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St. Mary's University, Ethiopia

**ASSESSMENT OF PROJECT RISK MANAGEMENT PRACTICE IN REAL ESTATE
CONSTRUCTION IN ADDIS ABABA**

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF
THE MASTER OF ART IN PROJECT MANAGEMENT**

BY:

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JUNE 2020

ADDIS ABABA, ETHIOPIA



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Ababa

A thesis submitted in partial fulfillment of the requirements of the

Master of art in project management

By

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June 2020

Addis Ababa, Ethiopia

DECLARATION

This is to declare that the Thesis is entitled as “Assessment of Project Risk Management Practice in Real Estate Construction in Addis Ababa” is prepared by Nardos Dilnesa. I hereby affirm that the thesis is my original work conducted in partial fulfillment of the requirements for the Masters of Arts in project management. Literatures used in the study were appropriately cited and the author is acknowledged.

Approved by Board of Examiners

Advisor _____ Signature _____ Date _____

Examiner _____ Signature _____ Date _____

Examiner _____ Signature _____ Date _____

ACKNOWLEDGEMENT

First and foremost I would like to thank Almighty God for helping me in completion of my thesis writing. Next, my heartfelt gratitude goes to my Advisor Dejene Mamo (PhD, Asst, prof.). Your consistent advice, support and recommendation helped me a lot in producing my paper. My greatest appreciation also goes to my beloved family and my husband who have always been supportive and whose precious moral support has been with me throughout this study. I also want to thank study participants and many others, who assisted me in many different ways to get valuable information from selected real estates. The thesis was complete because of the genuine willingness of study participants to participate in the study and provision of the required data for the research.

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Abstract

The study entitled as Assessment of Project Risk Management Practice in Real Estate Construction in Addis Ababa was written with a general objective of assessing risk management practices among selected real estate projects. In order to achieve this objective, the researcher collected data from three selected real estate companies in Addis Ababa. This data was collected through In-depth interview and self-administered questionnaire. During the data collection, the participants of the study were project managers, coordinators and project team members of the selected real estate companies. The collected data from these study participants was analyzed using descriptive, thematic and narrative analysis methods. Using the above listed methods, the researcher found out that risk management is practiced effectively. Risk is planned in advance, where cause and effects are assessed in a methodical way. The study also reported that even though there is no training to develop employee's knowledge regarding risk, the awareness towards risk and management is good. The selected companies also use different techniques such as assignation of person and departments, standard definition of risk and risk management process and preparing guidelines to manage risk. Based on these findings, the researcher recommended provision of trainings to employees to increase their awareness regarding risk.. It was also recommended that it would be better if other researches conduct similar study using many real estate companies.

Key words: real estate, risk, risk identification, risk management

CHAPTER ONE

INTRODUCTION

1.1. Background

The construction industry has now become one of the thriving industries of today that has considerable impact on the economy of the nation. There is a huge amount of investments made in infrastructure development activities. The real estate industry is one among different investments, which is continuously evolving. As major towns in the country continue experiencing rural-urban migration which is driving growth in demand for both residential and commercial property, real estate and property developers are striving to satisfy this demand (Ehsanet *al.* 2010, cited by Haddush 2016).

These real estate projects undertaken encounter considerable time and cost overruns. Construction projects when delayed cause increase in overall budget. The project has to be scheduled and organized properly and carefully in order to complete it within given time with proper quality. Since most of the projects undertaken under this industry are construction projects, they are very risky (Ehsanet *al.* 2010, cited by Haddush 2016).

Regarding the risks, Okuwoga (1998) in his report showed that the performance of the building construction industry in Nigeria has consistently been a source of concern to both public and private sector clients. The results of the study carried out on 42 building projects shows that there is a problem of cost gap and time lag between the realistic estimate and actual commencement of contract.

Consequently, Oyewobi, Ibrinke, Ganiyu and Ola-Awo (2011), pointed out that cost and time overruns have become a cankerworm within the Nigeria construction industry today as well as

lack of good quality work of its end product, which do not provide many of the clients' value for money. Construction projects in Nigeria are known for overshooting their initial cost budget, which invariably means it is out of initial time schedule.

According to a study conducted in Ethiopian building construction projects, most projects are not completed in conformity to the original plan i.e. they face various problems and changes that lead to delay, cost overrun or lower quality. The risks involved throughout the life of a building project might be causes for variations in project objectives if they are not managed well (Alem. 1999).

Therefore, risk management is crucial, not only to go with the planned cost and time frame, but also to profit out of that, to gain a competitive advantage. It helps to gain a greater awareness and understanding of the types and nature of risks inherent in the project, and the likelihood of their occurrence. It also helps to assess the potential impact of the risks on the viability of the project and contract and to determine how best to eliminate or control the risks (Okuwoga 1998).

According to Francis (2008), risk management in the contractual stage can especially be very important in preventing the effect of risk on project objectives. A study by Okuwoga (1998) reported that risk management is an important area of project management, it allows anticipating the occurrence of events that could adversely affect a construction project and to define actions that could minimize their impacts. For building construction projects which is vital to the economy of any nation, more so in a developing country, a risk management system will need to be in place to ensure swift closure of projects and to allow building construction projects to reach its potential (Serpell et al, 2015).

For many years, construction organizations in developing countries have approached risk management in building construction projects by using a set of practices that are normally

insufficient, producing poor results most of the time, and limiting the success of project management (Serpell, et al, 2015).

In relation to the above discussion with risk and risk management, various theories have been raised. For instance, Agency theory, New Institutional Economics and stakeholder theory can be mentioned. Agency theory argues that in the field of corporate risk management agency issues have been shown to influence managerial attitudes toward risk taking and hedging. Theory also explains a possible mismatch of interest between shareholders, management and debt holders due to asymmetries in earning distribution, which can result in the firm taking too much risk or not engaging in positive net value projects (Smith and Stulz, 1985).

On the other hand, New Institutional Economics predicts that risk management practices may be determined by institutions or accepted practice within a market or industry. Moreover, the theory links security with specific assets purchase (Williamson, 1987). Stakeholder theory on the other side discuss about risk management. It reported that the most promising contribution to risk management is the extension of implicit contracts theory from employment to other contracts, including sales and financing (Cornell and Shapiro, 1987).

As a result, based on the above theories and findings it can be said that risk management is crucial to an organization. It adds maximum sustainable value to all the activities of the organization. It also marshals the understanding of the potential upside and downside of all those factors which can affect the organization. It increases the probability of success, and reduces both the probability of failure and the uncertainty of achieving the organization's overall objectives (IRM 2002). Thus, considering the importance of risk management to an organization, the current study discusses effective implementation of risk management technique, techniques of risk management and employee's awareness towards risk and risk management.

1.2. Statement of Problem

The construction industry has now become one of the thriving industries of today that has considerable impact on the economy of the nation. There is a huge amount of investments made in infrastructure development activities. Many projects undertaken encounter considerable time and cost overruns. Construction projects when delayed cause increase in overall budget. The project has to be scheduled and organized properly and carefully in order to complete it within given time with proper quality. Activities in the construction industry are subjected to various uncertainties or risks that cause adverse effects on the performance of the various activities 'during the project life cycle. Construction projects may have damaging consequences due to uncertainties or risks (Oyewobi, Ibronke, Ganiyu and Ola-Awo 2011).

Risks which exist in real estate development have impacts and developers need to manage risks and minimize their impact on project objectives and their business as a whole. It is important to know what risks exist in the real estate development projects and their impact on project objectives(Chougdry and Iqbal, 2013).

Different researchers put their findings regarding risk and risk management. They propose different causes for risk. For instance, Previous researches similar to this show that the main causes of delay and cost overrun in building construction is improper project management and claim administration. Due to unforeseen incidences and contract management problems, building projects sometimes face many kinds of claims. According to Liu (2009), during the execution of the contract, sometimes claims might show up due to different factors. Some of the factors are Ambiguities in the contract document: like inaccurate design information and incomplete tender information; inadequate contract and willingness of parties to administer the contract such as slow decision making, irresponsibility of the contract administration parties and changed

circumstances like inadequate site investigations, uncontrollable external events and unclear risk allocation, etc. Abdissa (2003) puts unclear and unfair risk management as one of the root causes of claims and disputes in construction.

According to the parties involved in Ethiopian building construction projects, most projects are not completed in conformity to the original plan i.e. they face various problems and changes that lead to delay, cost overrun or lower quality. The risks involved throughout the life of a building project might be causes for variations in project objectives if they are not managed well (Alem T. 1999).

Another major problem facing the Ethiopian construction industry is shortage of construction materials. According to a research done (Alem T. 1999), this situation can in fact be improved if proper management and good quality control of materials were available.

To address these challenges, risk management has become an important part of the decision-making process in construction industry - as it determines the success or failure of construction projects (Abujnah and Eaton, 2010). Good decisions are made against a predetermined set of objectives based on knowledge, data, and information; whereas decisions that are made without a logical assessment of project-specific criteria may lead to difficulties in project delivery (Abujnah and Eaton, 2010).

According to Francis, (2008), risk management in the contractual stage can especially be very important in preventing the effect of risk on project objectives. There are different risk management techniques used in different stages of the construction in the outside world; Risk management in the contractual stage, i.e. before signing the contract is used very frequently. If risks are identified and allocated to the contracting parties in the contract document, it makes dealing with the risks if and when they arise very easy. A construction contract risk management

approach that uses a team of experienced construction professionals or experts will lead to better achievement of project objectives.

Even though various studies have been conducted on risk and risk management, they mainly focus on the type of risks, causes or risk and risk management. To the best of the researcher's knowledge, there is no comprehensive study that assesses whether risk management process is being practiced effectively among selected real estate projects or not, level of awareness to risk and its management among real estate projects and the techniques adopted by the real estate for risk management in a single study. Thus, this research will close the limitation by giving detailed description about whether risk management process is being practiced effectively among selected real estate projects or not, level of awareness to risk and its management among real estate projects and the techniques adopted by the real estate for risk management.

1.3. Research questions

- What is the gap on the practice of applying risk management?
- What is the level of awareness to risk and its management among real estate projects?
- What is the risk management techniques used by the real estates?

1.4. Objective of the study

1.4.1. General objective

The general objective of the study is to observe risk management practices among selected real estate projects in Addis Ababa.

1.4.2. Specific objective

In assessing risk management practices of real estate projects, the following three specific objectives have been established.

- To observe if risk management process is being practiced effectively among selected real estate projects.
- To investigate the level of awareness to risk and its management among real estate projects.
- To identify the techniques adopted by the real estate for risk management

1.5. Scope and Limitation

The study is limited to selected real estate projects on the subject of practice of risk management in the real estate industry in Addis Ababa, Ethiopia. This study will only focus risk management knowledge area, by specifically investigating how risk management is being practiced among selected real estate projects by collecting data.

1.6. Significance of the Study

This thesis focuses on the practice of risk management in the selected real estate projects. The study would give great importance to different project developers, project practitioners and project managers and project teams in real estate projects. Generally, the study will inform real estate project stakeholders how risk management is really being practiced at their projects. Last but not least, this study will serve as a starting point for further studies.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This section presents review of different literatures. It starts with defining important elements of the study. It also discusses different theories, empirical findings all over the world and the gaps of literatures. This section also presents conceptual framework of the study, where basic variables are discussed.

2.1 Risk

Risk has been defined differently in reviewed literatures. Most definitions of risk have focused on the negative side of risks such as losses or damages which is the downside of it (Schieg, 2006). This definition which signifies the negative aspect has been connoted as a traditional view of risk Khedekar&Dhawale, 2015).

Some literatures encompassed both the possibility of downside/loss and upside risk /gain. Risk and uncertainty might be found being used interchangeable in different literatures. However, PMBOK describes risk through the notion of uncertainty, risk has its origins in the uncertainty present in all projects. “Project risk is an uncertain event or condition that, if it occurs, has a positive or negative effect on one or more project objectives such as scope, schedule, cost, and quality” (PMI 2013: 310) which shows these two phenomena are not synonymous.

According to Al-Bahar (1990), uncertainty represents the probability that an event occurs which entails how likely an event is to occur, i.e., the chance of the event occurring. He also defined risk as exposure to the consequences of uncertainty.

2.1.1 Risk in Real Estate Projects

Risk management has become increasingly important for any commercial organizations operating in today's environment (Groton et al., 2010; Mead, 2007; Wiegelmann, 2012) where risks are inherent (Mead, 2007). It is important that risks identified, understood, anticipated, assessed, analyzed, and to learn to manage risks (Groton et al., 2010; Wiegelmann, 2012). "Failure to accurately identify and make appropriate allowance for risks being assumed under complex commercial and contractual arrangements can have terrible consequences" (Mead, 2007).

The construction business is risky like any other business (El-Sayegh, 2008; Taroun, 2014). Risks are inherent in all construction projects (Dey&Ogunlana, 2004; El-Sayegh, 2008; M. Motiar& M.M, 2002) because the construction industry is one of the most dynamic, risky, challenging, and rewarding fields (Kangari, 1995; Sterman, 1992; TE Uher&Loosemore, 2004; Zeng, An, & Smith, 2007). Flanagan and Norman (1993) argued that the construction industry is subject to more risks and uncertainties than any other industry. Dey and Ogunlana (2004) share the same opinion.

There is no risk free construction project (Lam et al., 2007). Construction projects are always unique (Oyegoke, 2006; Pheng&Chuan, 2006) and are built only once (Zavadskas et al., 2010). In addition, construction involves numerous stakeholders and long production durations (Zou, Zhang, & Wang, 2007) which increase the susceptibility for uncertainty.

The outcomes of all construction projects can potentially be affected adversely by a large number of risks (Loosemore& McCarthy, 2008). The construction process is complex and characterized by a number of uncertainties which make many construction projects fail to achieve their time,

cost and quality goals (Baloi& Price, 2003; Banaitiene&Banaitis, 2012; Mohammad & Jamal, 1991; Zavadskas et al., 2010; Zeng et al., 2007; Zhang et al., 2006). Project risks may even cause construction project a total failure (Banaitiene&Banaitis, 2012).

Risks and uncertainty are inevitable in the construction industry. Incorporating risk management concepts into construction practice is important for managing uncertainty and risk (KarimiAzari et al., 2011), for the enhancement the performance of a project (FarnadNasirzadeh, Afshar, &Khanzadi, 2008) and for the successful delivery of a project (Zou, Zhang, & Wang, 2006). However the construction industry is not with a good reputation of coping with risk. Many projects fail to meet deadlines, cost targets, and specifications (Dey&Ogunlana, 2004).

The real estate development business shares the risky nature of construction as well. Risks and uncertainties are associated with all projects in real estate development like any other commercial activity. As mentioned earlier, these risks and uncertainties can strongly influence all related progresses at all stages of the entire lifecycle of properties (Chen &Khumpaisal, 2009). Wiegelmann (2012) says as best applied to the real estate development industry, the definition of risk is but not limited to an element of uncertainty aligned with expectations and objectives of a real estate development organization within a specified time horizon and budget differentiating between negative (threat) and positive (opportunity) aspects of risk. Yet, it is the downside of risk this research is concerned with.

2.2. Risk Management

Risk management is defined in different ways by authors. Edwards and Bowen (1998) defined risk management as a systematic approach to dealing with risk. According to Uher (2003) risk management is “a systematic way of looking at areas of risk and consciously determining how

each should be treated. It is a management tool that aims at identifying sources of risk and uncertainty, determining their impact, and developing appropriate management responses.” Risk management is also defined as a scientific approach of identifying, anticipating and minimizing the possible adverse impacts on the projects (Koirala, 2014).

Risk management is also presented as a process in reviewed literature. To name a few, Koirala (2014) defined risk management as a set of processes concerned with conducting risk management planning, risk identification, risk analysis, response planning, and monitoring and control on a project. Thompson and Perry (1992) presented risk management as a systematic process of identifying, analyzing, and responding to project risk and it includes maximizing the probability and consequences of positive attributes and minimizing the probability and consequences of attributes adverse to project objectives.

2.2.1 The Risk Management process

According to (Lewis 2011), there are three steps in the risk management process. The steps are categorized in to risk management planning, risk identification, risk analysis and risk response. All these processes are presented below.

2.2.1.1 Risk Management Planning

Risk management planning refers to deciding how to approach and plan the risk management activities for a project. It is the process of defining how to conduct risk management activities. It is important to plan for the risk management processes that follow to ensure that the level, type, and visibility of risk management are proportional with the risk. The risk management plan for the project must be started at the launch meeting so that further risk identification can be extended to include the technology of the process/product, the project’s schedule, resource base,

and a myriad of other risks facing the project but not really identifiable until the project plan has begun to take form (Meredeth and Mantel, 2009).

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. It is also 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 (Meredeth and Mantel, 2009).

The main output from this process is the risk management plan. The risk management plan describes how risk identification, qualitative and quantitative analysis, response planning, monitoring, and control will be structured and performed during the project life cycle (PMBOK® Guide, 2000).

Careful and explicit planning enhances the probability of success for other risk management processes. Planning is also important to provide sufficient resources and time for risk management activities and to establish an agreed upon basis for evaluating risks. The Plan Risk Management process should begin when a project is conceived and should be completed early during project planning (Meredeth and Mantel, 2009).

2.2.1.2 Risk Identification

Risk Identification is the process of determining which risks may affect the project and documenting their characteristics. Risk identification should be approached in a methodical way to ensure that all significant activities within the organization have been identified and all the risks flowing from these activities defined. All associated volatility related to these activities should be identified and categorized (IRM, 2002).

The first step in establishing a risk management process is to identify and assess all potential risks. From a project manager's perspective, it is the art of eliciting risks from a range of organizational and external resources as well as the body of knowledge within the project team itself that distinguishes the effectiveness of one manager from another (Sheppy et al., 2012).

Risk identification sets out to identify an organization's exposure to uncertainty. This requires an intimate knowledge of the organization, the market in which it operates, the legal, social, political and cultural environment in which it exists, as well as the development of a sound understanding of its strategic and operational objectives, including factors critical to its success and the threats and opportunities related to the achievement of these objectives (IRM, 2002). In order to establish a risk management program for the project, the project manager and project team must go through several processes. The first is risk identification, and it generally occurs as part of project planning activities. In this part of the process, the entire planning team is brought together to discuss and identify the risks that are specific to the current project (Wysocki, 2014).

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. Identifying risks is an iterative process, because new risks may evolve or become known as the project progresses through its life cycle (Wysocki, 2014).

2.2.1.3 Risk analysis

2.2.1.3.1 Qualitative Risk Analysis

Qualitative risk analysis refers to performing a qualitative analysis of risks and conditions by assessing and combining their probability of occurrence and impact to prioritize their impacts on

project objectives. In performing qualitative risk analysis, 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 will also be assessed (PMBOK® 2000).

Qualitative risk analysis assesses the impact and likelihood of identified risks. It is one way to determine the importance of addressing specific risks and guiding risk responses. 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. An evaluation of the quality of the available information on project risks also helps to clarify the assessment of the risk's importance to the project. It is usually a rapid and cost-effective means of establishing priorities for 'plan risk responses' and lays the foundation for Perform 'quantitative risk analysis', if required. Trends in the results when qualitative analysis is repeated can indicate the need for more or less risk-management action (Sheppyet al., 2012).

The key output from this process is ranking the overall risks for the project to indicate the overall risk position of a project relative to other projects by comparing the risk scores. It can be used to assign personnel or other resources to projects with different risk rankings; to make a benefit cost analysis decision about the project, or to support a recommendation for project initiation, continuation, or cancellation (PMBOK® Guide 2000).

2.2.1.3.1 Quantitative Risk Analysis

Quantitative risk analysis is a process of estimating the probability and consequences of risks and estimating the implications for project objectives. It is the process of numerically analyzing the effect of identified risks on overall project objectives. According to the Project Management

Institute's (PMI) publication A Guide to the Project Management Body of Knowledge (2000), this process uses techniques such as Monte Carlo simulation and decision analysis to:

- ❖ Determine the probability of achieving a specific project objective.
- ❖ Quantify the risk exposure for the project, and determine the size of cost and schedule contingency reserves that may be needed.
- ❖ Identify risks requiring the most attention by quantifying their relative contribution to project risk.
- ❖ Identify realistic and achievable cost, schedule, or scope targets.

It is performed on risks that have been prioritized by the 'perform qualitative risk analysis' process as potentially and substantially impacting the project's competing demands. The key benefit of this process is that it produces quantitative risk information to support decision making in order to reduce project uncertainty.

2.2.1.5 Risk Response Planning

Risk response planning refers to the process of developing options, procedures and techniques to enhance opportunities and reduce threats to the project's objectives. It is the process of developing options and actions to enhance opportunities and to reduce threats to project objectives (Barkley 2004).

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. Risk responses should be appropriate for the significance of the risk, cost-effective in meeting the challenge, realistic within the project context, agreed upon by all parties involved, and owned by a responsible person. Selecting the optimum risk response from several options is often required.

The effectiveness of response planning will directly determine whether risk increases or decreases for the project (PMBOK® Guide 2000).

Planning a response to risk involves understanding the project and impacts of various corrective actions midstream. You create risk scenarios and schedule impacts. An "expected" scenario is the best guess at what actually will happen, a "pessimistic" scenario is the worst case, and an optimistic scenario is the "best case" (Barkley 2004).

Risk response planning must be appropriate to the severity of the risk, cost effective in meeting the challenge, timely to be successful, realistic within the project context, agreed upon by all parties involved, and owned by a responsible person. Selected the best risk response from several options is often required (PMBOK® Guide 2000).

2.3. Theories of risk and risk management

2.3.1. Agency theory

Agency theory extends the analysis of the firm to include separation of ownership and control, and managerial motivation. In the field of corporate risk management agency issues have been shown to influence managerial attitudes toward risk taking and hedging (Smith and Stulz, 1985). Theory also explains a possible mismatch of interest between shareholders, management and debt holders due to asymmetries in earning distribution, which can result in the firm taking too much risk or not engaging in positive net value projects (Mayers and Smith, 1987). Consequently, agency theory implies that defined hedging policies can have important influence on firm value (Fite and Pflleiderer, 1995). The latter hypotheses are associated with financing structure, and give predictions similar to financial theory. Managerial motivation factors in implementation of corporate risk management have been empirically investigated in a few

studies with a negative effect (Faff and Nguyen, 2002). Notably, positive evidence was found however by Tufano (1996) in his analysis of the gold mining industry in the US. Financial policy hypotheses were tested in studies of the financial theory, since both theories give similar predictions in this respect.

2.3.2. New Institutional Economics

A different perspective on risk management is offered by new institutional economics. The focus is shifted here to governance processes and socio-economic institutions that guide these processes, as explained by Williamson (1998). Although no empirical studies of new institutional economics approach to risk management have been carried out so far, the theory offers an alternative explanation of corporate behavior. Namely, it predicts that risk management practices may be determined by institutions or accepted practice within a market or industry. Moreover, the theory links security with specific assets purchase, which implies that risk management can be important in contracts which bind two sides without allowing diversification, such as large financing contract or close cooperation within a supply chain (Williamson, 1998).

2.3.3. Stakeholder theory

Stakeholder theory, developed originally by Freeman (1984) as a managerial instrument, has since evolved into a theory of the firm with high explanatory potential. Stakeholder theory focuses explicitly on an equilibrium of stakeholder interests as the main determinant of corporate policy. The most promising contribution to risk management is the extension of implicit contracts theory from employment to other contracts, including sales and financing (Cornell and Shapiro, 1987). In certain industries, particularly high-tech and services, consumer trust in the company being able to continue offering its services in the future can substantially contribute to company value. However, the value of these implicit claims is highly sensitive to expected costs

of financial distress and bankruptcy. Since corporate risk management practices lead to a decrease in these expected costs, company value rises (Klimczak, 2005). Therefore, stakeholder theory provides a new insight into possible rationale for risk management. However, it has not yet been tested directly. Investigations of financial distress hypothesis provide only indirect evidence (Smith and Stulz, 1995).

2.4. Empirical findings

Different researcher said a lot about risk in real estate projects. They all agreed that causes of risk were Lack of communication between parties, slow decision making, change orders, Inadequate contractor planning, Finance and payment of completed work, Subcontractor performance and Inadequate contractor experience (Salleh, 2009).

A study by Ogege (2011) reported the major problems in projects are related with lack of clear definition of the project, and deliberate exclusion of local professionals during the tendering, ordering, procurement, installation and commissioning stages of projects. Other problems were appointment of persons who were technically ill equipped to manage such projects poor tender documentation, and poor evaluation of the tenders. Procurement and location of projects on political consideration only and the noncommittal attitude of government functionaries to the implementation of its own budget plans, unpatriotic attitude of some policy makers who for the purpose of handsome kickbacks encourage over-invoicing and absence of built in planned maintenance affected the project a great deal. The Nigerian preference for imported machinery, equipment and even foreign expertise and the unpatriotic habits of many Nigerians who hold the view that what belongs to the government is nobody's property and therefore deserves no special care led to major failure. It was found generally that most project beneficiaries and managers lacked the understanding of project management, that is, the procedure for its initiation, costing

and execution. It is for this reason that we found it expedient to give some explanation on the term project and the procedure for its management.

According to Cleland et al (1975, Cited in Nwachukwu&Emoh, 2011: P59), a project is considered to have successful risk management techniques if it passes four success test criteria i.e. the time criterion –completed on time; the cost or money criterion – completed within budget; the effectiveness criterion – completed in accordance with the original set performance and quality standards; and client's satisfaction criterion –accepted by the intended users or clients whether the client is internal or from outside the organization. "The above success criteria call for successful project implementation by the utilization of proven management techniques of planning, organizing, directing and control. The issues on life cycle management, time management, conflict resolution and management, networking, contracts management, project choice and project quality are the key factors that contribute to project success" (Nwachukwu&Emoh, 2011:P59). Based on this criteria, various studies have been conducted.

For instance, Salleh, (2009).has identified the most important critical success and risk management factors for building construction projects based on rank: Project manager's capabilities and experience, Clarity of project scope and work definition, Organizational Planning, Use of control systems, Project manager's goal commitment, Project team motivation and goal orientation and Safety precaution and applied procedures.

Another study by Jari&Pankaj (2013) stated that success factors for the real estate construction process are Clarity/Definition of project objective, Scope of project, Project manager, Project Team Commitment, Capability and cooperation, Planning, Control, Appropriate size of work package and environment, Communication and information management, and Top management support and Health and safety.

A study conducted in Nigeria reported different risk management techniques. It was reported that substantive professional project management support for national and state project planning, execution, monitoring/control should be provided. If proper project management is institutionalized, it would bring about authenticity of data or information, timely release of funds, effective management of project risks and realization of project benefits in both public and private sector of the economy. Intervention of academic researchers and major stakeholders from building construction industry for a scientific study on other factors constraining project management success in public and private sectors of the building development industry. Comparative study be undertaken to determine the level of building development project management performance between foreign and indigenous development firms. To this end, we are very optimistic that an empirical study in these areas may provide a level ground for all the stakeholders, clients, designers, contractors, users, financiers and sponsors to rub minds on how to drastically reduce if not eliminating these disastrous elements as constraining factors to building development project management success in Nigeria.

A study made in Dundee by A K Munns and B F Bjeirmi focused on the role of project management in achieving project success. This paper has highlighted the overlap that exists between projects and project management and the confusion that can arise from the common use of these terms. It has also attempted to highlight how the objectives of a project and project management are different and how the emphasis of project management is towards achieving specific and short-term targets compared to the wider aims of a project. The conclusion is that to make the project management team totally responsible for success would appear to be inappropriate and that the clients should take an increased interest in the development and use of the project. Thus, for a project to be successful and has better risk management strategy, there

must, first, be an improved appreciation of the role of project management within projects, and this role must be placed within the context of a wider project alongside other outside criteria and long-term expectations. Second, the project manager must allow the client to contribute actively in the planning and production phases and at the same time the project team involvement has to be extended into the utilization phase. This would be accommodated properly in a project evaluation technique that examines not only the implementation processes but also the economic and financial performance. Finally, one must always bear in mind that successful project management techniques will contribute to the achievement of projects, but project management will not stop a project from failing to succeed. The right project will succeed almost without the success of project management, but successful project management could enhance its success. Selecting the right project at the outset and screening out potentially unsuccessful projects, will be more important to ensuring total project success.

2.4.1. Empirical findings in Ethiopia

Real Estate development is considered as one of the sectors with transaction of billions of ETB in the market. However, researches concerning real estates in Ethiopia mainly in Addis Ababa show the real estate development sector faces different problems and challenges. For instance, Eshete and Teshome (2015) examined the performance, challenges and prospects of real estate financing in Addis Ababa with a micro and macro outlook. The result of their research shows problems of land management, inadequate infrastructure, low construction capacity of developers or contractors hired for construction, poor borrowing capacity, price escalation, and low affordability are some of the challenges and shortcomings of real estate development in Addis Ababa. Kiros (2009) also assessed and described the factors affecting the real estate market and shares similar results with Eshete and Teshome. Kiros stated there exists a slow and

insufficient supply of land, foreign currency shortage, shortage and price escalation of housing construction materials. In addition, inflation and non-existence of long-term housing finance were factors which affected the real estate sector. He outlined there is a considerable decline in sales and that housing prices are less affordable in the market. Similarly, research done by Paulos (2011) on private residential real estate developers shows price escalation and devaluation of birr are major challenges. Findings of Paulos (2011) also show that there is a delay in handing over which was a point most of real estate developers which were study subjects of his research agreed. Price escalation and shortage of construction materials and lack of adequate finance were the major causes to the delay.

Adverse climatic conditions and unavailability of skilled labor were also found to be significant causes of delay. Non-delivery of housing projects on time is one of the major problems affecting trustworthiness of real estate developers (Bewket, 2014; Muluken, 2013). Only 15 of them have completed the houses and transferred houses to the hands of their clients and four of them were kicked out while the rest are still with incomplete houses for up to ten years (Bewket, 2014).

As per the report of Land Administration and Building Permit Authority of the City Administration, the usual excuses mentioned as major challenges by developers are delay in handing over the site on the part of the City Administration, delay in provision of infrastructure, price escalation of building materials and lack of loan finance (Truneh, 2013). According to experts and developers, the major problems were delays in the original timetable due to lack of available accessible land, finances obtained from clients for housing projects being used for other purposes and the shortage of experienced and organized professional teams to handle such huge investments (Muluken, 2013).

Delays affect not only the clients but also developers themselves since delay causes rise in initial cost which was originally estimated by the contractors for a specific project in relation to inflation, foreign currency exchange and other issues. Still, clients mostly become the primary victims of the delay incurred since they are definitely expected to cover the additional cost. Whereas, real estate developers also argue that some of them may become bankrupt, forcing them out of the market. Insufficient funds are also an issue which contributed in a major way to delays for long periods because customers are the only sources of finance in real estate projects (Muluken, 2013).

According to the findings Paulos (2011), time extension is not the only issue in client-developer contractual relationship. Price adjustment is found to be what most developers do considering price escalation of some construction inputs and devaluation of birr. Most of these developers make engineers approve the adjustment and few of them get approval from consultants. However, customers usually refuse to accept the adjustment as some developers stated. This is another cause of delay in handing over. Price adjustment as a result of escalating prices construction materials affects not only for new orders to come, but also the ability of customers/buyers to pay remaining installment payments (Kiros, 2009). Price adjustment might lead to terminations of contract before delivering the homes unless clients agree to new terms and conditions which include a new price and can result in customers taking their seller to court to get the homes they had paid for (Tadeos, 2012). Developers who faced shortage of finance to complete projects caused terminations of contract for customers who do not agree to new terms and conditions which include new price (Selam, 2016).

All the problems discussed in this section are challenges to the real estate development projects. Problems that exist in the real estate development make the environment

susceptible to uncertainty. An uncertain environment involves risk, and risks should be identified and their impact has to be assessed in order to make decisions which help minimize their impact. Researches and reports on problems related to real estate development projects in Addis Ababa have identified possible risk factors. These risk factors are summarized as follows.

2.5. Gap in Reviewed Literature

There have been many researchers conducted worldwide on risk and risk management, but most researchers have different view about risk. Some researchers consider risk only as negative, and other as both positive and negative. This creates lack of uniformity among similar researches. Besides, the researchers also failed to operationalize how they measured risk.

Researches concerning real estates in Ethiopia mainly in Addis Ababa focused on problems and challenges the sector is facing. Non-delivery of housing projects on time is one of the major problems of real estate developers (Bewket, and Muluken, 2013). There exists problems of land management, inadequate infrastructure, low construction capacity of developers or contractors hired for construction, poor borrowing capacity, low affordability (Eshete and Teshome, 2015), price escalation, (kiros, 2009; Paulos 2011; Eshete and Teshome, 2015) slow and insufficient supply of land, foreign currency shortage, shortage of housing construction materials. In addition, inflation and non-existence of long-term housing finance were factors which affected the real estate market (Kiros, 2009). All these researches studied the problems and challenges and failed to study whether risk management process is being practiced effectively among selected real estate projects or not, level of awareness to risk and its management among real estate projects and the techniques adopted by the real estate for risk management.

2.6. Conceptual framework

A conceptual framework is an analytical tool with several variations and contexts. It is used to illustrate what a researcher expects to find through a research, including how the variables the researcher is considering might relate to each other (Brans, et al, 2011). The conceptual framework for the current study is presented below as follows.

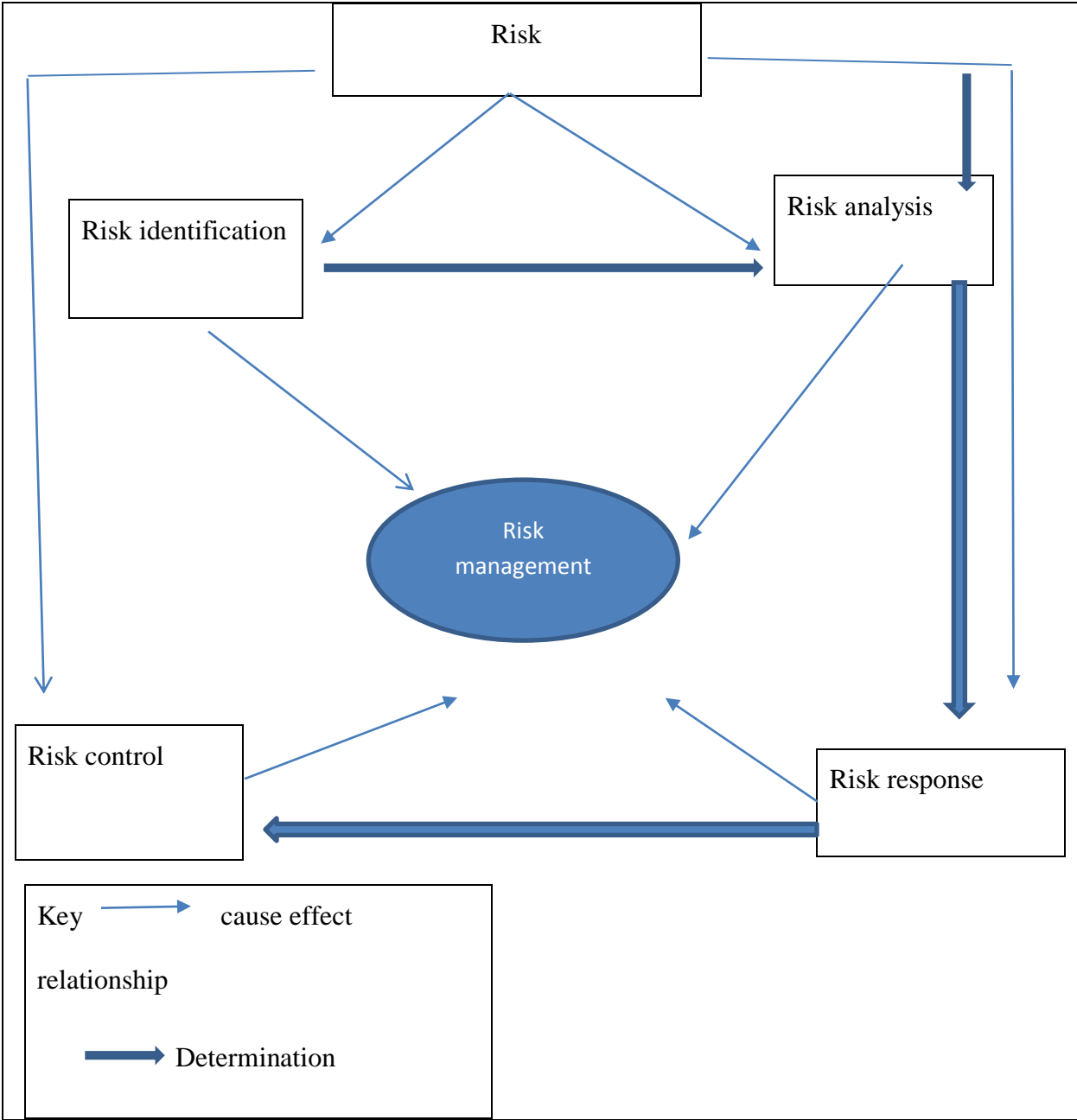


Figure one: conceptual framework of the study

2.6.1. Description of the framework

Risk passes different stages before it is managed. The first step is risk identification, which will be followed by risk analysis. In order to give possible response, risk would be analyzed after it is identified. After risk is identified and analyzed, the next step would be controlling and responding the risk by giving different solutions. These four steps can be categorized as risk management practices, in which all the four techniques leads one company to risk management process. Each step is interconnected and one step can determine the other. For instance, analysis of risk is determined by the characteristics of the identified risk. Response for the risk would also be given based on the analysis of the risk. Risk can also be controlled after consulting the response given to risk.

CHAPTER THREE

METHODS OF THE STUDY

This section describes about the method, which the researcher used in the study. It describes the study site, research design, data source, sampling, data collection instrument, data analysis technique and ethical consideration.

3.1. Study Site

The study was conducted in Addis Ababa. The researcher collected data from Pluto, SemuTekle real estate and Tracon real estate. Six real estate companies, which are geographically close to the researcher, were listed for selection. From these real estate companies, three were selected using lottery method. From the selected real estates, one of them was not willing to provide data due to COVID 19. Thus, the researcher again uses lottery method to replace the missing real estate. Finally, three real estate companies namely Pluto, SemuTekle and Tracon were used as research study sites.

3.2. Research design

Because the study is not new the researcher doesn't utilize exploratory research design. Whereas, the researcher used explanatory research design to answer the question why. The researcher also used descriptive design to describe the case of risk management practices of real estate projects.

Descriptive design is used to describe in detail about the subject under study. Variables were described using percentages, frequency and distribution table. The researcher also used explanatory design to adequately show the risk management practices of real estate projects. Important variables were also explained using qualitative words.

3.3. Data sources

In order to address its objectives, the study used both primary and secondary sources of data.

3.3.1. Primary data

The study used both qualitative and quantitative data. Therefore, in-depth interview, key informant and survey questionnaire was employed. The researcher used Likert scale measurement in the questionnaire to measure different variables of the study. Employing these methods helped the researcher to produce appropriate and in-depth information by collecting information from the target population and knowledgeable individuals about the subject under study.

3.3.2. Secondary data

The researcher also used secondary data. A number of books, journals, articles and previously conducted researches on the case of risk management practices of real estate projects were reviewed.

3.4. Sampling of the study population

The study populations for this study were project managers, coordinators and project team members. Since the number of project managers, coordinators and team members is small, the researcher took the whole population of project managers, coordinators and project team members.

3.5. Sample size

For the qualitative data, the researcher used three project managers and one project coordinator. One project manager from each real estate company and one project coordinator were the sample for the qualitative data. Since the employee in the three real estate companies is small, the

researcher found sampling the population inappropriate for the ideal number of quantitative data. Thus, the researcher took the whole population (20 employees).

3.6. Data collection instruments

The researcher used a guide for In-depth interview, key informant interview and survey questionnaire to collect data. The instruments were prepared based on the objectives of the study after consulting the extant literature.

3.6.2. Key Informant Interview

Key informants provide information about others or specific situations, events, and conditions in the study area (kikwawlia study group, 1994). In this study the researcher conducted key informant interview to generate a more detailed and rich information directly from the expertise.

3.6.3. Survey questionnaire

To collect large amount of data, survey questionnaire was distributed for selected informants. The questioner measures different variables about risk and risk management. The questionnaire was also prepared and translated in to Amharic language to make the questions clear and easily understandable.

3.7. Data analysis

The data analysis for are search is generally categorized into data collection, organizing data in some meaningful form, understanding and analyzing data, interpreting and presenting (Creswell,2003).

This researcher collected important data through in-depth interview, key informant interview and survey questionnaire. This involves distributing questionnaire, recording, taking major notes, transcribing interviews, sorting and arranging the data into different types depending on the sources

of information. After collecting the data through these techniques, the analysis started as soon as possible right after the interviews took place.

To make an important connection, for the qualitative data narrative analysis and thematic analysis technique were used to discover the most common and relevant themes within the data, which are able to address research objectives, questions, and analyze the collected data items from the interview. Thematic analysis method is one of the most common ways of analysis in qualitative research. It emphasizes pinpointing, examining, and recording pattern or themes within data (Braun and Clarke, 2006). For the quantitative data, the researcher used SPSS (Statistical package for social science students) and use percentages, tables, graphs and frequencies for further analysis.

For the purpose of analysis, the researcher started listening and reading through the entire questionnaire and interview to get an over view, as a result, the researcher created a summary for the collected data. This summary includes personal information of the interviewees. In this way recording and notes were transcribed into English without changing their original meanings. Then in this way the data was transcribed, translated, edited, coded.

3.8. Reliability and Validity

According to Saunders *et al.* (2009), internal validity in relation to questionnaires refers to the ability of the questionnaire to measure what the researcher intends it to measure. To achieve this, questions in the questionnaire are emanated from the broad research questions tailored to meet research objectives. Content validity, on the other hand, refers to the extent to which the measurement device, in this case the measurement questions in the questionnaire, provides adequate coverage of the investigative questions. This is achieved by providing a five scale Likert scale for addressing a range of alternatives.

Reliability, on the other hand, refers to consistency. It refers to the extent to which the data collection techniques or analysis procedures will yield consistent findings. According to Gliem and Gliem (2003), when using Likert-type scales it is essential to calculate and report coefficient for internal consistency reliability. But because Cronbach's alpha does not provide reliability estimates for single items, the analysis of the data must use the summated scales or subscales and not individual items. In this study, Cronbach's alpha test is calculated for the Likert-style items using SPSS statistical software and the result is presented in the following table.

Cronbach's alpha reliability coefficient normally ranges between 0 and 1. The closer Cronbach's alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale. George and Mallery (2003) cited in Gliem and Gliem (2003), provide the following rules of thumb: “_ > .9 – Excellent, _ > .8 – Good, _ > .7 – Acceptable, _ > .6 – Questionable, _ > .5 – Poor, and _ < .5 – Unacceptable”. Accordingly, the Cronbach's alpha coefficient of 0.801 in the above table indicates good internal consistency of the items in the scale. Generally, in an effort to maximize reliability and validity, individual questions are carefully designed. .

3.9. Ethical Consideration

The primary data collection started after obtaining willingness from each real estate companies and their employees. All participants of the study were provided with clear explanation about the purpose of the study and why they have been chosen for this particular research. In order to build rapport between the researcher and the study participants, the researcher clearly defined about confidentiality and anonymity of the data. Besides, the researcher informed participants that factious names will be used for the report. As a result, participants were not identified by their names.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1. Introduction

This section presents the analysis and interpretation of the collected data. Tables with frequency and percent with detailed analysis and description are presented in this section.

4.2. Demographic profile of respondents

This section presents the sex, position and experience of respondents. The finding is presented below as follows.

Table one: General demographic profile of respondents

Sex of the respondents		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	14	70.0	70.0	70.0
	female	6	30.0	30.0	100.0
	Total	20	100.0	100.0	
Position		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Site engineer	7	35.0	35.0	70.0
	project manager	5	25.0	25.0	95.0
Experience		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	6-10 years	1	5.0	5.0	5.0
	11-15 years	19	95.0	95.0	100.0
	Total	20	100.0	100.0	

The study came across different questions, where the first one was sex. It was found out that the majority of the respondents (70%) were male and the rest 30% were female. This shows that the majority of the respondents during data collection were male.

The study participants, who work in real estate Company, were also in different positions during the data collection period. From the total survey respondents, majority of them were office engineer and site engineer, where both accounts 35 % of the total share. On the other hand, project managers and project coordinator accounts for 25% and 5% respectively. This data shows that the majority of the respondents during data collection were engineers.

All the study participants have different work experience. Almost all of the respondents (95%) had 11-15 years of experience and only 5% of the respondents had 6-10 years during data collection. This shows that majority of the respondents were seniors. The longer years of experience is important for the survey that more informed response to the questions would be given because of the respondents extended knowledge of the project's doings.

4.3. Risk management effectiveness

Different questions were asked to assess whether the selected real estate companies use risk management techniques or not. The finding is presented in three themes. The first theme is about planning of risk. The second theme deals with risk identification and ranking. The last one is about monitoring and evaluation of risk. All the responses are analyzed, interpreted and presented below as follows.

4.3.1. Risk Planning

The researcher asked a question to assess whether the project team decides how to approach and plan risk management activities before the project is launched or not. Different question using Likert's scale was used and the result is presented below as follows.

Table two: Descriptive statistics on risk planning

Item	Strongly disagree	Agree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
The project team decides how to approach and plan risk management activities before the project is launched	1(5%)	3(15%)	5(25%)	9(45%)	2(10%)	3.8000	.946210
Expert judgment is considered while planning for risks that might occur in the project	1(5%)	2(10%)	1(5%)	15(75%)	1(5%)	3.6500	.93330
Environmental factors are taken into account during risk planning	1(5%)	2(10%)	1(5%)	14(70%)	2(10%)	3.7000	.97872
Relevant stakeholders are involved in risk management planning	1(5%)	5(25%)	10(50%)	3(15%)	1(5%)	2.9000	.91191

As shown in the above table, majority of the respondents (45%) agreed that the project team decides how to approach and plan risk management activities before the project is launched. Participants, who reported neutral feeling, rank the next lion's share of the response, i.e., 25%. On the other hand, those participants who disagree and strongly disagree account for 15% and 5% respectively.

The mean and standard deviation for decision of risk management by the project was 3.8 and 0.95 respectively. This means that the majority of the respondents agree regarding planning of risk management activities before the project is launched. The standard deviation is small and shows that there is consistency among the finding and the data is closely clustered about the mean. This shows that real estate companies plan in advance how to approach risk in teams before a project started. This might be due to a fear of falling in risk.

Unlike this study, a research by Kalkidan (2017) reported that risk management is implemented in the monitoring stage of the project. Besides, it was also reported that the project team doesn't decide how to approach and plan risk management activities before the project is launched. In addition, it was found from the interview held that risk management planning is so weak in the projects and that most activities that involve an element of risk are taken care of without any formal planning. The variation for the result might be due to the time variation where data is collected. Recently, people's awareness towards risk increased and the variation might be due to that.

Other than prior risk management, the other mechanism to know whether risk is managed properly or not is by assessing the participation of experts in risk management process. Regarding this, respondents were assessed and from the total 20 respondents, the majority of the respondents (75%) agreed that expert judgment is considered during planning in advance. On the

other hand, equal percent of respondents strongly disagree, have neutral feeling and strongly agreed. The response for these respondents was 5%.participants, who disagreed regarding the inclusion of experts during risk management planning account for 10%.

The mean and standard deviation for consideration of expert judgment in planning of risk was 3.56 and 0.93 respectively. This means that the majority of the respondents agree regarding consideration of expert judgment in planning of risk. The standard deviation is small and shows that there is consistency among the finding and the data is closely clustered about the mean. This finding shows that experts meet and decide about risk management in advance than any lay person. Similar to this study, Milka (2016) found out that experts are involved in different stages of risk management process and various factors, including environmental are taken in to account.

One form of risk was found to be environmental risk and respondents were asked whether environmental factors are considered in the risk planning process or not. It was reported that majority (70%) of the respondents agreed regarding the inclusion of environmental factors. On the other hand, equal number of participants (10% each) Disagreed and strongly agreed. Those participants who have neural feeling and those who disagreed are 5% each.

The mean and standard deviation for consideration of environmental factors in risk planning was 3.7 and 0.97 respectively. This means that the majority of the respondents agree regarding consideration of environmental factors in risk planning. The standard deviation is small and shows that there is consistency among the finding and the data is closely clustered about the mean. This shows that the environmental factor is one issue discussed during risk planning process.

Respondents were also asked about involvement of relevant stakeholders in risk management planning. Accordingly, it was reported that that majority of the respondents 50% have neutral feeling regarding the involvement of relevant stakeholders in risk management planning. On the other hand, those participants, who disagreed and strongly disagreed, constitute 25% and 5% of the total population. Whereas, those participants who agreed and strongly agreed about the question ranks 15% and 5% respectively. This shows that even though the majority vote goes to neutral, disagreement was higher than agreement regarding involvement of relevant stakeholders in risk management planning.

The mean and standard deviation for involvement of relevant stakeholders in risk management planning was 2.9 and 0.91 respectively. This means that the majority of the respondents have neutral feeling about involvement of relevant stakeholders in risk management planning. The standard deviation is small and shows that there is consistency among the finding and the data is closely clustered about the mean.

In opposite to the survey finding, AtoKassegn, who is a project coordinator at Tracon real estate responded as follows.

All stakeholders involve in risk planning. Mostly, people who are at the managerial level and people who work in management and planning department participate in all necessary steps of risk.

The variation might be because of the project coordinator's attitude that people at the managerial and planning department are the only relevant stakeholders.

4.3.2. Risk identification and Ranking

Risk planning is not the only thing that makes risk assessment perfect. Identification and assessment of risk is another important thing. Thus, the researcher asked respondents different questions to get detailed result on risk identification. Thus, the result is presented below as follows.

Table three: Descriptive statistics on risk identification and ranking

Item	Strongly disagree	disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
Potential risks are identified and assessed in a methodical way	1(5%)	2(10%)	5(25%)	11(55%)	1(5%)	3.4500	.94451
Sources of risks, areas of impacts, and their corresponding causes and potential effects are identified in	1(5%)	2(10%)	7(35%)	9(45%)	1(5%)	3.4000	.92130

the project.							
Overall risks for the project are ranked to indicate the overall risk position of a project relative to other projects undertaken by your company.	1(5%)	3(15%)	9(45%)	7(35%)	0	3.1000	.85224
Project documents and risk register are updated after assessment of the risk that might occur.	1(5%)	4(20%)	9(45%)	6(30%)	0	3.0000	.85840

The researcher asked respondents whether risk is assessed in a methodical way or not. The majority of the respondents (55%) agreed that risks are identified and assessed in a methodical way. The next value goes to neural feeling, where majority of the participants response accounts

for 25%. Respondents, who strongly agree and strongly disagree accounts for 5% each, whereas, regarding the question, 10% of the respondents disagree.

The mean and standard deviation for assessing risk in a methodical way was 3.45 and 0.94 respectively. This means that the majority of the respondents agreed about assessing risk in a methodical way. The standard deviation is small and shows that there is consistency among the finding and the data is closely clustered about the mean. Similar to this finding, AtoDawit, who is a project manager at Tracon real estate, said that:

There are different processes for risk management. For instance, we first identify the risk then we proceed to analyzing the risk. After we analyze the risk and came in to solution, we respond to the risk. This are the steps taken in order to reduce risk....I can confidently say we respond to risk methodically.

This shows that there is an agreement regarding risk identification and assessment in a methodical way. Even though there is an agreement among the majority participants, there is also high response of uncertainty or neutral feeling. This might be due to failure of understanding the word “methodical way” by the respondents.

Unlike to this study, (Abdissa, 2003) affirmed the absence of some kind of methodical way in identifying project risks, but the outcome of the analysis reveals that the projects are still doing good in terms of identifying sources of risks, areas of impacts and their corresponding causes and potential effects. The majority of the respondents also agreed that brainstorming is the primary method used to identify risks that might occur.

Again, Participants were asked whether sources of risks, areas of impacts, and their corresponding causes and potential effects are identified in the project or not. The lion’s share of

the response (45%) goes to agreement. The next observed higher value (35%) was for the neutral response. Those participants, who strongly agree and strongly disagree ranks 5% each, where disagreement among the response account for 10%.

The mean and standard deviation for identification of sources of risks, areas of impacts, and their corresponding causes and potential effects are was 3.40 and 0.92 respectively. This means that the majority of the respondents agreed about identifying sources of risks, areas of impacts, and their corresponding causes and potential effects are. The standard deviation is small and shows that there is consistency among the finding and the data is closely clustered about the mean. The higher number of neutral response might be due to identifying of cause and effects in some project and ignorance in other projects. This shows that sources of risks, areas of impacts, and their corresponding causes and potential effects are identified in the project.

After risks are assessed and the immediate cause and effect are identified, the next step would be ranking risks. This would help to identify the most devastating risks and act accordingly. To asses such issues, the researcher came across a question that says “Overall risks for the project are ranked to indicate the overall risk position of a project relative to other projects undertaken by your company.” The majority (45%) of the respondents has neutral feeling and they are uncertain whether the overall risks for the project are ranked to indicate the overall risk position of a project relative to other projects undertaken by their company or not. neither of the respondents strongly agreed and 35% of them agreed. Regarding this, those participants, who disagreed and strongly disagreed ranks for 15% and 5% respectively. The lion’s share next to the neutral feeling is agreement.

The mean and standard deviation for deciding overall risks for the project are ranked to indicate the overall risk position of a project relative to other projects undertaken by their company was

3.1 and 0.85 respectively. This means that the majority of the respondents have neutral feeling about identifying overall risks for the project are ranked to indicate the overall risk position of a project relative to other projects undertaken by their company. The standard deviation is small and shows that there is consistency among the finding and the data is closely clustered about the mean. This finding shows that participants are uncertain and it might be due to the fact that sometimes risks are ranked and other times ignored.

Regarding this, AtoKassegn stated that:

We do prioritize risks. The first step for prioritizing is identifying the risk. After that we assess the effect and balance the effect of the risk.

Similar to this finding, a study by Milka (2016) imply that projects are doing fairly good in terms of keeping track of identified risks, monitoring residual risks and ensuring execution of risk plans to evaluate their effectiveness. The respondents' response on risk monitoring tools reveal that technical performance measurement is used in the projects as a primary tool for risk monitoring.

It is believed that registration of risks is important. This would help to act immediately and provide solution when similar risks occur. Again, majority of the participants have neutral feeling (45%) regarding registering risks. Participants who agreed ranks 30% and no strongly agree response was observed. Those participants who strongly disagreed and disagreed ranked 5% and 20% respectively.

The mean and standard deviation regarding registration of risks was 3.0 and 0.85 respectively. This means that the majority of the respondents have neutral feeling about identifying regarding registration of risks. The standard deviation is small and shows that there is consistency among

the finding and the data is closely clustered about the mean. This finding shows that participants are uncertain and it might be due to the fact that sometimes risks are ranked and other times ignored. The higher response of neutral feeling might be due to failure of registering common and expected risks.

4.3.3. Monitoring and Evaluation

The researcher asked whether identified risks are monitored and execution of risk plans is ensured just to evaluate their effectiveness. The responses are presented below as follows.

Table four: Descriptive statistics on monitoring and evaluation

Item	Strongly disagree	disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
The project keeps track of identified risks , monitor residual risks and ensure execution of risk plans to evaluate their effectiveness	2(10%)	2(10%)	8(40%)	8(40%)	0	3.1000	.96791

There is a well-developed strategy of monitoring and evaluation within the project to respond to risk.	1(5%)	4(20%)	6(30%)	9(40%)	0		
						3.4500	.94330

As presented in the above table, the findings show that participants, who agreed and have neutral feeling, regarding keeping track of identified risks, monitoring residual risks and ensuring execution of risk plans to evaluate their effectiveness have equal response percent (40%). Participants, who strongly disagreed and disagreed also, have equal response percent (10%).

The mean and standard deviation regarding keeping track of identified risks, monitoring residual risks and ensuring execution of risk plans to evaluate their effectiveness of risks was 3.1 and 0.96 respectively. The higher number of monitoring and evaluation might be practicing for some projects and ignorance for others. Besides, it might be due to implementation of monitoring and ignorance of evaluation and vice versa.

On the other hand, different strategy methods are used in assessing risk and responding to risk. The respondents were asked whether there is well-developed strategy within the project to respond to risk or not. That the majority of the respondents (45%) agreed that there is well-developed strategy to respond for risk. The next lion's share goes to neutral (35%) attitude. Those respondents, who disagreed and strongly disagreed, rank 20% and 5% respectively.

The mean and standard deviation regarding well-developed strategy to respond for risk was 3.4 and 0.93 respectively. This means that the majority of the respondents agree about identifying well-developed strategy to respond for risk. The standard deviation is small and shows that there is consistency among the finding and the data is closely clustered about the mean. This shows that there is well developed strategy within the project to respond to risk.

4.4. Risk awareness in real estate companies

Building a risk management culture is primarily a process of developing people in the organization who think and plan projects effectively, and who are supported by company systems that encourage them to think and plan effectively. Successful management of project risk is usually the product of a successful organization that has instilled into its people the importance of a careful risk management process. In an effort to investigate awareness and perception of project personnel and team members to risk management, a number of survey questions relating to risk management training and team members' understanding of the concept of risk were included in the questionnaire. As it is explained in literatures, risk is an uncertain event that, if it occurs, has both welcome upside and unwelcome down side effect on the project. Accordingly, various questions were asked to assess the risk awareness by the study participants. To present the responses, the researcher classified the findings in two themes. The first one is knowledge of risk management and the second theme is trainings to increase knowledge of risk management.

4.4.1. Knowledge of risk management

Participants were asked what they think about risk. Different questions were raised to assess their attitude towards risk. They were asked If they solely think that risk is positive, negative or both negative and positive. They were also asked if all the personnel in the companies have

knowledge about understanding of risk, risk planning and risk management. The result is presented below as follows.

Table five: Descriptive statistics on knowledge of risk management

Item	Strongly disagree	disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
For me risk is only negative result of a project	5(25%)	8(40%)	7(35%)	0	0	2.1000	.78807
For me risk is only positive result of a project	6(30%)	9(45%)	1(5%)	4(20%)	0	2.1500	0.78942
For me risk is both positive and negative result of a project	1(5%)	3(15%)	3(15%)	10(50%)	3(15%)	3.5500	0.99904
All project personnel have an understanding of the major risks and the risk management plan of the project.	2(10%)	4(20%)	10(50%)	3(15%)	1(5%)	2.8500	.98809

The finding regarding the definition of risk shows different results. For instance, the majority of the participants (40%) disagreed that risk is only negative result. Participants, who strongly disagreed about the concept account 25% of the total respondents. As compared to disagreement, slightly lower percent is observed for agreement (35%).

The mean and standard deviation regarding the view that risk is only negative was 2.1 and 0.7 respectively. This means that the majority of the respondents disagree about identifying the view that risk is only negative. The standard deviation is small and shows that there is consistency among the finding and the data is closely clustered about the mean. This shows that there is well developed strategy within the project to respond to risk. This shows that even though the lion's share of the response goes to disagreement, higher number of respondents agreed that risk is only negative.

On the other hand, Participants were also asked if they think risk is only positive result of a project. The result shows that the majority of the respondents (45%) disagreed that risk is only positive outcome and 30% of the respondents strongly disagree. Those participants who have neutral attitude and agree are 5% and 20% respectively.

The mean and standard deviation regarding the view that risk is only positive was 2.1 and 0.7 respectively. This means that the majority of the respondents disagree about identifying the view that risk is only positive. The standard deviation is small and shows that there is consistency among the finding and the data is closely clustered about the mean. This shows that there is well developed strategy within the project to respond to risk. This shows that even though the lion's share of the response goes to disagreement, higher number of respondents agreed that risk is only negative.

Again, participants were asked if they believe that risk is both positive and negative. Those participants who agreed and strongly agree with the statement that risk is both positive and negative account 50% and 15% respectively. On the hand, respondents who disagree and have neutral feeling have equal percentage (15%). Those who strongly disagree accounts for 5%.

The mean and standard deviation regarding the view that risk is both positive and negative was 3.5 and 0.9 respectively. This means that the majority of the respondents agree about identifying the view that risk is both positive and negative. The standard deviation is small and shows that there is consistency among the finding and the data is closely clustered about the mean.

Unlike to this study finding, a research by Kalkidan (2017) reported that the meanings attached to risk shows that the majority of the respondents relate risk with negative events and only few believe that risk represents both opportunities and threats. This means that the projects are missing out on opportunities by identifying only negative risks and planning only for threats and disasters. The variation among the two studies might be due to differences in findings, where the participants of the current study worked for longer years.

Another finding shows that half of the respondents have neutral feeling regarding understanding of the major risks and the risk management plan of the project by all project personnel. Those who disagree and strongly disagreement accounts for 20% and 10% respectively. Those who agree are 15% and strongly agree accounts for 5%. This shows that neutral feeling is higher than all responses and as compared to agreement, disagreement is shows higher percent than agreement.

The mean and standard deviation regarding understanding of the major risks and the risk management plan of the project by all project personnel was 2.8 and 0.9 respectively. This

means that the majority of the respondents have neutral feeling about identifying regarding understanding of the major risks and the risk management plan of the project by all project personnel. The standard deviation is small and shows that there is consistency among the finding and the data is closely clustered about the mean. This shows that there is well developed strategy within the project to respond to risk. This might be because of sole participation of managers and people at higher position.

4.4.2. Understanding of risk and risk management by personnel

The researcher came across a question that assess whether the companies provide different trainings and sessions to increase the employee’s awareness of risk, risk planning and risk management. The result is presented below.

Table six: Descriptive statistics on understanding of risk and risk management by personnel

Item	Strongly disagree	disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
Team members within the project receive trainings and seminars to develop enough knowledge on major risks that might affect project	1(5%)	8(40%)	5(25%)	5(25%)	1(5%)	2.4500	.98809

objectives							
The company facilitates different meetings and events to raise employees awareness towards risk	0	5(25%)	8(40%)	6(30%)	1(50%)	2.8000	.99525

Respondents were asked if team members within the project receive trainings and seminars to develop enough knowledge on major risks that might affect project objectives. Regarding this, the majority of the study participants disagreed (40%) that team members within the project receive trainings and seminars to develop enough knowledge on major risks that might affect project objectives. Participants, who have neutral feeling and who agree account equal percentage (25%). On the other hand those participants who strongly disagreed and strongly agreed ranks accounts for 5% each.

The mean and standard deviation regarding provision of trainings and seminarsto develop enough knowledge on major risks that might affect project objectives was 2.4 and 0.9 respectively. This means that the majority of the respondents disagree about identifyingprovision trainings and seminarsto develop enough knowledge on major risks that might affect project objectives. The standard deviation is small and shows that there is consistency among the finding and the data is closely clustered about the mean. This shows that there is no training to update employee’s risk identification and risk planning skill. This might be

affecting handling of risk by the companies or it might be due to lack of budget and other constraints. Similarly Kalkidan (2017) reported that staff members don't receive trainings to close their knowledge gap regarding risks.

Participants of the study were also asked whether the company facilitates different meetings and events to raise employee's awareness towards risk. It was found out that the majority of the respondents (40%) have neutral feeling. Participants, who disagree about the statement account 25%. The participants who agree and strongly agree are 30% and 5% respectively. This shows that different meetings and events are facilitated to raise employee's awareness towards risk.

The mean and standard deviation regarding preparation of different meetings and events to raise employee's awareness towards risk was 2.8 and 0.9 respectively. This means that the majority of the respondents have neutral feeling about identifying preparation of different meetings and events to raise employee's awareness towards risk. The standard deviation is small and shows that there is consistency among the finding and the data is closely clustered about the mean. Similarly, Milka (2016) reported that there is monthly meeting regarding risk and risk management. Like Milka's and the current finding, W/roBanchi, Project manager at Semu real estate said that:

We do have awareness creation session for our employees. We do facilitate meeting to increase their knowledge regarding risk. We sometimes prepare risk aid tools if possible. We also give trainings to create better safety engineers.

4.5. Risk management techniques

Different companies use different risk management techniques. Since risk management techniques the crucial ways to determine a company's success of risk management, risk

management techniques are very important. Different questions are asked and the response is presented below as follows.

Table seven: descriptive statistics on risk management techniques

Item	Strongly disagree	disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
The project has a defined or standard risk management process.	5(25%)	5(25%)	7(35%)	3(35%)	0	3.3000	.94630
There is a policy or guideline that recommends how to manage unexpected risks.	0	6(30%)	3(15%)	8(40%)	3(15%)	2.7000	1.34164
There is a responsible person or department assigned to handle risk when it occurs.	0	5(25%)	4(20%)	10(50%)	1(5%)	3.1500	.98809

The study found out that the majority (35%) of the respondents agreed with the statement that there is defined or standard risk management process. On the other hand, participants who disagreed and with neutral feeling have equal percentage (25%). The rest 15% of the participants strongly agreed with availability of defined or standard risk management process. Similar to this AtoDawit responded as follows.

There are defined processes for managing risks. For instance, information gathering is one of the common practices in our real estate. We also do frequent feasibility study...we also have experience sharing with other companies in Ethiopia.

This shows that there are defined or standard risk management processes. This means that standard and common risk management process is one techniques used by real estate companies to deal with risk.

On the other hand, Respondents were also asked whether there is a policy or guideline that recommends how to manage unexpected risks not. It was found out that 40% of the respondents agreed that there is a policy or guideline that recommends how to manage unexpected risks. Similarly, participants, who strongly agree and have neutral feeling account for 15% each, whereas, those, who disagree by the statement are 30% of the total respondents.

The mean and standard deviation for availability of policy or guideline, that recommend how to manage unexpected risks was 2.7 and 1.3 respectively. This means that the majority of the respondents have neutral feeling about availability of policy or guideline that recommends how to manage unexpected risks. The standard deviation is small and shows that there is consistency among the finding and the data is closely clustered about the mean. This shows that there are policies and guidelines recommending how to manage unexpected risks. This means that policies are recommendations are one means or techniques of managing risks.

To assess the risk management techniques, participants were asked if there is a responsible person or department assigned to handle risk. It was reported that that majority (50%) of the participants agree with regards to availability of assigned person or department or risk management. 25% and 20% of the respondents disagreed and have neutral feeling. The rest 5% strongly agreed Similarly AtoKassegn reported as follows:

Mostly, people who are at the managerial level and people who work in management and planning department participate in all necessary steps of risk.

This shows that there is a responsible person or department assigned to handle risk. This means, everyone in the company doesn't involve in risk management process and assignment of responsible person is one risk management technique.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1. Introduction

This section deals with summary of the study finding and conclusion of the thesis and recommendation for some of the findings.

5.2. Summary of the finding

The current study reported that the majority of the respondents were male, working as site and office engineer with more than 10 years of experience. It was also found out that the real estate companies plan about risk management activities before the project starts. The current study also document that experts are involved in risk management and expert's input is taken in the planning phase. Besides, it was reported that environmental factors are taken in to account during the planning phase. Even though experts are involved in risk management process, it was found out that relevant stakeholders are less likely to involve in risk and risk management activities.

Again the study documented that risks are identified and assessed in a methodical way, where sources of risks, areas of impacts, and their corresponding causes and potential effects are identified in the project. It was also documented that risk is also ranked. The findings on risk monitoring showed that monitoring and evaluation is implemented properly.

The study further reported that participants neither believe risk is only negative nor positive. They rather believed that risk is both negative and positive. The current study also found out that team members within the project doesn't receive trainings and seminars to develop enough knowledge on major risks that might affect project objectives. Although there is neutral feeling

regarding facilitation of different meetings and events to raise employee's awareness towards risk, the majority of the responses go to agreement.

5.3. Conclusion

The study was conducted with a general objective of observing risk management practices among selected real estate projects in Addis Ababa. The study had also specific objectives to guide the findings of the study. For instance, Assessing whether risk management process is being practiced effectively among selected real estate projects or not, investigating the level of awareness to risk and its management among real estate projects and identifying the techniques adopted by the real estate for risk management were the specific objectives of the study.

To meet the stated objective, data was collected from three real estate companies namely, Tracon, SemuTekle and Pluto. The researcher used both primary and secondary data sources to meet the stated objectives. Accordingly, the researcher conducted face to face in-depth interview with key informant individuals. Besides, self-administered survey questionnaire was also distributed for the participants of the study. The target populations for the study were 20 project managers, coordinators and project team members. Descriptive and explanatory research designs were used to effectively describe the study findings.

Using these methods, the study came across different findings. During the data collection period, majority of the respondents were male and most of them had longer years of work experience. The study found out that real estate companies plan in advance how to approach risk in teams before a project started. During such times, it was experts, who meet and decide about risk management in advance of risk. On the meetings of experts, different issues are raised, where the highly ignored environmental factor is also covered. Thus, it can be said that the research

found out that risk management process is being practiced effectively regarding the planning phase.

Other than the planning stage, risk is identified and managed methodically. Besides, the study found out that sources of risks, areas of impacts, and their corresponding causes and potential effects are identified in the project. Reading ranking and registration of risk, the study participants reported uncertainty. It was also reported that there is well-developed strategy to respond for risk. Again it can be confidently conclude that risk management process is being practiced effectively regarding risk identification.

The study also reported in detail about awareness of risk by the study participants. It was found out that the participants neither think that risk is only positive nor negative. They rather believe that risk is both positive and negative. Even though they have good understanding of risk, it was found out that majority of the participants have neutral feeling regarding understanding of the major risks and the risk management plan of the project by all project personnel. This finding shows that the identified real estate companies have good understating/awareness of risk.

The study again found out that the real estate companies doesn't provide trainings and seminars to close the knowledge gap regarding risk and risk management. Unlike the trainings and seminars, majority of the respondents had neutral feeling about identifyingpreparation of different meetings and events to raise employee's awareness towards risk. It was also reported that there is a policy or guideline that recommends how to manage unexpected risks. The policy promotes assignation of specific person for handling risk. This finding shows that risk management techniques adopted by the real estate were planning, identifying ranking and assigning responsible person. Besides, these companies opt for arranging different meetings and events to raise employee's awareness towards risk.

5.4. Recommendation

- ❖ It was reported that the real estate companies doesn't provide trainings and seminars to enhance the knowledge of individuals regarding risk and risk management. Employees with little or no knowledge regarding risk and risk management techniques might not be able to successfully deal with risk. Thus, it would be better for real estate companies to provide training and seminars to enhance their knowledge of risk and risk management techniques. It is important if real estate companies held regular meetings to discuss and plan about risk and risk management techniques.
- ❖ It was also found out that the majority of the study participants think that relevant stakeholders are not involved in risk management process. Thus, it would be better if the chance is not only given to project managers or coordinators. Better result regarding risk would be seen if professions at different levels involve in risk and risk management. This would also increase their knowledge about risk and it would create better result in succession of employees during turnovers.
- ❖ The current research showed that there is uncertainty regarding registration of risk. It would be better if risk and risk management techniques are registered. This would help companies to act easily and learn from mistakes when similar risks occur.
- ❖ The study was limited only on three real estate companies. Thus, the findings can only apply to limited real estate companies, and can't be fully generalized to whole real estate companies in Addis Ababa. As a result, it is better if other researchers conduct their studies on a wider area by encompassing the experience of many real estate companies in Addis Ababa.

- ❖ The current study only covers issues like risk management process, risk awareness and risk management techniques. Further studies need to be conducted on different areas of risk such as integrated risk management competencies and characteristics of risk management

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APPENDIX A

QUESTIONNAIRE FOR REAL ESTATE EMPLOYEES

SAINT MARRY UNIVERSTY

SCHOOL OF GRADUATE STUDIES

General instruction

Dear respondent,

This questionnaire is prepared to assess general information on the risk management practices among selected real estate projects in Addis Ababa. The data will only be used in writing research report and your information will be kept confidential. Since you are the back bone of the study, please give us accurate answer and please don't skip any question unless it says so.

Specific instruction

- ❖ There is no need to write your name
- ❖ Please circle your answers
- ❖ Please don't skip any question unless there is skip instruction
- ❖ If multiple answers are allowed, don't hesitate to answer more than one question

General and Demographic questions

1. Sex of respondent

A. Male B. Female

2. How long have you worked in real estate company?

A. 0-5 years

B. 5-10 years

C. 10-15 years

D. other _____

3. What is your position in this real estate?

Specific questions

II. Please tick (√) on the following question by considering the score

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

Question ID	Statement on risk management process in real estate companies	1	2	3	4	5
1	Relevant stakeholders are involved in risk management planning					
2	The project team decides how to approach and plan risk management activities before the project is launched					
3	Expert judgment is considered or meetings are conducted while planning for risks that might occur in					

	the project.					
4	Environmental factors are taken into account during risk planning.					
5	Potential risks are identified and assessed in a methodical way					
6	Sources of risks, areas of impacts, and their corresponding causes and potential effects are identified in the project.					
7	Overall risks for the project are ranked to indicate the overall risk position of a project relative to other projects undertaken by your company.					
8	Project documents and risk register are updated after assessment of the risk that might occur.					
9	The project keeps track of identified risks , monitor residual risks and ensure execution of risk plans to evaluate their effectiveness					
10	The project uses the following tools to monitor and control risk management effectiveness					
11	There is a well-developed strategy within the project to					

	respond to risk.					
12	Corporate and strategic objectives of the company are clearly defined and they are well communicated and understood at project level.					

Question ID	Statement on risk awareness in real estate companies	1	2	3	4	5
1	For me risk is only negative result of a project					
2	For me risk is only positive result of a project					
3	For me risk is both negative and positive result of a project					
4	All project personnel have an understanding of the major risks and the risk management plan of the project.					
5	Team members within the project receive trainings and seminars to develop enough knowledge on major risks that might affect project objectives					
6	The company facilitates different meetings and events to raise employees awareness towards risk					

Question ID	Statement on risk management techniques in real estate companies	1	2	3	4	5
1	The project has a defined or standard risk management process.					
2	There is a policy or guideline that recommends how to manage unexpected uncertainties.					
3	There is a responsible person or department assigned to handle risk when it occurs.					

APPENDIX B

INTERVIEW GUIDE FOR PROJECT MANAGERS

SAINT MARRY UNIVERSTY

SCHOOL OF GRADUATE STUDIES

Dear respondent,

This Interview Guide is prepared to assess general information on the risk management practices among selected real estate projects in Ethiopia. The data will be only used in writing research report and your information will be kept confidential. Since you are the back bone of the study, please give us accurate answer and please don't skip any question unless it says so.

Specific questions

1. Can you please brief me on the projects' risk management practice? How do you manage risks in the project?
2. Is there a standard risk management process which is being followed with in the projects or formal documented process on how to manage risks within the project?
3. Is there a special department or person that's specially assigned to handle risks that occur within the project?
4. Are team members within the project aware of the major risks that the project might face and the ways to handle them? Are they given any kind of activities or trainings to develop their knowledge and awareness on risk and its management?

5. Are sources of risks, areas of impacts, and their corresponding causes and potential effects clearly identified early in the project? Is planning done carefully by considering environmental factors and involving stakeholders? Who is involved in the planning process?
6. At which stage of the project do you identify the risks that the project may encounter? And what methods do you use to identify them?
7. How do you analyze and prioritize risks? How do you monitor them?
8. Do you consider factors such as schedule, budget and objective of the project considered in responding for risks that occur? What risk response method do you use usually in the project?
9. Is there any kind of integration or link between project risk management plan and corporate plan? How do you integrate the project risk management plan with other plans and project objectives?
10. Can you tell me risk management techniques in your organizations?
11. How do you define risk?
12. Can you tell me risk management indicators?
13. How long have you worked in this organization?