent does the organization analyze risks (if they tend to identify properly)?
4. Which risk response plan does the organization use most often? And why?
5. How the organization monitor and control risks?

1.4. Objective of the study

The general objective of this study is to assess the risk management practice of Addis Ababa City House Saving Enterprise 40/60 Schemes.

1.4.1. Specific Objectives:

- To identify if there is risk management plan in the projects.
- To assess the methods used to identify risks in the projects.
- To assess how the risks that are identified are analyzed in the projects.
- To identify the options used to respond to risks and uncertainties that occur in the projects.
- To identify if monitoring and controlling mechanism is applied in the projects.

1.5. Significance of the Study

Effective risk management practice in project management helps one to identify project's strengths, weaknesses, opportunities and threats. This study established the influence of risk management practice on the overall success of the projects and it signified to people who are involved in project management activities and described the importance of incorporating risk response strategies and how they can apply them as they endeavor to manage their projects.

1.6. Delimitations and Scope of the study

While risks can have positive consequences such as unexpected price reduction in materials, this study focused mainly on those risks results in negative consequences.

Furthermore, the study was limited to in the investigation of risk management practice in the Addis Ababa City Saving Houses Development Enterprise (which is commonly known as 40/60 Schemes).

1.7. Limitations of the Study

One of the challenges that was faced by the study was that respondents found it difficult to give honest feedback even though their anonymity was guaranteed and furthermore they felt that negative responses reflect on their abilities in managing Projects and not on factors beyond their control.

1.8. Operational Definitions

Project: A temporary endeavor undertaken to create a unique product, service or result.

Project life cycle: Project Life Cycle refers to a series of activities which are necessary to fulfill project goals or objectives.

Project Success: The completion of an activity within the constraints of time, cost, and performance.

Project management: Is the planning, organizing, directing, and controlling of company resources for a relatively short -term objective that has been established to complete specific goals and objectives.

Uncertainty: Is an absence of information, knowledge, or understanding regarding the outcome of an action, decision, or event.

Risk: Any event that may occur in the project life cycle and has an effect on the set objectives of the project.

Threat: Are the negative or “downside” effects of risk.

Opportunities: The positive effects of risk.

Risk management: Risk management is a series of steps whose objectives are to identify, address, and eliminate risk items before they become either threats to successful operation or a major source of expensive rework.

Plan Risk Management: is the process of defining how to conduct risk management activities for a project.

Risk Identification: is the process of determining which risks may affect the project and documenting their characteristics.

Risk Analysis: Is about determining which threats are of greatest concern.

Plan Risk Responses: Is the process of developing options and actions to enhance opportunities and to reduce threats to project objectives.

Control Risks: is the process of implementing risk response plans, tracking identified risks, monitoring residual risks, identifying new risks, and evaluating risk process effectiveness throughout the project.

Risk avoidance: The risk avoidance strategy seeks to eliminate any likely risk. It entails changing the project to avoid the risk, change scope, objectives, etc.

Risk transference: The risk transference strategy aims to pass ownership and/or Liability for a particular risk to a third party. It involves shifting the impact of a risk to a third party (like a subcontractor). It does not eliminate it, it simply shifts responsibility.

Risk mitigation: Seeking to reduce the size of the risk exposure to below an acceptable threshold. It involves taking steps to reduce the probability and/or impact of a risk.

Risk acceptance: Recognizing residual risks and devising responses to control and monitor them.

Schedule/Time overrun: Delay in the schedule of a given activity or milestone experienced during project lifecycle.

Cost Overrun: Is the additional percentage or Dollar/ETB amount by which actual costs exceed estimate.

CHAPTER TWO: LITERATURE REVIEW

2.1 Definition of Terms

2.1.1. Project

Many authors have defined projects in several ways. In this paper we are going to discuss the basic definition of project.

A project is a temporary endeavor undertaken to create a unique product, service, or result. The temporary nature of projects indicates that a project has a definite beginning and end. The end is reached when the project's objectives have been achieved or when the project is terminated because its objectives will not or cannot be met, or when the need for the project no longer exists (Project Management Institute, 2013, p. 3).

Projects are the building blocks in the design and execution of strategies for an organization. Projects provide an organizational focus for conceptualizing, designing, and creating new or improved products, services, and organizational processes (CLELAND, 2004). From the above two definition we can see the uniformity of the definition of project among authors.

2.1.2. Project Management

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. Project management is accomplished through the appropriate application and integration of the 47 logically grouped project management processes, which are categorized into five Process Groups. These five Process Groups are: Initiating, Planning, Executing, Monitoring and Controlling, and Closing (Project Management Institute, 2013, p. 5).

Gary R. Heerkens (2002) in his book of Project Management agrees with the above definition of Project Management but raised his concern by saying the above definition may sound pretty straightforward, you will find that the skillful application of those skills, tools, and techniques will come only after you've had a significant amount of education and on-the-job experience.

Project management is the art of creating the illusion that any outcome is the result of a series of predetermined, deliberate acts when, in fact, it was dumb luck (Kerzner, 2001).

2.1.3. Project Risk and Risk Management

In the context of projects, risk is an uncertain event or condition that, if it occurs, has a positive or negative effect on project objectives. A risk has a cause and, if it occurs, a consequence (GRAY, Project Management the Managerial Process Fifth Edition, 2011).

Risk is a measure of the probability and consequence of not achieving a defined project goal. Most people agree that risk involves the notion of uncertainty. Some common risks include: Poorly defined requirements, Lack of qualified resources, Lack of management support, Poor estimating, Inexperienced project manager. Risk has two primary components for a given event: A probability of occurrence of that event & Impact of the event occurring (amount at stake) (Kerzner, 2001).

Risk Management is the processes involved with identifying, analyzing, and handling risk. It includes maximizing the results of positive risk events and minimizing the consequences of adverse events (Brandon, 2006, p. 159).

Risk management is the act or practice of dealing with risk. It includes *planning* for risk, *assessing (identifying and analyzing)* risk issues, developing *risk handling* options, and *monitoring* risks to determine how risks have changed. (Kerzner, 2001, p. 907).

Project Risk Management includes the processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project. The objectives of project risk management are to increase the likelihood and impact of positive events, and decrease the likelihood and impact of negative events in the project (Project Management Institute, 2013, p. 309).

2.2. Project Management Knowledge Areas

According to PMI (2013), Knowledge Area represents a complete set of concepts, terms, and activities that make up a professional field, project management field, or area of specialization. These ten Knowledge Areas are used on most projects most of the time. Project teams should utilize these ten Knowledge Areas and other Knowledge Areas, as appropriate, for their specific project. The

Knowledge Areas are: Project Integration Management, Project Scope Management, Project Time Management, Project Cost Management, Project Quality Management, Project Human Resource Management, Project Communications Management, Project Risk Management, Project Procurement

Management and Project Stakeholder Management. Below are summarized note regarding the ten knowledge areas according to PMI (2013).

Project Integration Management: Project Integration Management includes the processes and activities to identify, define, combine, unify, and coordinate the various processes and project management activities within the Project Management Process Groups. Project Integration Management processes includes Develop Project Charter, Develop Project Management Plan, Direct and Manage Project Work, Monitor and Control Project Work, Perform Integrated Change Control & Close Project or Phase.

Project Scope Management: Project Scope Management includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully. Managing the project scope is primarily concerned with defining and controlling what is and is not included in the project. Project Scope Management processes, includes; Plan Scope Management, Collect Requirements, Define Scope, Create WBS, Validate Scope & Control Scope.

Project Time Management: Project Time Management includes the processes required to manage the timely completion of the project. Project Time Management processes includes; Plan Schedule Management, Define Activities, Sequence Activities, Estimate Activity Resources, Estimate Activity Durations, Develop Schedule & Control Schedule.

Project Cost Management: Project Cost Management includes the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so that the project can be completed within the approved budget. Project Cost Management processes are; Plan Cost Management, Estimate Costs, Determine Budget & Control Costs.

Project Quality Management: Project Quality Management includes the processes and activities of the performing organization that determine quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was undertaken. Project Quality Management uses policies and procedures to implement, within the project's context, the organization's quality management system and, as appropriate, it supports continuous process improvement activities as undertaken on behalf of the performing organization. Project Quality Management works to ensure that the project requirements, including product requirements, are met and validated. Project Quality Management include; Plan Quality Management, Perform Quality Assurance & Control Quality.

Project Human Resource Management: Project Human Resource Management includes the processes that organize, manage, and lead the project team. The project team is comprised of the people with assigned roles and responsibilities for completing the project. Project team members may have varied skill sets, may be assigned full or part-time, and may be added or removed from the team as the project progresses. Project team members may also be referred to as the project's staff. Although specific roles and responsibilities for the project team members are assigned, the involvement of all team members in project planning and decision making is beneficial. Participation of team members during planning adds their expertise to the process and strengthens their commitment to the project. Project Human Resource Management processes includes; Plan Human Resource Management, Acquire Project Team, Develop Project Team & Manage Project Team.

Project Communications Management: Project Communications Management includes the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information. Project managers spend most of their time communicating with team members and other project stakeholders, whether they are internal (at all organizational levels) or external to the organization. Effective communication creates a bridge between diverse stakeholders who may have different cultural and organizational backgrounds, different levels of expertise, and different perspectives and interests, which impact or have an influence upon the project execution or outcome.

Project Communications Management processes includes; Plan Communications Management, Manage Communications & Control Communications.

Project Risk Management: Project Risk Management includes the processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project. The objectives of project risk management are to increase the likelihood and impact of positive events, and decrease the likelihood and impact of negative events in the project. Project Risk Management processes involves; Plan Risk Management, Identify Risks, Perform Qualitative Risk Analysis, Perform Quantitative Risk Analysis, Plan Risk Responses & Control Risks.

Project Procurement Management: Project Procurement Management includes the processes necessary to purchase or acquire products, services, or results needed from outside the project team. The organization can be either the buyer or seller of the products, services, or results of a

project. Project Procurement Management includes the contract management and change control processes required to develop and administer contracts or purchase orders issued by authorized project team members. Project Procurement Management processes includes; Plan Procurement Management, Conduct Procurements Control Procurements & Close Procurements.

Project Stakeholder Management: Project Stakeholder Management includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution. Stakeholder management also focuses on continuous communication with stakeholders to understand their needs and expectations, addressing issues as they occur, managing conflicting interests and fostering appropriate stakeholder engagement in project decisions and activities. Stakeholder satisfaction should be managed as a key project objective. Project Stakeholder Management processes that includes; Identify Stakeholders, Plan Stakeholder Management, Manage Stakeholder Engagement & Control Stakeholder Engagement.

2.3. Project Management Approach as a Function of Risk

As Jean Couillard (1995) in his study project managers were asked to assess project risk with regard to three objectives: technical performance, schedule, and cost. Accordingly, when technical risk is high, project success is influenced by project manager authority, communication, team support, and problem handling. Pure-project structure is also negatively correlated with success when technical risk is high. It turns out that matrix structure is better for such projects, presumably because technical expertise can be more easily drawn from a matrix structure than the pure-project (or stand-alone) structure. When cost risk is high, project success is influenced by understanding of project goals by the team, project manager authority, team support, and communication. If schedule risk is high, two factors are important: the project manager's experience and the frequency of monitoring progress. (Lewis, 2008).

2.4. Certainty, Risk, and Uncertainty

Decision-making falls into three categories: certainty, risk, and uncertainty. Decision-making under certainty is the easiest case to work with. With certainty, we assume that all of the necessary information is available to assist us in making the right decision, and we can predict the outcome with a high level of confidence (Kerzner, 2001).

2.4.1. Decision-making under certainty

Decision-making under certainty implies that we know with 100 percent accuracy what the states of nature will be and what the expected payoffs will be for each state of nature. Mathematically, this can be shown with payoff tables (Kerzner, 2001).

2.4.2. Decision-Making under Risk

In most cases, there usually does not exist one dominant strategy for all states of nature. In a realistic situation, higher profits are usually accompanied by higher risks and therefore higher probable losses. When there does not exist a dominant strategy, a probability must be assigned to the occurrence of each state of nature (Kerzner, 2001).

2.4.3. Decision-making under Uncertainty

The difference between risk and uncertainty is that under risk there are assigned probabilities, and under uncertainty meaningful assignments of probabilities are not possible. As with decision making under risk, uncertainty also implies that there may exist no single dominant strategy. The decision-maker, however, does have at his disposal four basic criteria from which to make a management decision. The decision about which criterion to use will depend on the type of project as well as the project manager's tolerance to risk (Kerzner, 2001, pp. 907-910).

2.5. Factor that can expose project to higher risk

According to Ludin & Kleim (1998) there are several factors that contribute for higher project risk. Below are some of the points discussed.

Team size: The larger the team, the higher the probability of a problem arising. For instance communication can be more difficult as the number of participants increases, the number of interactions among people increases and thus they require greater coordination.

History: Newer projects are riskier because the processes have not been refined. The more times a project of a similar nature has been done, the greater the likelihood of success.

Staff expertise and experience: If the staff lacks direct experience and knowledge of the subject, people will struggle to learn as they go along, robbing the project of time and possibly introducing errors.

Complexity: The more sophisticated a project, the greater the opportunity of a mistake or slipup. Untested technologies, such as ones dealing with information systems or biotechnologies, are risk laden.

Management stability: The more senior management plays “musical chairs,” the greater the risks of a problem arising, with every new management comes the possibility of changed priorities and directions. Management stability implies unity of direction, which in turn means reaching goals. Management irritability can lead to unrealistic scheduling and inefficient use of resources.

Time compression: If a schedule is highly compressed, then the risks are magnified. Having more time means greater flexibility and the opportunity to prevent or mitigate the impact of errors.

Resource availability: The more resources that are available, the greater the ability to respond to problems as they arise. For example more money brings greater ability to secure equipment or people when needed. Plentiful resources, of course, do not guarantee protection from risk; however, they do provide the means to respond to it. (Ludin, 1998).

2.6. Project Risk Management processes

According to PMI (2013) Project Risk Management processes has six steps. These are, Plan Risk Management, Identify Risks, Perform Qualitative Risk Analysis, Perform Quantitative Risk Analysis, Plan Risk Responses and Monitor & Control Risks.

2.6.1. Plan Risk Management

Plan Risk Management is the process of defining how to conduct risk management activities for a project. The key benefit of this process is it ensures that the degree, type, and visibility of risk management are commensurate with both the risks and the importance of the project to the organization. The risk management plan is vital to communicate with and obtain agreement and support from all stakeholders to ensure the risk management process is supported and performed effectively over the project life cycle (Project Management Institute, 2013).

According to PMI (2013), the Inputs that can be used to plan risk management are the project management plan, project charter, stakeholder register, enterprise environmental factors and organizational process assets. The tools and techniques that can be used to plan risk management

are analytical techniques, expert judgment and meetings. The output of the risk management planning process is the risk management plan.

2.6.2. Identify Risks

According to PMI (2013) Identify Risks is the process of determining which risks may affect the project and documenting their characteristics. The key benefit of this process is the documentation of existing risks and the knowledge and ability it provides to the project team to anticipate events.

The risk identification process normally considers the product description, scope, WBS, planning documents, historical information, and industry information to determine sources of risk, potential risk events, and risk symptoms (Brandon, 2006, p. 160).

Any source of information that allows recognition of a potential problem can be used for risk identification. These include: Systems engineering documentation, Life-cycle cost analysis, Plan/WBS decomposition, Schedule analysis, Baseline cost estimates, Requirements documents, Lessons learned files, Assumption analysis, Trade studies/analyses, Technical performance measurement (TPM) planning/analysis, Models (influence diagrams), Decision drivers, Brainstorming, Expert judgment (Kerzner, 2001, pp. 915-916).

According to PM 2013 the input for risk identification are Risk management plan, Cost management plan, Schedule management Plan, Quality management plan, Human resource management plan, Scope baseline, Activity cost estimates, Activity duration Estimates, Stakeholder register, Project documents, Procurement documents, Enterprise environmental Factors, Organizational process assets. The tools and techniques are Documentation reviews, Information gathering Techniques, Checklist analysis, Assumptions analysis, Diagramming techniques, SWOT analysis & Expert judgment. The output is a risk register.

2.6.3. Risk Analysis

According to Heerkens (2002), Risk Analysis is about determining which threats are of greatest concern. This will be done by using the knowledge gained through risk assessment to determine which potential problems represent the greatest danger to achieving a successful and predictable project outcome, ordinarily by considering the probability that a specific problem will occur and its anticipated impact on the project.

2.6.3.1. Perform Qualitative Risk Analysis

Performing Qualitative Risk Analysis is the process of prioritizing risks for further analysis or action by assessing and combining their probability of occurrence and impact. The key benefit of this process is that it enables project managers to reduce the level of uncertainty and to focus on high-priority risks (Project Management Institute, 2013, p. 328).

Perform Qualitative Risk Analysis assesses the priority of identified risks using their relative probability or likelihood of occurrence, the corresponding impact on project objectives if the risks occur, as well as other factors such as the time frame for response and the organization's risk tolerance associated with the project constraints of cost, schedule, scope, and quality. Such assessments reflect the risk attitude of the project team and other stakeholders. Effective assessment therefore requires explicit identification and management of the risk approaches of key participants in the Perform Qualitative Risk Analysis process. Where these risk approaches introduce bias into the assessment of identified risks, attention should be paid to identifying bias and correcting for it. (Project Management Institute, 2013, p. 329).

The inputs for perform Qualitative Risk Analysis are Risk management plan Scope baseline, Risk register, Enterprise environmental Factors & Organizational process assets. The tools and techniques for perform qualitative risk analysis are Risk probability and impact assessment, Probability and impact matrix, Risk data quality assessment, Risk categorization, Risk urgency assessment & Expert judgment. The output for perform Qualitative Risk Analysis are Project documents updates. (Project Management Institute, 2013, p. 328).

2.6.3.2. Perform Quantitative Risk Analysis

Perform Quantitative Risk Analysis is the process of numerically analyzing the effect of identified risks on overall project objectives. The key benefit of this process is that it produces quantitative risk information to support decision making in order to reduce project uncertainty. The input for Perform Quantitative Risk Analysis are Risk management plan, Cost management plan, Schedule management Plan, Risk register, Enterprise environmental Factors & Organizational process assets. The tools and techniques for Perform Quantitative Risk Analysis are Data gathering and Representation techniques, Quantitative risk analysis and modeling techniques & Expert judgment. The output for Perform Quantitative Risk Analysis is Project documents updates (Project Management Institute, 2013, p. 334).

2.6.4. Plan Risk Responses

Plan Risk Responses is the process of developing options and actions to enhance opportunities and to reduce threats to project objectives. The key benefit of this process is that it addresses the risks by their priority, inserting resources and activities into the budget, schedule and project management plan as needed. The inputs for Plan Risk Responses are Risk management plan & Risk register. The tools and techniques for Plan Risk Responses are Strategies for negative risks or threats, Strategies for positive risks or opportunities, Contingent response strategies & Expert judgment. The outputs of Plan Risk Responses are Project management plan updates & Project documents updates (Project Management Institute, 2013).

2.6.5. Control Risks

Control Risks is the process of implementing risk response plans, tracking identified risks, monitoring residual risks, identifying new risks, and evaluating risk process effectiveness throughout the project. The key benefit of this process is that it improves efficiency of the risk approach throughout the project life cycle to continuously optimize risk responses. The inputs for Control Risks are Project management plan, Risk register, Work performance data & Work performance reports. The tools and techniques for Control Risks are Risk reassessment, Risk audits, Variance and trend Analysis, Technical performance Measurement, Reserve analysis and Meetings. The outputs of Control Risks are Work performance Information, Change requests, Project management plan updates, Project documents updates and Organizational process assets updates (Project Management Institute, 2013).

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1. Research Design and Approach

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure (Claire Selltiz and others as cited in Kothari, C. (2004)).

According to Saunders et.al (2009), most common used research designs are exploratory, descriptive and explanatory which are classified based on the purpose of the research. Among these research designs, the research design that is applied for this study was descriptive research design.

The main idea behind using this type of research is to better define an opinion, attitude, or behavior held by a group of people on a given subject (Fluid Surveys University, 2014). Fluid Survey Teams also believes descriptive research allows one to measure the significance of one's results on the overall population you are studying, as well as the changes of your respondent's opinions, attitudes, and behaviors over time (Fluid Surveys University, 2014).

The research also adopted combination of both qualitative and quantitative research approach in order to gain more insight regarding the study area. Therefore, this study tried to describe the practice of project risk management at Addis Ababa City Saving Houses Development Enterprise, 40/60 Schemes/Project.

3.2. Data Type, Sources and Method of Data Collection

For the purpose of this study in order to gain relevant information both primary and secondary data was utilized. Primary data was collected through the administration of interview and questionnaires to the respondents that are selected through purposive sampling. Secondary data was collected through review of the organization's own data archives such as published work, journals, and related documents that contribute to better understanding of the study.

3.3. Target Population and Sampling Design

The target population of this study was be Addis Ababa City Saving Houses Development Enterprise 40/60 Schemes while the study population was a staff working for Addis Ababa City House Saving Enterprise 40/60 Schemes.

The sampling design that was conducted for this research was non-probability sampling as the sample size which is required for the research will be selected based on their convenience to the research topic. As Saunders et.al, (2009), explained for non probability samples, the probability of each case being selected from the total population is not known and in non probability sample respondents are chosen based on their convenience and availability (Creswell, 2009).

3.3.1. Sampling Technique

As the numbers of respondents was limited who are appropriate and who have the expertise in the area being studied the technique that was used in this research was purposive sampling. According to Saunders et.al (2009), Purposive or judgmental form of sampling is often used when working with very small samples. This form of sampling enables to use judgment to select cases that will best enable to answer research question(s) and to meet the objectives.

3.3.2. Sampling Size

According to the April, 2018 report of the human resource department of the project there are a total of 400 employees (190 Office Staff and 210 field staffs). As sample was selected using purposive sampling respondents was chosen based on this technique were those employees who had related with the risk management practice of the project. In which it involved the project manager, officers within the project department and specific individuals who have direct involvement with practice of the project risk management. Thus, the sample was consisted of 40 respondents from project and functional departments who engage in project risk management. The researcher interviewed two (2) respondents from top level management of the project using semi structure interview.

3.4. Data Analysis and Presentation

Analysis of the data collected from primary source using questionnaire was analyzed using descriptive statistics of SPSS software version 20.0 to present the collected data in frequency, percentage, tables and charts. The data that was collected using semi structured interview was analyzed by combining and summarizing the results.

3.5 Ethical Issues

The study was conducted by adhering to the research ethics. To assure the ethics of the study, the purpose of the study was clearly provided to the respondents and the response has been used only for the purpose of the study without making any adjustment. The responses was also be kept confidential.

3.6 Validity and Reliability

According to Kothari (2004), Validity refers to the extent to which a test measures what we actually wish to measure. Reliability has to do with the accuracy and precision of a measurement procedure. Therefore, to ensure the validity of the data the research used reliable sources such as published books and recent articles written by different authors in the area of project risk management. Questionnaire that is close ended and an interview that is semi structured was developed so that the results of the data can be easily comparable. The questionnaires reliability was checked by the Cronbach's-Alpha test coefficient using SPSS software and the gained result was .945. If Cronbach's-Alpha is ≥ 0.7 , then it is safe. Therefore, based on the test, the results for the items are reliable and acceptable.

Table 3.1 1 Reliability and Validity

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.945	.937	49

3.7 Organization of the study

The research paper is organized in five chapters namely introduction, literature review and research methodology. The introductory chapter highlighted the background to the study. Statement of the problem was also expressly stated in the chapter indicating the existing problem that requires to be addressed by the study, purpose of the study, objectives of the study, research questions, research hypothesis, significance of the study, delimitation & scope of the study, limitations of the study, basic assumptions of the study, and finally definition of terms and are mentioned in the chapter. All these items will gear towards giving the study the necessary background to undertake the investigation logically and scientifically.

The second chapter highlighted the definition of terms, project management knowledge areas, brief on project management approach as a function of risk, distinguish between certainty, risk & uncertainty. The chapter also describes factors that can expose project to higher risks. It gives detail description of Project Risk Management Process and finally it explains the conceptual framework with its figure illustration.

The third chapter of the paper discusses about the research design and methodology. It consists of research design & approach, data type, sources & method of data collection, target population,

sampling design, sampling techniques, sampling size, how data area analyzed and presented, ethical consideration, validity & reliability and finally of course organization of the study.

The fourth chapter deals with the presentation, analysis and interpretation of the data which was collected from respondents.

The fifth and final chapter discusses the summary of the findings, conclusions generated from the analysis & interpretation and finally suggests the recommendations that might help to improve the Addis Ababa City Saving Houses Development Enterprise in regard to risk management practice.

CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter deals with the presentation, analysis and interpretation of the data which was collected from respondents. To analyze the collected data in line with the overall objective of the research, statistical procedures were carried out using SPSS 20.0 software. To determine the actual practice of project risk management at Addis Ababa City Saving Houses Development Enterprise, the researcher has collected the data through questionnaire and semi structured interview.

4.2 Response Rate

The primary data that was collected through questionnaire consisted of 49 close ended items which was distributed to 40 individuals who are part of the project team and individuals participating in the projects to gather responses. An interview was also held with two project managers from Bulbula and Hayat 40/60 Condominium sites as a source of primary data. The response rate among the sample size of 40 were completed and the researcher were able to collect all the questionnaire duly. Here below the data that was collected with its analysis and interpretation is presented.

4.3 General information of respondents

On the general questions about age, gender, highest level of education, total years of work experience & work experience on the project are presented below.

Table 4.1 1 Age of the respondents

Age of the respondent					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	[20-30) years	23	57.5	57.5	57.5
	[30-40) years	10	25.0	25.0	82.5
	[40-50) years	6	15.0	15.0	97.5
	[50-60] years	1	2.5	2.5	100.0
	Total	40	100.0	100.0	

Source: Own Survey, 2018

As discussed in table 4.1 above, among 40 respondents, majority 57.5% (23) age were between 20-30 years; followed by 25.0% (10) age between 30-40; while only 2.5% (1) of the respondent was between 50-60 years.

Table 4.2 1 Gender of the Respondents

Gender of the Respondent					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	27	67.5	67.5	67.5
	Female	13	32.5	32.5	100.0
	Total	40	100.0	100.0	

Source: Own Survey, 2018

Table 4.2 above presents the gender of the respondents. As it is clearly depicted from the table above among 40 respondents 67.5% (27) were male whereas 32.5% (13) were female.

Table 4.3 1 Highest level of education achieved

Highest level of education achieved					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	6	15.0	15.0	15.0
	Degree	31	77.5	77.5	92.5
	Postgraduate	3	7.5	7.5	100.0
	Total	40	100.0	100.0	

Source: Own Survey, 2018

As Table 4.3 above indicated among 40 respondents, the highest level of education were those with Degree 77.5% (31) ; while the least 7.5% (3) were those who held Postgraduate.

Table 4.4 1 Total years of work experience acquired

Total years of work experience acquired					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 2 years	5	12.5	12.5	12.5
	[2-5] years	14	35.0	35.0	47.5
	(5-10] years	9	22.5	22.5	70.0
	(10-15] years	7	17.5	17.5	87.5
	Above 15 years	5	12.5	12.5	100.0
	Total	40	100.0	100.0	

Source: Own Survey, 2018

Regarding the total work of experience, among 40 respondents, 35.0% (14) of respondents were in there 2 to 5 years of experience; 22.5% (9) of respondents were in there 5 to 10 years of experience; 17.5% (7) of respondents were in there 10 to 15 years of experience & those who were in less than 2 years and above 15 years of experience possessed equal number which is 12.5% (5).

Table 4.5 1Work experience on the project

Work experience on the project					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 year	6	15.0	15.0	15.0
	(1-2] years	4	10.0	10.0	25.0
	(2-3] years	9	22.5	22.5	47.5
	(3-5] years	12	30.0	30.0	77.5
	Above 5 years	9	22.5	22.5	100.0
	Total	40	100.0	100.0	

Source: Own Survey, 2018

As depicted in the table 4.5 above, among 40 respondents, 30.0% (12) of respondents were in there 3 to 5 years of experience on the project; the number of respondents who were in their 2 to 3 years of experience and above 5 years of experience possessed the same number which is 22.5% (9) & 15.0% (6) of respondents were acquired less than 1 year of experience on the project.

4.4 Response about project risk management in general

Table 4.6 1Response regarding policy/guideline and standards

There is a policy or guideline that recommends how to manage unexpected uncertainties.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	15.0	15.0	15.0
	Disagree	12	30.0	30.0	45.0
	Neutral	12	30.0	30.0	75.0
	Agree	10	25.0	25.0	100.0
	Total	40	100.0	100.0	
	Mean: 2.65				
	Standard Deviation: 1.027				
The project has a defined or standard risk management process.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	15.0	15.0	15.0

	Disagree	13	32.5	32.5	47.5
	Neutral	6	15.0	15.0	62.5
	Agree	14	35.0	35.0	97.5
	Strongly Agree	1	2.5	2.5	100.0
	Total	40	100.0	100.0	
	Mean: 2.78				
	Standard Deviation: 1.165				

Source: Own Survey, 2018

As illustrated on the table 4.6 above, 15.0% (6) of respondents strongly disagree on the existence of a policy or guideline; again 30.0% (12) of respondents disagree on the point of the policy or guideline availability & 25.0% (10) of respondents agree on the availability of the policy.

Regarding the question if there is a defined or standard risk management process with in the projects, 15.0% (6) strongly disagree and 32.5% (13) disagree that there was a defined process to manage risk; whereas 35.0% (14) and 2.5% (1) of respondents agree and strongly agree to this point respectively. The remaining 15.0% (6) of respondents were neutral.

From the above result the researcher came to understand that the majority of the respondents believed that there was no policy or guideline that proposes how to handle uncertainties and there was also no defined standard risk management process within the projects. In addition to the questionnaire, through an interview that had been conducted with the projects manager it was realized that a well sated standard process that guides on how project teams should manage risk when it occurs within the projects didn't exist.

Table 4.7 1Response regarding assigned person and treatment of risk management

Responsible person or department is assigned to handle risk when it occurs.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	27.5	27.5	27.5
	Disagree	14	35.0	35.0	62.5
	Neutral	5	12.5	12.5	75.0
	Agree	10	25.0	25.0	100.0
	Total	40	100.0	100.0	
	Mean: 2.35				
	Standard Deviation: 1.145				
Risk management is treated as a continuous process in the project.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	17.5	17.5	17.5

	Disagree	13	32.5	32.5	50.0
	Neutral	11	27.5	27.5	77.5
	Agree	7	17.5	17.5	95.0
	Strongly Agree	2	5.0	5.0	100.0
	Total	40	100.0	100.0	
	Mean: 2.60				
	Standard Deviation: 1.128				

Source: Own Survey, 2018

As presented on the table 4.7 above 27.5% (11) and 35.0% (14) of respondents strongly disagree and disagree respectively on the existence of responsible person or department who handle risk; 25.0% (10) of respondents agree on the point and the remaining 12.5% (5) of respondents were neutral.

When we see the question regarding risk management is treated as a continuous process in the project, 17.5% (7) & 32.5% (13) of respondents strongly disagree and disagree respectively with treatment of risk management as a continuous process; while 17.5% (7) & 5.0% (2) of respondents agree and strongly agree respectively on the treatment of risk as a continuous process in the project.

From the above result the researcher came to understand that the majority of the respondents believed there was no responsible person or department who handle risk and treatment of risk management was not a continuous process in the project.

In addition to the questionnaire, through an interview that had been conducted with project managers in both branches (Hayat & Bulbula sites) the researcher confirmed there was no specialized department or responsible person assigned to handle risks.

Table 4.8 1Response regarding who handles uncertainties within the project

Uncertainties that occur within the project are mostly handled by: The Project Manager					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	15	37.5	37.5	37.5
	No	25	62.5	62.5	100.0
	Total	40	100.0	100.0	
	Mean: 1.63				
	Standard Deviation: 0.49				
Uncertainties that occur within the project are mostly handled by: The Consultant					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	12	30.0	30.0	30.0
	No	28	70.0	70.0	100.0

		Total	40	100.0	100.0
		Mean: 1.70			
		Standard Deviation: 0.464			
Uncertainties that occur within the project are mostly handled by: The Client					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	8	20.0	20.0	20.0
	No	32	80.0	80.0	100.0
	Total	40	100.0	100.0	
	Mean: 1.80				
	Standard Deviation: 0.405				
Uncertainties that occur within the project are mostly handled by: A Specialized Risk Management in the Project					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	40	100.0	100.0	100.0
	Mean: 2.00				
	Standard Deviation: 0.00				
Uncertainties that occur within the project are mostly handled by: All teams participating in the Project					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	18	45.0	45.0	45.0
	No	22	55.0	55.0	100.0
	Total	40	100.0	100.0	
	Mean: 1.55				
	Standard Deviation: 0.504				
	Total Mean: 1.63+1.70+1.80+2.00+1.55 = 8.68				
	Total Standard Deviation: 0.490+0.464+0.405+0.000+0.504 = 1.863				
Aggregated Total Mean for Project Risk Management: 2.65+2.78+2.35+2.60+8.68 = 19.06					
Standard Deviation Sum for Project Risk Management: 1.027+1.165+1.145+1.128+1.863= 6.328					

Source: Own Survey, 2018

According table 4.8 above uncertainties that occur within the project, 37.5% (15) of respondents said it was handled by the project managers; 30.0% (12) of respondents said it was handled by the consultants; 20.0% (8) of respondents said it was handled by the client; 45.0% (18) of respondents said it was handled by all teams participating in the project. However, the figure was nowhere close to who said 'No' to a given body indicated above.

From this the researcher came to understand that uncertainties that occur within the project were not handled properly.

In addition to the questionnaire, through an interview that had been conducted with project managers in both branches (Hayat & Bulbula sites) the researcher sees similarity in response as above.

4.5 Risk planning related response

Table 4.9 1Response to risk management plan

There is systematic approach or careful planning done to perform risk management in the project.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	20.0	20.0	20.0
	Disagree	10	25.0	25.0	45.0
	Neutral	9	22.5	22.5	67.5
	Agree	13	32.5	32.5	100.0
	Total	40	100.0	100.0	
	Mean: 2.68				
	Standard Deviation: 1.141				
Relevant stakeholders are involved in the planning and performing of managing risk.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	17.5	17.5	17.5
	Disagree	10	25.0	25.0	42.5
	Neutral	5	12.5	12.5	55.0
	Agree	16	40.0	40.0	95.0
	Strongly Agree	2	5.0	5.0	100.0
	Total	40	100.0	100.0	
	Mean: 2.90				
Standard Deviation: 1.257					

Source: Own Survey, 2018

As illustrated in the table 4.9 above, 20.0% (8) & 25.0% (10) of respondents strongly disagree and disagree respectively on the existence of careful planning for the risk management in the project; while 32.5% (13) of respondents shared their views by agreeing to the statement of a careful planning.

As far as stakeholder involvement is concerned, 17.5% (7) & 25.0% (10) of respondents strongly disagree and disagree respectively to the existence of stakeholder involvement in the planning of risk management; 40.0% (16) & 5.0% (2) of respondents agree and strongly disagree respectively in stakeholders involvement in the planning and performing of managing risk.

From the above result the researcher came to understand that the majority of the respondents believed that there were no systematic approach or a careful planning done to perform risk

management in the project. According to the above result, even though the representation of relevant stakeholder was not worst, their involvement was not sufficient enough.

Table 4.10 1 Response to expert judgment & risk management treatment

An expert judgment or meetings are considered while planning for risks that might occur in the project.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	17.5	17.5	17.5
	Disagree	10	25.0	25.0	42.5
	Neutral	12	30.0	30.0	72.5
	Agree	11	27.5	27.5	100.0
	Total	40	100.0	100.0	
	Mean: 2.68				
	Standard Deviation: 1.071				
Risk management is treated as a continuous process in the project.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	7.5	7.5	7.5
	Disagree	12	30.0	30.0	37.5
	Neutral	10	25.0	25.0	62.5
	Agree	13	32.5	32.5	95.0
	Strongly Agree	2	5.0	5.0	100.0
	Total	40	100.0	100.0	
	Mean: 2.98				
Standard Deviation: 1.074					

Source: Own Survey, 2018

As depicted in the table 4.10 above 17.5% (7) & 25.0% (10) of respondents strongly disagree and disagree respectively on the consideration of expert judgment or meetings while planning of risks; 27.5% (11) of respondents agree that expert judgment or meetings were considered while planning for risks.

As far as risk management as a continuous process is concerned, 7.5% (3) & 30.0% (12) of respondents strongly disagree and disagree respectively that risk management was treated as a continuous process; while 32.5% (13) & 5.0% (2) of respondents agree and strongly agree that risk management was treated as a continuous process.

From the above result the researcher came to understand that the majority of the respondents believed that expert judgment or meetings was not considered while planning of risks. The mean value of risk management treated as a continuous process (2.98) is greater than the average mean for risk planning which is (2.835). Therefore, the risk management of the Enterprise was treated as a continuous process in the project.

Table 4.11 1Response to environmental factor & training for team members

Environmental factors are included as an input to plan for uncertainties.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	17.5	17.5	17.5
	Disagree	7	17.5	17.5	35.0
	Neutral	10	25.0	25.0	60.0
	Agree	14	35.0	35.0	95.0
	Strongly Agree	2	5.0	5.0	100.0
	Total	40	100.0	100.0	
	Mean: 2.93				
	Standard Deviation: 1.207				
Team members within the project receive training or have enough knowledge about how to handle uncertainties.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	20.0	20.0	20.0
	Disagree	8	20.0	20.0	40.0
	Neutral	11	27.5	27.5	67.5
	Agree	11	27.5	27.5	95.0
	Strongly Agree	2	5.0	5.0	100.0
	Total	40	100.0	100.0	
	Mean: 2.78				
	Standard Deviation: 1.209				

Source: Own Survey, 2018

As presented in the table 4.11 above, equal number of respondents 17.5% (7) strongly disagree and disagree respectively with the inclusion of environmental factors as an input to plan for uncertainties; while 35.0% (14) & 5.0% (2) of respondents were agree and strongly agree respectively with the inclusion environmental factors as an input to plan for uncertainties.

As far as training for team members is concerned, 20.0% (8) & 20.0% (8) of respondents strongly disagree and disagree respectively about the existence of training for team members that help them handle uncertainties; while 27.5% (11) & 5.0% (2) respondents agree and strongly agree respectively with availability of training.

From the above result the researcher came to understand the Enterprise take in to consideration the environmental factor that has been an issue while planning for

uncertainty. The Enterprise didn't take much of emphasis in the provision of training for team members in order to properly handle uncertainties.

In addition to the questionnaire, through an interview that had been conducted with project managers in both branches (Hayat & Bulbula sites) the researcher found that the response strengthen the above results.

Table 4.12 1 Response to Risk Management Plan Incorporation

Risk management plan is incorporated with the project plan.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	15.0	15.0	15.0
	Disagree	9	22.5	22.5	37.5
	Neutral	10	25.0	25.0	62.5
	Agree	13	32.5	32.5	95.0
	Strongly Agree	2	5.0	5.0	100.0
	Total	40	100.0	100.0	
	Mean: 2.90				
	Standard Deviation: 1.172				
Aggregated Total Mean for Risk Planning: 2.68+2.90+2.68+2.98+2.93+2.78+2.90 = 19.85					
Standard Deviation Sum for Risk Planning: 1.141+1.257+1.071+1.074+1.207+1.209+1.172 = 8.131					

Source: Own Survey, 2018

As table 4.12 above illustrated, 15.0% (6) & 22.5% (9) of respondents strongly disagree and disagree respectively the practice of risk management plan incorporation with the project plan; 32.5% (13) & 5.0% (2) of respondents agree and strongly agree respectively with the statement.

From the above result the researcher came to understand that the Enterprise incorporated the risk management plan to the project plan.

4.6 Risk identification related response

Table 4.13 1Response to Team Members Role in Risk Identification

All team members within the project play a role in identifying risk.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	20.0	20.0	20.0
	Disagree	8	20.0	20.0	40.0
	Neutral	12	30.0	30.0	70.0
	Agree	11	27.5	27.5	97.5

	Strongly Agree	1	2.5	2.5	100.0
	Total	40	100.0	100.0	
	Mean: 2.72				
	Standard Deviation: 1.154				

Source: Own Survey, 2018

As presented in the table 4.13 above, 20.0% (8) & 20.0% (8) of respondents strongly disagree and disagree respectively the existence of role played by team members in identifying risk; 27.5% (11) & 2.5% (1) of respondents agree and strongly agree respectively with role played by team members in identifying risks.

From the above result the researcher came to understand that team members didn't play a role in identifying risks. Furthermore, the mean value (2.72) is lower than that of the average mean value for risk identification (5.13).

Table 4.14 1Response to method used in identifying risk

SN	Method Used	Response	Frequency	Percent	Valid Percent	Cumulative Percent
1	Expert Judgment	Yes	9	22.5	22.5	22.5
		No	31	77.5	77.5	100.0
		Total	40	100.0	100.0	
		Mean: 1.78				
		Standard Deviation: 0.423				
2	Checklist	Yes	14	35.0	35.0	35.0
		No	26	65.0	65.0	100.0
		Total	40	100.0	100.0	
		Mean: 1.65				
		Standard Deviation: 0.483				
3	Document Review	Yes	12	30.0	30.0	30.0
		No	28	70.0	70.0	100.0
		Total	40	100.0	100.0	
		Mean: 1.70				
		Standard Deviation: 0.484				
4	Information Gathering	Yes	19	47.5	47.5	47.5
		No	21	52.5	52.5	100.0
		Total	40	100.0	100.0	
		Mean: 1.53				
		Standard Deviation: 0.506				
5	Assumption Analysis	Yes	14	35.0	35.0	35.0
		No	26	65.0	65.0	100.0
		Total	40	100.0	100.0	
		Mean: 1.63				
		Standard Deviation: 0.483				

Total Mean: 8.29
Total Standard Deviation: 2.379

Source: Own Survey, 2018

According to the table 4.14 above, among the method used to identify risks, 22.5% (9) respondents believed there was an expert judgment; while 77.5% (31) of respondents said 'No'; 35.0% (14) of respondents believed there was a checklist that used to identify the risk in the project; while majority 65.0% (26) of respondents said 'No' in the usage of checklist as a method in identifying risks.

Those respondents who said yes to use of Document review and Information gathering were 30.0% (12) & 47.5% (19) respectively. On the other hand who said No accounts 70.0% (28) & 52.5% (21). Regarding assumption analysis, 35.0% (14) of respondents believed that assumption analysis were used in identifying in the project; while majority 65.0% (26) said 'No'.

From the above result the researcher came to understand that Enterprise didn't use the aforementioned method of risk identification adequately.

Table 4.15 1Response to Sources of Risk in the Project

SN	Sources of Risk	Response	Frequency	Percent	Valid Percent	Cumulative Percent
1	Technical	Yes	24	60.0	60.0	60.0
		No	16	40.0	40.0	100.0
		Total	40	100.0	100.0	
		Mean: 1.40				
		Standard Deviation: 0.496				
2	Financial	Yes	14	35.0	35.0	35.0
		No	26	65.0	65.0	100.0
		Total	40	100.0	100.0	
		Mean: 1.65				
		Standard Deviation: 0.483				
3	Human	Yes	27	67.5	67.5	67.5
		No	13	32.5	32.5	100.0
		Total	40	100.0	100.0	
		Mean: 1.33				
		Standard Deviation: 0.474				
		Total Mean: $1.40+1.65+1.33 = 4.38$				
		Total Standard Deviation: $0.496+0.483+0.474 = 1.453$				
		Aggregated Total Mean for Risk Identification: $2.72+8.29+4.38 = 15.39$				
		Standard Deviation Sum for Risk Identification: $1.154+2.379+1.453 = 4.986$				

Source: Own Survey, 2018

As discussed in the table 4.15 above the majority of source of risk in the project was human risk followed by technical and financial risks, 67.5% (27), 60.0% (24) & 35.0% (14) respectively.

4.7 Risk analysis related response

Table 4.16 1Response to Characteristics of Risk

Characteristics of the risk are considered before analyzing the identified risk.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	15.0	15.0	15.0
	Disagree	11	27.5	27.5	42.5
	Neutral	10	25.0	25.0	67.5
	Agree	12	30.0	30.0	97.5
	Strongly Agree	1	2.5	2.5	100.0
	Total	40	100.0	100.0	
	Mean: 2.78				
	Standard Deviation: 1.121				

Source: Own Survey, 2018

As illustrated in the table 4.16 above 15.0% (6) & 27.5% (11) of respondents strongly disagree and disagree respectively in the existence of consideration of risk characteristics before analyzing the identified risk; 30.0% (12) & 2.5% (1) of respondents agree and strongly agree respectively believed characteristics of the risk were considered before analyzing the identified risk.

From the above result the researcher came to understand that the Enterprise didn't consider the characteristics of risks in to account before analyzing the identified risk.

Table 4.17 1Response to measurement system to analyze the risk

There is a measurement system to analyze the risk.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	17.5	17.5	17.5
	Disagree	6	15.0	15.0	32.5
	Neutral	10	25.0	25.0	57.5
	Agree	15	37.5	37.5	95.0
	Strongly Agree	2	5.0	5.0	100.0
	Total	40	100.0	100.0	
	Mean: 2.97				
	Standard Deviation: 1.209				

Source: Own Survey, 2018

As presented in the table 4.17 above 32.5% (13) of respondents believed there was no measurement system to analyze the risk; whereas 42.5% (17) of respondents believed there was a measurement system to analyze the risk. The remaining 25.0% (10) of respondents were uncertain whether there was a measurement system to analyze the risk or not.

From the above result the researcher came to understand that there is a measurement system within the Enterprise to analyze the risk.

Table 4.18 1Response to document updating after assessment

Project documents are updated after assessment of the risk that might occur.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	15.0	15.0	15.0
	Disagree	11	27.5	27.5	42.5
	Neutral	10	25.0	25.0	67.5
	Agree	13	32.5	32.5	100.0
	Total	40	100.0	100.0	
	Mean: 2.75				
	Standard Deviation: 1.08				

Source: Own Survey, 2018

As presented in the table 4.18 above, majority 42.5% (17) of respondents believed project documents were not updated after the assessment of risks; while 32.5% (13) of respondents believed there was updating of project documents after the assessment of risks. The remaining 25.0% (10) of respondents were not sure whether project documents were updated or not.

From the above result the researcher came to understand that the Enterprise didn't update project document once assessment of risk is done.

Table 4.19 1 Response to the techniques used to assess the probability of risk occurrence in the project

SN	Technique Used	Response	Frequency	Percent	Valid Percent	Cumulative Percent
1	Quantitative assessment/Numerical analysis	Yes	7	17.5	17.5	17.5
		No	33	82.5	82.5	100.0
		Total	40	100.0	100.0	
		Mean: 1.83				
		Standard Deviation: 0.385				

2	Subjective probability assessments based on the expert judgment	Yes	23	57.5	57.5	57.5
		No	17	42.5	42.5	100.0
		Total	40	100.0	100.0	
		Mean: 1.43				
		Standard Deviation: 0.501				
3	Ranking the importance of risks based on past experience	Yes	12	30.0	30.0	30.0
		No	28	70.0	70.0	100.0
		Total	40	100.0	100.0	
		Mean: 1.70				
		Standard Deviation: 0.464				
4	Qualitative assessment based on historical data	Yes	6	15.0	15.0	15.0
		No	34	85.0	85.0	100.0
		Total	40	100.0	100.0	
		Mean: 1.85				
		Standard Deviation: 0.362				
		Total Mean: 1.83+1.43+1.70+1.85 = 6.81				
		Total Standard Deviation: 0.385+0.501+0.464+0.362=1.712				
Aggregated Total Mean for Risk Analysis: 2.78+2.97+2.75+6.81 = 15.31						
Standard Deviation Sum for Risk Analysis: 1.121+1.209+1.080+ 1.712 = 5.1222						

Source: Own Survey, 2018

As depicted in the table 4.19 above, according to the view of the respondents, Subjective probability assessment; Ranking the importance of risks based on the past experience; Quantitative assessment & Qualitative assessment were the technique used to assess the probability of risk occurrence in the project having the value of 57.5% (23), 30.0% (12), 17.5% (7) & 15.0% (6) respectively.

From the above result the researcher came to understand that as far as technique used in assessing the probability of risks, the Enterprise is doing well subjective probability assessment based on expert judgment but showed poor in using other techniques.

4.8 Risk response related responses

Table 4.20 1 Response to the strategy to respond to risks

There is a well developed strategy within the project to respond to risks.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	17.5	17.5	17.5
	Disagree	8	20.0	20.0	37.5
	Neutral	11	27.5	27.5	65.0
	Agree	10	25.0	25.0	90.0

	Strongly Agree	4	10.0	10.0	100.0
	Total	40	100.0	100.0	
	Mean: 2.90				
	Standard Deviation: 1.257				

Source: Own Survey, 2018

As illustrated in the table 4.20 above 17.5% (7) & 20.0% (8) of respondents strongly disagree and disagree respectively to the availability of a well developed strategy; whereas 25.0% (10) & 10.0% (4) of respondents agree and strongly agree respectively believed there were a well developed strategy within the project to respond to risks. The remaining 27.5% (11) of respondents were not sure whether there was a well developed strategy or not.

From the above result the researcher came to understand that there is no well established strategy within the project to respond to risk.

Table 4.21 1Response to the different factor consideration while responding to risks

Factors such as budget, schedule and resources are considered while responding to risk.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	5.0	5.0	5.0
	Disagree	8	20.0	20.0	25.0
	Neutral	9	22.5	22.5	47.5
	Agree	19	47.5	47.5	95.0
	Strongly Agree	2	5.0	5.0	100.0
	Total	40	100.0	100.0	
	Mean: 3.28				
	Standard Deviation: 1.012				

Source: Own Survey, 2018

As presented in the table 4.21 above, even though 5.0% (2) & 20.0% (8) of respondents strongly disagree and disagree respectively with the practice of different factor consideration while responding to the risks, majority 52.5% (21) of respondents believe factors such as budget, schedule & resources were considered while responding to risks.

From the above result the researcher came to understand that the Enterprise takes in to consideration different factors such as budget, schedule & resources while responding to risk.

Table 4.22 1Response to risk response strategies

SN	Risk Response Strategy	Response	Frequency	Percent	Valid Percent	Cumulative Percent
1	Reduction	Yes	26	65.0	65.0	65.0
		No	14	35.0	35.0	100.0
		Total	40	100.0	100.0	
		Mean: 1.35				
		Standard Deviation: 0.483				
2	Avoidance	Yes	14	35.0	35.0	35.0
		No	26	65.0	65.0	100.0
		Total	40	100.0	100.0	
		Mean: 1.65				
		Standard Deviation: 0.483				
3	Transfer	Yes	4	10.0	10.0	10.0
		No	36	90.0	90.0	100.0
		Total	40	100.0	100.0	
		Mean: 1.90				
		Standard Deviation: 0.304				
4	Acceptance	Yes	6	15.0	15.0	15.0
		No	34	85.0	85.0	100.0
		Total	40	100.0	100.0	
		Mean: 1.85				
		Standard Deviation: 0.362				
	Total Mean: 1.35+1.65+1.90+1.85=6.75					
	Total Standard Deviation: 0.483+0.483+0.304+0.362= 1.632					

Source: Own Survey, 2018

As presented in the table 4.22 above, among listed risk response strategies, 65.0% (26) of respondents said reduction followed by avoidance which accounts 35.0% (14) of respondents. The least strategies used according to respondents was transfer which was 10.0% (4).

4.8.1 Risk avoidance related responses

Table 4.23 1 Response to contingency plan to avoid delays

The organization encourages use of contingency plans or in order to avoid any situation that may cause delays in project implementation.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	2.5	2.5	2.5
	Disagree	10	25.0	25.0	27.5
	Neutral	7	17.5	17.5	45.0
	Agree	18	45.0	45.0	90.0
	Strongly Agree	4	10.0	10.0	100.0

	Total	40	100.0	100.0	
	Mean: 3.35				
	Standard Deviation: 1.051				

Source: Own Survey, 2018

As presented in the table 4.23 above 2.5% (1) & 25.0% (10) of respondents believed the organization didn't encourage the use of contingency, while majority 55.0% (22) of respondents believed the organization encouraged use of contingency plans which helps in overcoming the delays of project implementation.

From the above result the researcher came to understand that the Enterprise encourages use of contingency/alternative plans or in order to avoid any situation that may cause delays in project implementation.

Table 4.24 1Response to use of detailed work plan

The organization encourages use of detailed work plans so as to limit occurrence of anything that may delay the implementation of the project.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	12.5	12.5	12.5
	Disagree	4	10.0	10.0	22.5
	Neutral	11	27.5	27.5	50.0
	Agree	18	45.0	45.0	95.0
	Strongly Agree	2	5.0	5.0	100.0
	Total	40	100.0	100.0	
	Mean: 3.20				
	Standard Deviation: 1.114				

Source: Own Survey, 2018

As illustrated in the table 4.24 above 22.5% (9) of respondents believed the organization didn't encourage the use of detailed work plans; whereas 50.0% (20) of respondents believed the organization encouraged the use of detailed work plan so as to limit occurrence of anything that may delay the implementation of the project. The remaining 27.5% (11) of respondents were not sure whether the organization used detailed work plan or not.

From the above result the researcher came to understand that the Enterprise encourages use of detailed work plans so as to limit occurrence of anything that may delay in project implementation.

Table 4.25 1Response to availability of protection and safety system

The organization has put in place protection and safety systems against any event that may delay the project implementation					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	7.5	7.5	7.5
	Disagree	10	25.0	25.0	32.5
	Neutral	12	30.0	30.0	62.5
	Agree	14	35.0	35.0	97.5
	Strongly Agree	1	2.5	2.5	100.0
	Total	40	100.0	100.0	
	Mean: 3.00				
	Standard Deviation: 1.013				

Source: Own Survey, 2018

As discussed in the table 4.25 above, 32.5% (13) of respondents believed the organization didn't place protection and safety system; whereas 37.5% (15) respondents believed the organization placed protection and safety systems against any event that may delay the project implementation. The remaining 30.0% (12) of respondents were not sure on the availability of protection and safety systems.

From the above result the researcher came to understand that the Enterprise should realize in putting in place protection and safety systems against any event that may delay the project implementation.

Table 4.26 1Response to availability of regular inspection

The organization uses regular inspections to ensure no issue arises that may delay project implementation					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	2.5	2.5	2.5
	Disagree	8	20.0	20.0	22.5
	Neutral	12	30.0	30.0	52.5
	Agree	18	45.0	45.0	97.5
	Strongly Agree	1	2.5	2.5	100.0
	Total	40	100.0	100.0	
	Mean: 3.25				
	Standard Deviation: 0.899				

Source: Own Survey, 2018

As presented in the table 4.26 above 22.5% (9) of respondents believed the organization didn't use regular inspection; whereas 47.5% (19) of respondents believed the organization used regular inspection to ensure no issue arises that may delay project implementation. The

remaining 30.0% (12) of respondents were not sure on the practice of regular inspection was carried out or not.

From the above result the researcher came to understand that the Enterprise uses regular inspections to ensure no issue arises that may delay project implementation.

Table 4.27 1Response to Availability of training program for employee

The organization has a program on training of employees on how to ensure that projects run on schedule					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	10.0	10.0	10.0
	Disagree	7	17.5	17.5	27.5
	Neutral	15	37.5	37.5	65.0
	Agree	11	27.5	27.5	92.5
	Strongly Agree	3	7.5	7.5	100.0
	Total	40	100.0	100.0	
	Mean: 3.05				
	Standard Deviation: 1.085				

Source: Own Survey, 2018

As illustrated in the table 4.27 above, 27.5% (11) of respondents believed the organization didn't have a program for training their employee; whereas 35.0% (14) of respondents believed the organization has a program on training of employees on how to ensure that projects run on schedule. The remaining 37.5% (15) of respondents were not sure whether there was training program or not.

From the above result the researcher came to understand that the Enterprise didn't prioritize in keeping a program on training of employees on how to ensure that projects run on schedule.

4.8.2 Risk transfer related responses

Table 4.28 1Response to outsourcing to reduce schedule impact

The organization usually outsources some functions especially on those that may impact on the duration of the project.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	8	20.0	20.0	20.0
	Neutral	9	22.5	22.5	42.5
	Agree	21	52.5	52.5	95.0
	Strongly Agree	2	5.0	5.0	100.0
	Total	40	100.0	100.0	
	Mean: 3.43				

	Standard Deviation: 0.874
--	---------------------------

Source: Own Survey, 2018

As depicted in the table 4.28 above, 20.0% (8) of respondents believed the organization didn't outsource certain function; whereas majority 57.5% (21) of respondents believed the organization usually outsources some functions especially on those that may impact on the duration of the project. The remaining 22.5% (9) of respondents were not sure whether there is outsourcing of activities.

From the above result the researcher came to understand that the Enterprise outsources some functions especially on those that may impact on the duration of the project.

Table 4.29 1 Response to purchase of insurance premium & entering legal agreement

The organization buys insurance premium on some items so as to ensure no occurrence will cause a delay in project implementation.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	10.0	10.0	10.0
	Disagree	7	17.5	17.5	27.5
	Neutral	19	47.5	47.5	75.0
	Agree	8	20.0	20.0	95.0
	Strongly Agree	2	5.0	5.0	100.0
	Total	40	100.0	100.0	
	Mean: 2.93				
	Standard Deviation: 0.997				
The organization enters into legal agreements especially regarding any event that may cause the project implementation to delay.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	2.5	2.5	2.5
	Disagree	10	25.0	25.0	27.5
	Neutral	10	25.0	25.0	52.5
	Agree	15	37.5	37.5	90.0
	Strongly Agree	4	10.0	10.0	100.0
	Total	40	100.0	100.0	
	Mean: 3.28				
	Standard Deviation: 1.037				

Source: Own Survey, 2018

As discussed in the table 4.29 above, 27.5% (11) of respondents believed the organization didn't buy insurance premium; whereas 25.5% (10) of respondents believed the organization buys

insurance premium on some items so as to ensure no occurrence will cause a delay in project implementation. The remaining 47.5% (19) of respondents were not sure whether the organization buys insurance premium or not.

As far as entering into legal agreement is concerned, 27.5% (11) of respondents believed the organization didn't enters in to legal agreements; whereas 47.5% (19) of respondents believed the organization enters into legal agreements especially regarding any event that may cause the project implementation to delay. The remaining 25.0% (10) of respondents were not sure whether the organization enters in to legal agreement or not.

From the above result the researcher came to understand that the Enterprise's habit in buying insurance premium that may prevent the delay in project implementation was low. In contrary, the Enterprise enters into legal agreements especially regarding any event that may cause the project implementation to delay.

4.8.3 Risk reduction related responses

Table 4.30 1Response to periodic meeting & quality assurance techniques

The organization conducts periodic meetings with project team to alleviate the possible causes of project delay.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	7.5	7.5	7.5
	Disagree	6	15.0	15.0	22.5
	Neutral	8	20.0	20.0	42.5
	Agree	19	47.5	47.5	90.0
	Strongly Agree	4	10.0	10.0	100.0
	Total	40	100.0	100.0	
	Mean: 3.38				
	Standard Deviation: 1.102				
The organization uses quality assurance technique as a method to ensure that any situation that may cause project delay is eliminated.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	2.5	2.5	2.5
	Disagree	7	17.5	17.5	20.0
	Neutral	10	25.0	25.0	45.0
	Agree	20	50.0	50.0	95.0
	Strongly Agree	2	5.0	5.0	100.0
	Total	40	100.0	100.0	
	Mean: 3.38				
	Standard Deviation: 0.925				

As presented in the table 4.30 above, 22.5% (9) of respondents believed the organization didn't conduct periodic meetings; whereas majority 57.5% (23) of respondents believed the organization conducts periodic meetings with project team to alleviate the possible causes of project delay. The remaining 20.0% (8) of respondents were not sure whether the organization conducts periodic meetings or not.

Regarding the organization's use of quality assurance technique is concerned, 20.0% (8) of respondents believed the organization didn't use quality assurance technique; whereas 55.0% (22) of respondents believed the organization uses quality assurance technique as a method to ensure that any situation that may cause project delay is eliminated. The remaining 25.0% (10) of respondents were not sure whether the organization uses quality assurance technique or not.

From the above result the researcher came to understand that the Enterprise conducts periodic meetings with project team to alleviate the possible causes of project delay. According to the study, the use of quality assurance technique in the project also visible.

Table 4.31 1Response to adherence to signed contract & Planning for crisis meetings

The organization adheres to signed contracts terms and conditions on the issues that may influence the duration of implementation of projects.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	7.5	7.5	7.5
	Disagree	8	20.0	20.0	27.5
	Neutral	12	30.0	30.0	57.5
	Agree	15	37.5	37.5	95.0
	Strongly Agree	2	5.0	5.0	100.0
	Total	40	100.0	100.0	
	Mean: 3.13				
	Standard Deviation: 1.042				
The organization plans for crisis meetings and disaster recovery plans on issues that may affect the duration that the project will take in order to avoid such scenarios.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	7.5	7.5	7.5
	Disagree	11	27.5	27.5	35.0
	Neutral	13	32.5	32.5	67.5
	Agree	11	27.5	27.5	95.0
	Strongly Agree	2	5.0	5.0	100.0
	Total	40	100.0	100.0	

Mean: 2.95
Standard Deviation: 1.037

Source: Own Survey, 2018

As illustrated in the table 4.31 above, 27.5% (11) of respondents believed the organization didn't adheres to signed contracts terms and conditions; whereas 42.5% (17) of respondents believed the organization adheres to signed contracts terms and conditions on the issues that may influence the duration of implementation of projects. The remaining 30.0% (12) of respondents were not sure whether the organization adheres to signed contracts terms and conditions or not.

When we look the planning for crisis meeting, 35.0% (14) of respondents believed the organization didn't plan for crisis meetings & disaster recovery plan; whereas 32.5% (13) of respondents believed the organization plans for crisis meetings and disaster recovery plans on issues that may affect the duration that the project will take in order to avoid such scenarios. The remaining 32.5% (13) of respondents were not sure whether the organization plans for crisis meetings and disaster recovery or not.

From the above result the researcher came to understand that the Enterprise lags behind in adhering to signed contract terms and conditions on the issues that may influence the duration of implementation of the project. Additionally, the Enterprise preparedness in terms of planning for crisis meetings and disaster recovery plans on issues that may affect the duration of the project was low.

4.8.4 Risk acceptance related responses

Table 4.32 1 Response to taking no action for good

On some occasions the organization takes no action because it recognizes that though some events may occur and affect duration of the project, it is best not to do anything about them.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	10.0	10.0	10.0
	Disagree	9	22.5	22.5	32.5
	Neutral	10	25.0	25.0	57.5
	Agree	16	40.0	40.0	97.5
	Strongly Agree	1	2.5	2.5	100.0
	Total	40	100.0	100.0	
	Mean: 3.03				
	Standard Deviation: 1.074				
Aggregated Total Mean for Risk Response: 6.18+6.75+15.85+9.64+12.84+3.03 = 54.29					

Standard Deviation Sum for Risk Response: $2.269+1.632+5.162+2.908+4.106+1.074 = 17.151$

Source: Own Survey, 2018

As presented in the table 4.32 above, 32.5% (13) of respondents didn't believed the organization takes no action; whereas 42.5% (17) of respondents believed the organization takes no action because it recognizes that though some events may occur and affect duration of the project, it is best not to do anything about them. The remaining 25.0% (10) of respondents were not sure whether the organization takes no action or not.

In some instance abstinence from taking action is best solution. In this regard the Enterprise sometimes takes no action because it recognizes that though some events may occur and affect duration of the project, it is best not to do anything about them.

4.9 Risk monitor & control related responses

Table 4.33 1Response to risk monitor, control & review

Based on the current result of the project are risks monitored and controlled well.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	10.0	10.0	10.0
	Disagree	20	50.0	50.0	60.0
	Neutral	7	17.5	17.5	77.5
	Agree	8	20.0	20.0	97.5
	Strongly Agree	1	2.5	2.5	100.0
	Total	40	100.0	100.0	
	Mean: 2.55				
	Standard Deviation: 1.011				
The Project monitor, control and review the process for risk management to ensure that it complies with standards and procedures.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	2.5	2.5	2.5
	Disagree	18	45.0	45.0	47.5
	Neutral	11	27.5	27.5	75.0
	Agree	9	22.5	22.5	97.5
	Strongly Agree	1	2.5	2.5	100.0
	Total	40	100.0	100.0	
	Mean: 2.77				
	Standard Deviation: 0.92				

Source: Own Survey, 2018

As depicted in the table 4.33 above majority 60.0% (24) of respondents believed the organization's didn't monitor and control well; whereas 22.5% (9) of respondents believed the organization well monitored and controlled project risks. The remaining 17.5% (7)

respondents were not sure whether the organization well monitored and controlled project risks or not.

Regarding the Project monitor, control and review is concerned, 47.5% (19) of respondents believed the organization didn't comply with the proper monitor, control and review process; whereas 25.0% (10) of respondents believed the project monitor, control and review the process for risk management to ensure that it complies with standards and procedures. The remaining 27.5% (11) of respondents were not sure whether the project monitor, control and review the process for risk management or not.

From the above result the researcher came to understand that the Enterprise not monitor and control project risks very well. The monitoring, control, & review also didn't complies with standards and procedures.

Table 4.34 1Response to availability of information & control risk to meet objectives

Information available or the history of the project is used to supplement to control risk.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	10.0	10.0	10.0
	Disagree	11	27.5	27.5	37.5
	Neutral	12	30.0	30.0	67.5
	Agree	13	32.5	32.5	100.0
	Total	40	100.0	100.0	
	Mean: 2.85				
	Standard Deviation: 1.001				
Risks that occur within the project are controlled in a way that goes with the goal and objective of the project.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	2.5	2.5	2.5
	Disagree	13	32.5	32.5	35.0
	Neutral	13	32.5	32.5	67.5
	Agree	10	25.0	25.0	92.5
	Strongly Agree	3	7.5	7.5	100.0
	Total	40	100.0	100.0	
	Mean: 3.03				
Standard Deviation: 1.00					
Aggregated Total Mean for Risk Monitor & Control: 2.55+2.77+2.85+3.03 = 11.20					
Standard Deviation Sum for Risk Monitor & Control: 1.011+0.920+1.001+1.000 = 3.932					

Source: Own Survey, 2018

As presented in the table 4.34 above, 37.5% (15) of respondents didn't believe in the availability of information/ the project has used history; whereas 32.5% (13) of respondents believed the organization has used information available or the history of the project is used to supplement to control risk.. The remaining 30.0% (12) of respondents were not sure whether the organization has used information available or not.

As far as controlling risks in a way that meet the goal is concerned, 35.0% (14) of respondents believed the organization didn't control risk in a way that meet the goal; whereas 32.5% (13) respondents believed risks that occur within the project are controlled in a way that goes with the goal and objective of the project. The remaining 32.5% (13) of respondents were not sure whether the organization control risk in a way that meet the goal or not.

From the above result the researcher came to understand that the good things about the Enterprise in risk monitoring and control is concerned, it uses history of the project to supplement to control risk. Furthermore, risks that occur within the project are controlled in a way that goes with the goal and objective of the project.

4.10 Organizational risk management culture related responses

Table 4.35 1Response to utilization of recognized training method & funding

The organization uses a recognized training method to facilitate the improvement of general knowledge on risk management.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	5.0	5.0	5.0
	Disagree	15	37.5	37.5	42.5
	Neutral	10	25.0	25.0	67.5
	Agree	10	25.0	25.0	92.5
	Strongly Agree	3	7.5	7.5	100.0
	Total	40	100.0	100.0	
	Mean: 2.93				
	Standard Deviation: 1.071				
The organization provides funding to facilitate management of risks that may delay projects.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	10.0	10.0	10.0
	Disagree	16	40.0	40.0	50.0
	Neutral	8	20.0	20.0	70.0
	Agree	11	27.5	27.5	97.5
	Strongly Agree	1	2.5	2.5	100.0
	Total	40	100.0	100.0	
	Mean: 2.72				

Source: Own Survey, 2018

As depicted in the table 4.35 above, 42.5% (17) of respondents didn't believe in the existence of recognized training method; whereas 32.5% (13) of respondents believed the organization uses a recognized training method to facilitate the improvement of general knowledge on risk management. The remaining 25.0% (10) of respondents were not sure whether the organization uses a recognized training method or not.

Regarding provision of funding to facilitate management of risk is concerned, 50.0% (20) of respondents believed the organization didn't provide funding to facilitate management of risks; whereas 30.0% (12) of respondents believed risks that the organization provides funding to facilitate management of risks that may delay projects.. The remaining 20.0% (8) of respondents were not sure whether the organization provide funding to facilitate management of risks or not.

Table 4.36 1Response to communication of risk to the employee or stakeholder

The organization effectively communicates the risk to the employees or stakeholders (internal and external).					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	7.5	7.5	7.5
	Disagree	13	32.5	32.5	40.0
	Neutral	9	22.5	22.5	62.5
	Agree	12	30.0	30.0	92.5
	Strongly Agree	3	7.5	7.5	100.0
	Total	40	100.0	100.0	
	Mean: 2.98				
Standard Deviation: 1.121					
Aggregated Total Mean for Organizational risk management culture: 2.93+2.72+2.98 = 8.63					
Standard Deviation Sum Organizational risk management culture: 1.071+1.062+1.121 = 3.254					

Source: Own Survey, 2018

As presented in the table 4.36 above, 40.0% (16) of respondents didn't believe in the existence of effective communication channel; whereas 37.5% (15) of respondents believed the organization effectively communicates the risk to the employees or stakeholders. The remaining 22.5% (9) of respondents were not sure whether the organization effectively communicate the risk or not.

From the above result the researcher came to understand that the Enterprise's risk management culture was very low.

Table 4.37 1Statistics for major variables

SN	Major Variables		Mean	Standard Deviation	Remark
1	Risk Planning		19.85	8.1310	
2	Risk Identification		15.39	4.9860	
3	Risk Analysis		15.31	5.1222	
4	Risk Response	Risk Avoidance	15.85	5.1620	
		Risk Transfer	9.64	2.9080	
		Risk Reduction	12.84	4.1060	
		Risk acceptance	3.03	1.0740	
5	Risk Monitor & Control		11.20	3.9320	
6	Organizational Risk Management Culture		8.63	3.2540	

Source: Own Survey, 2018

Weighted average mean of the variables =

$$(19.85+15.39+15.31+15.85+9.64+12.84+3.03+11.20+8.63)/9 = 111.74/9 = 12.42$$

Based on the above figures risk planning related factor is the highest from the weighted average mean and risk acceptance is the lowest of all. Therefore, it can be deducted that risk acceptance, organizational risk management culture, risk transfer and risk monitor & control are the most challenging factors for the Enterprise. Whereas the Enterprise is doing well on the areas of risk planning, risk avoidance, risk identification & risk analysis.

CHAPTER FIVE: FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter will be discussing the summary of the findings, conclusions generated from the analysis & interpretation and finally suggests the recommendations that might help to improve the Addis Ababa City Saving Houses Development Enterprise in regard to risk management practice.

5.2 Summary of the findings

Based on the analysis of previous chapter, the following findings were reached and are outlined here under:

- ❖ According to the response of the respondents on the general questions on project risk management practice on the projects, there is no well organized policy or guideline that recommends how to manage unexpected uncertainties. and there was also no defined standard risk management process within the projects. In addition to the questionnaire, through an interview that had been conducted with the projects manager it was realized that, a well sated standard process that guides on how project teams should manage risk when it occurs within the projects didn't exist. Majority of the respondents believed there was no responsible person or department who handle risk and treatment of risk management was not a continuous process in the project. In addition to the questionnaire, through an interview that had been conducted with project managers in both branches (Hayat & Bulbula sites) the researcher confirmed there was no specialized department or responsible person assigned to handle risks.

Uncertainties that occur within the project is not handled properly. In addition to the questionnaire, through an interview that had been conducted with project managers in both branches (Hayat & Bulbula sites) the researcher sees similarity in response as above.

- ❖ In response to the practice of project risk planning process majority of respondents replied that there is no systematic approach or a careful planning done to perform risk management in the project. Even though the representation of relevant stakeholder was not worst, their involvement was not sufficient enough. Majority of the respondents believe that expert judgment or meetings is not considered while planning of risks.

The mean value of risk management treated as a continuous process (2.98) is greater than the average mean for risk planning which is (2.835). Therefore, the risk management of the Enterprise is treated as a continuous process in the project.

Enterprise take in to consideration the environmental factor that has been an issue while planning for uncertainty however, it didn't take much emphasis in the provision of training for team members in order to properly handle uncertainties. In addition to the questionnaire, through an interview that had been conducted with project managers in both branches (Hayat & Bulbula sites) the researcher found that the response strengthen the above results. The Enterprise incorporated the risk management plan to the project plan.

- ❖ The response to the risk identification process revealed that team members didn't play a role in identifying risks. Furthermore, the mean value (2.72) is lower than that of the average mean value for risk identification (5.13). Enterprise doesn't use the available method of risk identification adequately. The majority of source of risk in the project is human risk followed by technical and financial risks.
- ❖ The response to the risk analysis process revealed that the Enterprise doesn't consider the characteristics of risks in to account before analyzing the identified risk. On the contrary, there is a measurement system within the Enterprise to analyze the risk.

Updating of project document once assessment of risk is done has been an area of concern for the Enterprise. As far as technique used in assessing the probability of risks, the Enterprise is doing well in subjective probability assessment based on expert judgment but showed poor in using other techniques.

- ❖ The response to the risk response process revealed that there is no well established strategy within the project to respond to risk. On the contrary, Enterprise takes in to consideration different factors such as budget, schedule & resources while responding to risk. The result of the study also showed that Enterprise encourages use of contingency/alternative as well as using detailed work plans or in order to avoid any situation that may cause delays in project implementation.

Enterprise is weak in terms of putting in place protection and safety systems against any event that may delay the project implementation. Furthermore, the Enterprise doesn't prioritize in keeping a program on training of employees on how to ensure that projects run on schedule. The Enterprise outsources some functions especially on those that may impact on the duration of the project.

The Enterprise's habit in buying insurance premium that may prevent the delay in project implementation was low. However, the Enterprise enters into legal agreements especially regarding any event that may cause the project implementation to delay.

The Enterprise conducts periodic meetings with project team to alleviate the possible causes of project delay. According to the study, the use of quality assurance technique in the project also visible. However, the Enterprise lags behind in adhering to signed contract terms and conditions on the issues that may influence the duration of implementation of the project. Additionally, the Enterprise preparedness in terms of planning for crisis meetings and disaster recovery plans on issues that may affect the duration of the project is low.

In some instance abstinence from taking action is best solution. In this regard the Enterprise sometimes takes no action because it recognizes that though some events may occur and affect duration of the project, it is best not to do anything about them.

- ❖ The response to the risk monitoring and controlling practice is concerned, the Enterprise doesn't monitor and control project risks very well. The monitoring, control, & review also didn't complies with standards and procedures. The good things about the Enterprise in risk monitoring and control is concerned, it uses history of the project to supplement to control risk.
- ❖ The response to organizational risk management culture is concerned, majority of respondents disagree that the organization uses a recognized training method to facilitate the improvement of general knowledge on risk management and the provision of funding to facilitate management of risk is also minimal according to the respondents. Respondents also agreed the Enterprise communication of the risk to the employees and/or stakeholders is not adequate.

5.3 Conclusions

As the major objective of the study is to assess the actual risk management practice at Addis Ababa City Saving Houses Development Enterprise 40/60 Condominium project, the following conclusions are forwarded based on the findings mentioned above about the practice followed in these projects.

The findings of the study revealed that there is no well organized policy or guideline that recommend how to manage risks in the projects. The project doesn't usually follows a defined or standard risk management process. Majority of respondents believed risk management is not treated as a continuous process in the project. The finding of the result showed irregularity as far as handling of uncertainties that occur within the project.

There is no systematic approach or a careful planning done to perform risk management in the project. Even though the representation of relevant stakeholder was not worst, their involvement was not sufficient enough. Majority of the respondents believe that expert judgment or meetings is not considered while planning of risks.

Team members do not play a role in identifying risks. Enterprise doesn't use the available method of risk identification adequately. The majority of source of risk in the project is human risk followed by technical and financial risks.

The Enterprise doesn't consider the characteristics of risks in to account before analyzing the identified risk. On the contrary, there is a measurement system within the Enterprise to analyze the risk. Updating of project document once assessment of risk is done has been an area of concern for the Enterprise. As far as technique used in assessing the probability of risks, the Enterprise is doing well in subjective probability assessment based on expert judgment but showed poor in using other techniques.

There is no well established strategy within the project to respond to risk. On the contrary, Enterprise takes in to consideration different factors such as budget, schedule & resources while responding to risk. The Enterprise encourages use of

contingency/alternative as well as using detailed work plans or in order to avoid any situation that may cause delays in project implementation.

Enterprise is weak in terms of putting in place protection and safety systems against any event that may delay the project implementation. Furthermore, the Enterprise doesn't prioritize in keeping a program on training of employees on how to ensure that projects run on schedule. The Enterprise outsources some functions especially on those that may impact on the duration of the project.

The Enterprise conducts periodic meetings with project team to alleviate the possible causes of project delay. Quality assurance technique in the project also visible. However, the Enterprise lags behind in adhering to signed contract terms and conditions on the issues that may influence the duration of implementation of the project. Additionally, the Enterprise preparedness in terms of planning for crisis meetings and disaster recovery plans on issues that may affect the duration of the project is low.

Generally speaking the Enterprise lags behind in the practice of risk monitoring and control within the project. Furthermore, risk management culture is very low in the enterprise.

Therefore, as a whole it can be concluded that the practice of project risk management is implemented to some extent at Hayat & Bulbula house development projects however, a comprehensive risk management practice has shown gaps.

5.4 Recommendations

In the light of major findings of the study, the following recommendations are forwarded:

- ✓ Since the practice of risk management within the project comes with proper policy or guidelines of risk management, Addis Ababa City Saving Houses Development Enterprise should have a proper policy or guideline in relation to risk management.
- ✓ The Enterprise should have a separate department who handle risk otherwise at least they should appoint someone who particularly handle and follow the possible happening of risks.

- ✓ The Enterprise should conduct a careful planning for the projects to overcome or handle uncertain events that may take place.
- ✓ The Enterprise should try to increase the representation of stakeholder throughout the project period as representation will enhance visibility and help the project completed in the best interest of time, budget and quality.
- ✓ The Enterprise should cultivate the habit of training their employee members in order to handle uncertainty properly.
- ✓ The Enterprise should involve and encourage right employees in the process of risk identification within the project and use different methods of risk identification such as Expert judgment, Checklist, Document Review, Information gathering & Assumption analysis.
- ✓ The Enterprise should have a well developed strategy to respond to uncertainties if they occur.
- ✓ The Enterprise should develop a tools for risk monitoring and controlling practice.
- ✓ In order to enhance the organizational risk management culture the Enterprise should use a recognized training method to facilitate the improvement of general knowledge on risk management. In addition provision of funding is very essential to facilitate management of risks that may delay projects. Furthermore, the Enterprise should effectively communicate the risks to the its employees and stakeholders (both internal and external).

References

- Brandon, D. (2006). Project Management for Modern Information Systems. In D. Brandon, *Project Management for Modern Information Systems* (p. 159). USA: IRM Press.
- CLELAND, D. I. (2004). Field Guide to Project Management. In D. I. CLELAND, *Field Guide to Project Management* (p. 3). New Jersey: John Wiley & Sons, Inc.
- Creswell, J. (2009). Research Design: Qualitative, Quantitative & Mixed methods approach (3rd ed). SAGE Publication Inc.
- Delz, S. (n.d.). ETHIOPIA'S LOW-COST HOUSING PROGRAM.
- Fluid Surveys University. (2014, June 3). 3 Types of Survey Research, When to Use Them, and How they Can Benefit Your Organization!
- Getachew, T. (2016). Assessment of Affordability and Living Condition of Condominium Housing in Addis Ababa: The Case of Lideta Sub city in Addis Ababa, Ethiopia. *Student Research*.
- GRAY, E. W. (2011). Project Management the Managerial Process Fifth Edition. In E. W. GRAY, *Project Management the Managerial Process Fifth Edition*. New York: Mc Graw-Hill.
- Heerkens, G. R. (2002). *Project Management*. USA: Mc Graw-Hill.
- Kerzner, H. (2001). Project Management. In H. Kerzner, *A Systems Approach to Planning, Scheduling & Controlling, Seventh Edition* (p. 3). Ohio: John Wiley & Sons Inc.
- Kothari, C. (2004). Research Methodology, Methods and Techniques (2nd ed) . *New Age International Ltd Publishers*.
- Kothari, C. (2004). *Research Methodology: Methods and Techniques, Second Revised Edition*. India: New Age International.
- Lewis, J. P. (2008). *Mastering Project Management: Applying Advanced Concepts to System Thinking, Control & Evaluation, Resource Allocation*. USA: McGraw-Hill Companies, Inc.
- Ludin, R. L. (1998). *Project Management Practitioner's Handbook*. EarthWeb Inc.
- Project Management Institute. (2013). A Guide to the Project Management Body of Knowledge . In *A Guide to the Project Management Body of Knowledge* (p. 3). Pennsylvania 19073-3299 USA: Project Management Institute, Inc.

Saunders, M. L. (2009). Research Methods for business students (5th ed.). *Person Education Limited*.

Trochim, W. M. (2006, 10 20). *Research Methods Knowledge Base*. Retrieved from Web Center for Social Research Methods: <https://socialresearchmethods.net/kb/measure.php>

Tsehay, A. (Sept 2015). Analysis of Accessibility of Urban Households to Selected Public Services in Summit Condominium Housing. . *MA Thesis*, 13.

Verzuh, E. (2003). *The Portable MBA in Project Management* . New Jersey: John Wiley & Sons, Inc.

WANYONYI, W. K. (2015). INFLUENCE OF RISK MANAGEMENT STRATEGIES ON PROJECT PERFORMANCE: A SURVEY OF SELECTED INTERNATIONAL DEVELOPMENT ORGANIZATIONS BASED IN NAIROBI CITY, KENYA. *University of Nairobi Student's Research*, 31.

ANNEXES

Annex 1: Questionnaire for Survey

ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE GRADUATE PROGRAM IN PROJECT MANAGEMENT

TITLE OF THE THESIS “Assessment of Risk Management Practice in Addis Ababa City Administration Housing Development Project: The case of Addis Ababa City House Saving Enterprise 40/60 Schemes”

Dear Respondents,

This is a questionnaire intended to assess the risk management practice of Addis Ababa City House Saving Enterprise 40/60 Schemes. The information you provide is totally sought for academic purposes and shall be kept strictly confidential.

Section 1: Socio-demographic Characteristics

Instruction: Please indicate your response by ticking on the box provided.

SN	Questions	Answer/Choices of Respondents	Remark
1	Age	1. [20 – 30) years ☐ 2. [30 - 40) years ☐ 3. [40 - 50) years ☐ 4. [50 - 60] years ☐ 5. Above 60years ☐	
2	Gender	Male ☐ Female ☐	
3	Highest Level of Education	1. Diploma ☐ 2. Degree ☐ 3. Postgraduate ☐ 4. Other _____ (please specify)	
4	Total Years of Work Experience:	1. Less than 2 years ☐ 2. [2 - 5] years ☐ 3. (5 - 10] years ☐ 4. (10 - 15] years ☐ 5. Above 15 years ☐	
5	For how many years have you worked on the project?	1. Less than 1 year ☐ 2. [1 - 2] years ☐ 3. (2 - 3] years ☐ 4. (3 - 5] years ☐ 5. Above 5 years ☐	

Section 2: General Questions About Project Risk Management

Please indicate your opinion by marking a circle on the appropriate number for the five point scale questions and tick in the box the letter of your choice for the multiple choice questions that best describes how you perceive the project applies project risk management where: Strongly Disagree(SD) = 1, Disagree(D) = 2, Neutral(N)= 3, Agree(A) = 4 and Strongly Agree(SA) = 5

SN	Questions	Scales of Measurement					Remark
		SD	D	N	A	SA	

6	There is a policy or guideline that recommends how to manage unexpected uncertainties.	1	2	3	4	5	
7	The project has a defined or standard risk management process.	1	2	3	4	5	
8	Responsible person or department is assigned to handle risk when it occurs.	1	2	3	4	5	
9	Risk management is treated as a continuous process in the project.	1	2	3	4	5	

SN	Questions	Answer/Choices of Respondents (You may choose /tick more than one answer).	Remark
10	Uncertainties that occur within the project are mostly handled by:	1. The project manager ☐ 2. The consultant ☐ 3. The client ☐ 4. A specialized risk management team. ☐ 5. All teams participating in the project. ☐	

Section 3: Risk Planning

Please indicate your opinion by marking a circle on the appropriate number for the five point scale questions that best describes how you perceive the project plans for the risks where: Strongly Disagree(SD) = 1, Disagree(D) = 2, Neutral(N)= 3, Agree(A) = 4 and Strongly Agree(SA) = 5

SN	Questions	Scales of Measurement					Remark
		SD	D	N	A	SA	
11	There is systematic approach or careful planning done to perform risk management in the project.	1	2	3	4	5	
12	Relevant stakeholders are involved in the planning and performing of managing risk.	1	2	3	4	5	
13	An expert judgment or meetings are considered while planning for risks that might occur in the project.	1	2	3	4	5	
14	Risk management is treated as a continuous process in the project.	1	2	3	4	5	
15	Environmental factors are included as an input to plan for uncertainties.	1	2	3	4	5	
16	Team members within the project receive training or have enough knowledge about how to handle uncertainties.	1	2	3	4	5	
17	Risk management plan is incorporated with the project plan.	1	2	3	4	5	

Section 4: Risk Identification

Please indicate your opinion by marking a circle on the appropriate number for the five point scale questions that best describes how you perceive the project identifies the risks where: Strongly Disagree(SD) = 1, Disagree(D) = 2, Neutral(N)= 3, Agree(A) = 4 and Strongly Agree(SA) = 5

SN	Questions	Scales of Measurement					Remark
		SD	D	N	A	SA	
18	All team members within the project play a role in identifying risk.	1	2	3	4	5	

19. The following method is primarily used to identify risks within the project: (You may choose /tick more than one answer).

- | | |
|---|---|
| 1. Expert Judgment ☐ | 5. Assumption analysis ☐ |
| 2. Checklists ☐ | 6. None ☐ |
| 3. Document Review ☐ | |
| 4. Information gathering ☐ | |

20 Sources of risk that the project usually encounters:

1. Technical ☐

2. Financial ☐

3. Human ☐

Section 5: Risk Analysis:

Please indicate your opinion by marking a circle on the appropriate number for the five point scale questions that best describes how you perceive the project analyze risks where: Strongly Disagree(SD) = 1, Disagree(D) = 2, Neutral(N)= 3, Agree(A) = 4 and Strongly Agree(SA) = 5

SN	Questions	Scales of Measurement					Remark
		SD	D	N	A	SA	
21	Characteristics of the risk are considered before analyzing the identified risk.	1	2	3	4	5	
22	There is a measurement system to analyze the risk.	1	2	3	4	5	
23	Project documents are updated after assessment of the risk that might occur.	1	2	3	4	5	

24. Which of the following techniques are used to assess the probability of risk occurrence in the project? You may choose/tick more than one answer.

1. Quantitative assessments/ Numerical analysis ☐
2. Subjective probability assessments based on expert judgment ☐
3. Ranking the importance of risks based on past experience ☐
4. Qualitative assessment based on historical data ☐

Section 6: Risk Response

Please indicate your opinion by marking a circle on the appropriate number for the five point scale questions that best describes how you perceive the project responds to the risks where: Strongly Disagree(SD) = 1, Disagree(D) = 2, Neutral(N)= 3, Agree(A) = 4 and Strongly Agree(SA) = 5

SN	Questions	Scales of Measurement					Remark
		SD	D	N	A	SA	
25	There is a well developed strategy within the project to respond to risk.	1	2	3	4	5	
26	Factors such as budget, schedule and resources are considered while responding to risk.	1	2	3	4	5	

27. The risk response strategy that is usually used in the project:

1. Reduction ☐
2. Avoidance ☐
3. Transfer ☐
4. Acceptance ☐

Risk Avoidance

This section seeks how your opinion on how the organization you work for utilizes methods of avoiding any events that may delay projects under you as you implement them. Please indicate your opinion by marking a circle on the appropriate number for the five point scale questions: Strongly Disagree(SD) = 1, Disagree(D) = 2, Neutral(N)= 3, Agree(A) = 4 and Strongly Agree(SA) = 5

SN	Questions	Scales of Measurement					Remark
		SD	D	N	A	SA	
28	The organization encourages use of contingency/alternative plans or in order to avoid any situation that may cause delays in project implementation.	1	2	3	4	5	
29	The organization encourages use of detailed work plans so as to limit occurrence of anything that may delay the implementation of the project.	1	2	3	4	5	
30	The organization has put in place protection and safety systems against any event that may delay the project implementation	1	2	3	4	5	

31	The organization uses regular inspections to ensure no issue arises that may delay project implementation	1	2	3	4	5	
32	The organization has a program on training of employees on how to ensure that projects run on schedule	1	2	3	4	5	

Risk Transfer

The following section seeks how your opinion on how the organization you work for utilizes methods of ensuring that risks did not delay projects under you as you implement them Please indicate your opinion by marking a circle on the appropriate number for the five point scale questions: Strongly Disagree(SD) = 1, Disagree(D) = 2, Neutral(N)= 3, Agree(A) = 4 and Strongly Agree(SA) = 5

SN	Questions	Scales of Measurement					Remark
		SD	D	N	A	SA	
33	The organization usually outsources some functions especially on those that may impact on the duration of the project.	1	2	3	4	5	
34	The organization buys insurance premium on some items so as to ensure no occurrence will cause a delay in project implementation.	1	2	3	4	5	
35	The organization enters into legal agreements especially regarding any event that may cause the project implementation to delay.	1	2	3	4	5	

Risk Reduction

This section seeks how your opinion on how the organization you work for utilizes methods of ensuring that risks did not delay projects under you as you implement them by minimizing chances of occurrence of an event That may delay implementation of a project. Please indicate your opinion by marking a circle on the appropriate number for the five point scale questions: Strongly Disagree(SD) = 1, Disagree(D) = 2, Neutral(N)= 3, Agree(A) = 4 and Strongly Agree(SA) = 5

SN	Questions	Scales of Measurement					Remark
		SD	D	N	A	SA	
36	The organization conducts periodic meetings with project team to alleviate the possible causes of project delay.	1	2	3	4	5	
37	The organization encourages use of contingency/alternative plans or in order to avoid any situation that may cause delays in project implementation.	1	2	3	4	5	
38	The organization uses quality assurance technique as a method to ensure that any situation that may cause project delay is eliminated.	1	2	3	4	5	
39	The organization adheres to signed contracts terms and conditions on the issues that may influence the duration of implementation of projects.	1	2	3	4	5	
40	The organization plans for crisis meetings and disaster recovery plans on issues that may affect the duration that the project will take in order to avoid such scenarios.	1	2	3	4	5	

Risk Acceptance

This section seeks how your opinion on how the organization you work for utilizes methods of ensuring that risks did not delay projects under you as you implement them by accepting that there is not much that can be done but to just accept that the risks are likely to occur and the steps that can be taken to prevent are too costly. Please indicate your opinion by marking a circle on the appropriate number for the five point scale questions: Strongly Disagree(SD) = 1, Disagree(D) = 2, Neutral(N)= 3, Agree(A) = 4 and Strongly Agree(SA) = 5

SN	Questions	Scales of Measurement					Remark
		SD	D	N	A	SA	
41	On some occasions the organization takes no action because it recognizes that though some events may occur and affect duration of the project, it is best not to do anything about them.	1	2	3	4	5	

42	The organization encourages use of contingency/alternative plans or in order to avoid any situation that may cause delays in project implementation.	1	2	3	4	5	
----	--	---	---	---	---	---	--

Section 7: Risk Monitor And Control

Please indicate your opinion by marking a circle on the appropriate number for the five point scale questions that best describes how you perceive the project monitor & control to the risks where: Strongly Disagree(SD) = 1, Disagree(D) = 2, Neutral(N)= 3, Agree(A) = 4 and Strongly Agree(SA) = 5

SN	Questions	Scales of Measurement					Remark
		SD	D	N	A	SA	
43	Based on the current result of the project are risks monitored and controlled well.	1	2	3	4	5	
44	The Project monitor, control and review the process for risk management to ensure that it complies with standards and procedures.	1	2	3	4	5	
45	Information available or the history of the project is used to supplement to control risk.	1	2	3	4	5	
46	Risks that occur within the project are controlled in a way that goes with the goal and objective of the project.	1	2	3	4	5	

Section 8: Organizational Risk Management Culture

Please indicate your opinion by marking a circle on the appropriate number for the five point scale questions that best describes how you perceive your organization risk management culture where: Strongly Disagree(SD) = 1, Disagree(D) = 2, Neutral(N)= 3, Agree(A) = 4 and Strongly Agree(SA) = 5

SN	Questions	Scales of Measurement					Remark
		SD	D	N	A	SA	
47	The organization uses a recognized training method to facilitate the improvement of general knowledge on risk management?	1	2	3	4	5	
48	The organization provides funding to facilitate management of risks that may delay projects.	1	2	3	4	5	
49	The organization effectively communicates the risk to the employees or stakeholders (internal and external)?	1	2	3	4	5	

THANK YOU

Annex 2: Informed Consent Form for Interview Participants

Addis Ababa University

School of Commerce

Good morning/Good afternoon Sir /madam?

Ali Mohammed from Addis Ababa University, School of Commerce, who is a master student in Project Management, is conducting a research project on the '*Assessment of Risk Management Practice in Addis Ababa City Administration Housing Development Project: The case of Addis Ababa City House Saving Enterprise 40/60 Schemes.*' The researcher plan to participate employees who have directly involved in the implementation of the project.

Your participation in this study is completely voluntary. You are free not to answer any questions that may make you feel uncomfortable. Your response will be strictly confidential. Your name will not appear in any report of results. No one will use the information in any way that could cause problems for you. The questionnaire will take approximately 15 - 20 minutes. If you agree to participate, the researcher will schedule the time and location that is convenient for you.

If you have questions at any time about the study or the procedures, you may contact me, Ali Mohammed at 0960-11-82-32 or at alimod2016@gmail.com. If you have read this form and agree to take part in this study, please put your name and signature below.

Name _____

Date _____

Signature _____

Thank you very much for your participation!!!

Annex 3: Interview Guide for the Project Manager

Dear Interviewee,

First of all I really appreciate for giving me your valuable time to respond to my questions. I am Ali Mohammed, a Masters of Art student in Project Management at Addis Ababa University School of Commerce. The main purpose of this questionnaire is to collect data for the research entitled “Assessment of Risk Management Practice In Addis Ababa City Administration Housing Development Project: the Case Of 40/60 Schemes”. This interview is made so as to have more in depth on the matter under study. Thus, I kindly request you to answer all the questions assuring you that all responses will be used only as an input for this study.

1. Can you please tell me about risk management system in the project? Is there a standard risk management process which is being followed with in the projects?
2. Is there a standardized or formal documented process on how to manage uncertainties within the project? What is the current practice of risk management within the project?
3. Are team members within the project aware on how to manage risk in a way that doesn't affect the objective or goal of the project?
4. Is there a special department or assigned person to handle uncertainties that occur within the lifecycle of the project? At which stage of the project are risks managed in the projects?
5. Is planning done carefully on how to manage risk at your project? If yes, how do you plan and who is involved in planning process?
6. Are risks that might occur identified early while the project is at start up phase? And what methods are used to identify them?
7. Within the project how risks are analyzed to assess its probability of occurrence and level of impact?
8. While taking action or responding to uncertain events within the project what factors are kept in consideration? Are factors such as schedule, budget and objective of the project considered?
9. What challenges until now has the project faced due to unmanaged risk?
10. Do you think managing risk and project success are related? If yes, how?