UNIVERSITY OF GHANA

AN ASSESSMENT OF RISK MANAGEMENT PRACTICES: A CASE STUDY OF EL-VIRTUES CONSTRUCTION LIMITED

BY

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THIS PROJECT IS SUBMITTED TO THE DEPARTMENT OF ORGANISATION AND HUMAN RESOURCE MANAGEMENT, UNIVERSITY OF GHANA BUSINESS SCHOOL, UNIVERSITY OF GHANA, LEGON, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF A MASTER OF ARTS IN MANAGEMENT & ADMINISTRATION DEGREE.

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DECLARATION

I do hereby declare that this work is the result of my own research and has not been presented by anyone for any academic award in this or any other university. All references used in the work have been fully acknowledged, and I bear sole responsibility for any shortcomings in the work.

…….. ……

WINIFRED DAKO **DATE**

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CERTIFICATION

I hereby certify that this work was supervised in accordance with procedures laid down by the University.

…… ……

DR. KWASI DARTEY-BAAH **DATE**

(SUPERVISOR)

DEDICATION

This work is dedicated to my husband; Mr Samuel Dako.

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My greatest gratitude goes to the Almighty God, who has made all these possible. I am sincerely grateful to my supervisor, Dr. Kwasi Dartey-Baah for his guidance, inspiration and stimulating discussions throughout the writing of this thesis.

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TABLE OF CONTENTS

DECLARATION i

CERTIFICATION ii

DEDICATION iii

ACKNOWLEDGEMENTS iv

LIST OF TABLES viii

ABSTRACT ix

1.0 INTRODUCTION/BACKGROUND TO THE STUDY 1

2.0 RATIONALE FOR THE STUDY 3

3.0 OBJECTIVES OF THE STUDY 4

3.1 Research Questions 4

4.0 LITERATURE REVIEW 5

4.1 Risk defined 5

4.2 Concept of Risk Management 6

4.3 Benefits of Risk Management 6

4.4 Limits of Risk Management 7

4.5 The Risk Management Process 8

4.5.1 Risk identification 8

4.5.2 Assessment/analysis 9

4.5.3 Risk response 10

4.5.4 Risk monitoring and control 10

4.5 Risks and Risk Management in the Construction Industry 11

METHODOLOGY 13

5.1 Research Design 13

5.2 Research Approach 13
5.3 Population 14
5.4 Sample and Sampling Technique 14
5.5 Sources of Data 15
5.6 Data Collection Instrument 15
5.7 Data Collection Procedure 15
5.8 Data Analysis 15
5.9 Ethical Considerations 16
5.10 Brief Profile of Organisation under study 16
6.0 EMPIRICAL DATA FROM THE ORGANISATION 17
6.1 Demographic Details of Respondents 17
Educational Qualification 18
6.2 Research Question One: What is the general understanding of risk management among the workers? 19
6.3 Research Question Two: What are the commonly employed risk management practices in the organisation? 21
6.4 Research Question Three: Are these risk management practices effective for successful project management? 22
6.5 Research Question Four: What are the major challenges encountered in managing risks in the organisation? 23
7.0 DISCUSSION 25
8.0 CONCLUSION 28
9.0 RECOMMENDED STRATEGIES 29

REFERENCES 30

APPENDIX 36

RESEARCH QUESTIONNAIRE 36

LIST OF TABLES

Table 6.1 Demographic Distribution of Respondents..... 18

Table 6.2 Understanding of Risk Management 20

Table 6.3 Effectives of Risk Management..... 22

Table 6.4 Challenges of Risk Management 24

ABSTRACT

The purpose of study was to understand and assess the risk management practices and their effectiveness using El-Virtues Construction Limited as a case study. The study employed the cross-sectional design and the qualitative approach to gather data from 20 employees through semi-structured interviews and with the aid of a questionnaire. The study found that there was an adequate understanding of risk management among the respondents as including a tool to facilitate the project, a systematic application of management policies, processes and procedures on risks, establishing the context of and identifying risks, the analyzing and assessing risks of risks, the treating and monitoring of risks and the communication of risks. The study secondly found that there was no laid-down procedure for doing risk management, but risk management seemed to be done in an ad hoc manner, that is, as and when they are confronted with risks. The next finding of the study showed that majority of respondents felt risk management was effective to a good extent. However, there was no laid-down procedure to determine that risk management has been effective and they relied heavily on subjective experiences as they work from project to project. Lastly, the study found that a huge majority indicated that major risk management challenges included high level of complexity, size and difficulty on a project, financial constraints and demands, environmental factors (the project's surrounding, location and overall regulations), among others. The study recommended that the organisation must endeavour to draw up a comprehensive risk management policy that is all encompassing, taking into consideration the factors and characteristics of the industry and context. This will help guide the workers in managing risks better.

1.0 INTRODUCTION/BACKGROUND TO THE STUDY

In today's business, projects are widespread, influential, important, and are found in a large number of business areas. Building and construction industries, engineering, government, IT and telecom, banking and insurance, all use projects as a way to organise, manage and execute many of their activities. Benko and McFarlan (2011) indicate that about US$ 10 trillion is expended globally on projects each year, representing approximately one quarter of the world's, yearly gross product. Projects support a variety of change processes in an organisation, ranging from strategic market reorientation or new product development, to the improvement of current production processes (Winter, Smith, Morris, & Cicmil, 2015). Because of this change role, projects contribute to the efficacy of the organisations operation and the organisations long term continuity. Recent years have demonstrated a significant growth in project work, which has led to the current situation where project management is considered the dominant model in many organisations for creating change (Winter et al., 2015).

Each project is different, and involves some degree of unpredictability. Yet, many organizations still tend to assume that all their projects will succeed, and as such fail to consider and analyse their project risks, and prepare, in case something goes untoward (Raz, Shenhar & Dvir, 2002). This attitude of ill preparedness for the unpredictability of projects has led to project failures and unsatisfactory results (Raz et al., 2002). Projects have been defined in many ways by different authors and institutions. For instance, the Project Management Institute (PMI) (2016) defines a project as a temporary endeavour undertaken to create a unique product, service or result. Raz et al. (2002) also define a project as a temporary organization that is needed to produce a unique and pre-defined outcome or result at a pre-specified time using pre-determined resources.

According to Kerzner (2003), even though the importance of properly defining a project cannot be underestimated, it can be seen that a project is fundamentally a vision to realize some future state and that it is how the project is managed that is of real significance.

Projects fail to achieve their objectives due to the occurrence of something unexpected. Hence, risk management guides projects in achieving their objectives. The need for good project risk management is therefore vital (Frigueiredo & Kitson, 2009). Risk management is a systematic approach to setting the best course of action under uncertainty by identifying, assessing, understanding, acting on and communicating risk issues, i.e. risk management is a process that addresses uncertainty (Frigueiredo & Kitson, 2009, p. 8). Risk management is considered to be a tool to limit the impact of these unexpected events, or even to prevent these events from happening. Accordingly, it is generally assumed that risk management contributes to the success of the project (Olsson, 2007). There are two broad categories of risks found in projects: strategic risk and operational risk. Strategic risks are not of particular interest to the project team and project managers as these risks are out of the scope of project responsibility. Operational risk, on the other hand, is paid more attention to by project teams and project managers since such risks are within their control. As such, project teams and managers have the ability to tackle operational risks (Krane, Rolstadås & Olsson, 2010, p. 82). According to Chapman and Ward (1997), project risk management positively influences project performance and consequently project success by instrumental effects: through creation of a contingency plan or by influencing project time, budget or design plan, and by social effect: influencing stakeholders and stakeholder motives. Therefore, this research sought to assess the risk management practices and their effectiveness in Ghana, using a case study.

2.0 RATIONALE FOR THE STUDY

Despite the surge in project management research and methodologies, quite a significant number of projects continue to fail as a result of a variety of reasons (Robertson & Williams, 2016). Besner and Hobbs (2006) reports that about 66%-90% of projects fail and Hyvari (2006) posits that these failures are as a result of lacking managerial competencies needed for successful project activities. Conservative estimates put the cost of project failure at £97bn across the European Union (Boddy, 2006). Many projects suffer overrun in cost, delayed schedule, failure and even abandonment. In Ghana, Bawumia (2015) notes that the success of many projects in Ghana is doubtful as a result of the many project failures that have been registered in the industry over the years. Daily Graphic (2006, cited in Amponsah, 2010) maintains that project failure rates in Ghana are high and the costs involved are excessively high; where reports generally indicate that failures in projects is likely to be 1 in every 3 projects in Ghana (Amponsah, 2010). They may equally not meet the quality specifications or may not achieve the benefits for which they were embarked upon.

The cost of failure makes it important to understand what makes a project successful. Society desires that all projects should be successful and has become less tolerant of failure (Edwards & Bowen, 2005). Pressure is exerted on project managers to minimise the chance of project failure. This increasing pressure for successful project delivery suggest that it is prudent for anyone involved in a project to be concerned about the associated risks and how they can be effectively managed. Risk management has therefore been deemed one essential way of ensuring success of projects (Frigueiredo & Kitson, 2009). The practice of risk management becomes of greater concern seeing that most organisations in developing countries such as Ghana adopt projects as

strategies for reaching their goals (Bawumia, 2015). Armstrong (2010) maintained that risk management is theoretically and practically deficient in most organisations in Ghana. Seeing that project failures are high in Ghana, there is the need to assess risk management practices among organisations in the country.

3.0 OBJECTIVES OF THE STUDY

The main objective of the study was to understand and assess the risk management practices and their effectiveness using El-Virtues Construction Limited as a case study. Specifically, the study sought to meet the following objectives:

i. To ascertain the understanding of risk management among the workers.
ii. To determine the risk management practices that are prevalent in the organisation.
iii. To assess the effectiveness of the risk management practices for successful project management in the organisation.
iv. To determine the challenges associated with managing risks in the organisation.

3.1 Research Questions

The study also sought to answer the following questions based on the objectives:

i. What is the general understanding of risk management among the workers?
ii. What are the commonly employed risk management practices in the organisation?
iii. Are these risk management practices effective for successful project management?
iv. What are the major challenges encountered in managing risks in the organisation?

4.0 LITERATURE REVIEW

4.1 Risk defined

Risk and uncertainty are the two most often used concepts in the risk management literature. Although these terms are closely related, a number of authors differentiate between them (Samson, 2009). Also practitioners working with risk have difficulty in defining and distinguishing between these two. Often definitions of risk or uncertainty are tailored for the use of a particular project. Winch (2002) defines risk as stage where there is a lack of information, but by looking at past experience, it is easier to predict the future. Events where the outcome is known and expected, and uncertainty as a part of the information required in order to take a decision. The required information consists of the amount of available information and uncertainty. The level of uncertainty decreases as projects proceed towards completion. Cleden (2009) opines that risk is the statement of what may arise from that lack of knowledge. To Cleden (2009), uncertainty is the intangible measure of what we don't know. Uncertainty is what is left behind when all the risks have been identified. Uncertainty is gaps one may not be aware of, risk is a situation where lack of some aspect of work can cause a threat to project. Lack of information and knowledge are factors commonly mentioned as contributing to project failures. Darnall and Preston (2010) find some of the risks to be predictable and easy to identify before they occur, while the others are unforeseeable and can result in unexpected time delays or additional costs. This confirms the definition by Cleden (2009) who uses the same arguments defining uncertainty as rather unpredicted, unforeseeable events, while risk should be possible to foresee.

4.2 Concept of Risk Management

Smith, Merna and Jobbling (2006) provide a comprehensive description of the concept of risk management and how it can be used in practice. According to the authors, risk management cannot be perceived as a tool to predict the future, since that is rather impossible. Instead, they describe it as a tool to facilitate the project in order to make better decisions based on the information from the investment. In this way, decisions based on insufficient information can be avoided, and this will lead to better overall performance. In the literature, risk management is described as a process with some predefined procedures (Smith et al., 2006). To Cooper, Grey, Raymond and Walker (2015) risk management process involves the systematic application of management policies, processes and procedures to the tasks of establishing the context, identifying, analyzing, assessing, treating, monitoring and communicating risks.

Risk management process is the basic principle of understanding and managing risks in a project. It consists of the main phases: identification, assessment and analysis, and response (Smith et al., 2006). All steps in the risk management process should be included when dealing with risks, in order to efficiently implement the process in the project. There are many variations of the risk management process available in literature, but most commonly described frameworks consist of those mentioned steps.

4.3 Benefits of Risk Management

To maximize the efficiency of risk management, the risk management process should be continuously developed during the entire project. In this way, risks will be discovered and managed throughout all the phases (Smith et al., 2006). The benefits from risk management are

not only reserved for the project itself, but also for the actors involved. The main incentives are clear understanding and awareness of potential risks in the project. In other words, risk management contributes to a better view of possible consequences resulting from unmanaged risks and how to avoid them (Thomas, 2009). Another benefit of working with risk management is increased level of control over the whole project and more efficient problem solving processes which can be supported on a more genuine basis. It results from an analysis of project conditions already in the beginning of the project (Perry, 1986). Risk management also provides a procedure which can reduce possible and sudden surprises (Cooper et al., 2015).

Different attitudes towards risk can be explained as cultural differences between organizations, where the approach depends on the company's policy and their internal procedures (Webb, 2003). Within the risk management, three company's approaches can be distinguished. The first one is the risk-natural firm which does not invest much in risk management but is still aware of the most important risks. The second approach is the risk-averse, where no investments are made in order to reduce the probability of occurrence of risk. The last one is the risk-seeker where the organization is prepared to face all risks and is often called gambler. In the long term, the risk-seeking companies can get a lower profitability compared to risk-natural firms. This is because of the large investments and losses when repeating the risk management processes over and over again to ensure all risks have been managed before the risks actually occurs (Winch, 2002).

4.4 Limits of Risk Management

The level of risk is always related to the project complexity (Darnall & Preston, 2010). The bigger the project is, the larger the number of potential risks that may be faced. Several factors

can stimulate risk occurrence. Those most often mentioned in the literature are financial, environmental (the project's surrounding, location and overall regulations), time, design and quality. Other influences on the occurrence of risk are the level of technology used and the organization's risks (Gould & Joyce, 2002). Cleden (2009) claims that complexity is a factor that can limit a project; the bigger and more complex a project is, the more resources are required to complete it. Moreover, when all potential risks have been identified, there may still be risks that may not have been considered. As such project teams should not solely focus on management of identified risks but also be alert for any new potential risks which might arise. Risk management should be used as a tool to discover the majority of risks and a project manager should be also prepared for managing uncertainties not included in a risk management plan (Cleden, 2009).

4.5 The Risk Management Process

4.5.1 Risk identification

Winch (2002) claims that the first step in the risk management process is usually informal and can be performed in various ways, depending on the organization and the project team. It means that the identification of risks relies mostly on past experience that should be used in upcoming projects. In order to find the potential risks, an allocation needs to be done. This can be decided and arranged by the organization. Risks and other threats can be hard to eliminate, but when they have been identified, it is easier to take actions and have control over them. If the causes of risks are identified before problems occur, the risk management will be more effective (PMI, 2004). Risk management is not only solving problems in advance, but also being prepared for potential problems that can occur unexpectedly. Handling potential threats is not only a way to minimize losses within the project, but also a way to transfer risks into opportunities, which can lead to

economical profitability, environmental and other advantages (Winch, 2002). The purpose of identifying risks is to obtain a list with potential risks to be managed in a project (PMI, 2004). In order to find all potential risks which might impact a specific project, different techniques can be applied. It is important to use a method that the project team is most familiar with and the project will benefit from. The aim is to highlight the potential problems, in order for the project team to be aware of them.

4.5.2 Assessment/analysis

Risk analysis is the second stage in the risk management process where collected data about the potential risk are analyzed. Risk analysis can be described as short listing risks with the highest impact on the project, out of all threats mentioned in the identification phase (Cooper et al., 2015). In the analysis of the identified risk, two categories of methods – qualitative and quantitative – have been developed. The qualitative methods are most applicable when risks can be placed somewhere on a descriptive scale from high to low level. The quantitative methods are used to determine the probability and impact of the risks identified and are based on numeric estimations (Winch, 2002). Companies tend to use a qualitative approach since it is more convenient to describe the risks than to quantify them (Lichtenstein, 1996). In addition, there is also one approach called semi-quantitative analysis, which combines numerical values from quantitative analysis and description of risk factors, the qualitative method (Cooper et al., 2015).

Within the quantitative and qualitative categories, a number of methods which use different assumptions can be found, and it may be problematic to choose an appropriate risk assessment model for a specific project. The methods should be chosen depending on the type of risk,

project scope as well as on the specific method's requirements and criteria. Regardless of the method chosen, the desired outcome of such assessment should be reliable (Lichtenstein, 1996). Perry (1986) mentions that the selection of the right technique often depends on past experiences, expertise, and nowadays it also depends on the available computer software.

4.5.3 Risk response

This third step of the risk management process indicates what action should be taken towards the identified risks and threats. The response strategy and approach chosen depend on the kind of risks concerned (Winch, 2002). Other requirements are that the risk needs to have a supervisor to monitor the development of the response, which will be agreed by the actors involved in this risk management process (PMI, 2004). Winch (2002) claims that the lower impact the risk has, the better it can be managed. Most common strategies for risk response are: avoidance, reduction, transfer and retention (Potts, 2008). Beyond those types of responses, Winch (2002) describes that sometimes it is difficult to take a decision based on too little information. This may be avoided by waiting until the appropriate information is available in order to deal with the risk. This way of acting is called "Delay the decision" but this approach is not appropriate in all situations, especially when handling critical risks. Those need to be managed earlier in the process.

4.5.4 Risk monitoring and control

Risk monitoring and control is the process of keeping track of the identified risk, monitoring residual risks and identifying new risks, ensuring the execution of risk plans and evaluating their effectiveness in reducing risk. Risk monitoring and control is an ongoing process for the life of

the project. The purpose of risk monitoring is to ensure that mitigation actions are keeping the risks under control and monitor indicators to know when to invoke contingency plans. Risk control may involve choosing alternative strategies, implementing a contingency plan, taking corrective action or replanning the project. Risk monitoring and control can be executed by project risk response audits or periodic risk reviews. Project managers regularly review and update the status for each risk to ensure risks are under control, revise the mitigation action or get approval to proceed with the associated contingency plan, update and publish the current top risk list, and prepare a risk status report for use in project reviews.

4.5 Risks and Risk Management in the Construction Industry

Amponsah (2010) indicates that the construction industry has a great potential not only as a means of meeting countries' construction needs, but also for developing the infrastructure of every country. Wood and Gidado (2018) opine strongly that in almost all construction projects, complexity is inherent, stating that "the construction process is one of the most complex and risky businesses undertaken" (p. 3). Similarly, Shen et al. (2001) maintain that construction is a very risk-inclined industry with a relatively poor reputation for handling the risk. The accomplishment of project success in the construction industry mainly relies upon the level of risk (Kartam & Kartam, 2001). With the increasing association of many contracting parties, such as contractors, subcontractors, suppliers, owners, and designers, the level of risk increases (Iqbal et al., 2015). According to Ofori (2006), the construction industry in Ghana is faced with a myriad of technical, non-technical and unique project management challenges. The non-technical challenges include lack of know-how, skills and experience needed to deliver projects.

Several risks have been identified in research with regard to construction projects and the construction industry. These include failure to meet project schedule, cost and quality estimates, health and safety issues, delays in release of funds, failure to detect defects early, poor quality of materials and equipment, inadequate project planning, inadequate skilled labour, poor communication and coordination among team members, inadequate technology, unforeseen adverse site and weather conditions, delays in procurements, poor definition of project scope, environmental laws and issues, among others (Abdul-Rahman et al., 2012; Ahmed et al., 1999; Chileshe & Yirenkyi-Fianko, 2011; Perera et al., 2009; Rahman & Kumaraswamy, 2002).

The level of risks and their effects on construction projects can be decreased by adopting good risk management practices (Aleshin, 2001; Iqbal et al., 2015). According to Hansen-Addy and Fekpe (2015), risk management is a widely researched subject matter in construction management with several approaches and techniques proposed and discussed in literature. In this industry, risk management involves four (4) fundamental steps namely: risk identification, risk assessment, risk response, and risk monitoring and control (Hansen-Addy & Fekpe, 2015). Other empirical studies on risk management practices in the construction industry also highlight some practices such as the importance of different risk categories; usage of techniques at different risk management stages of major companies; usage of risk management techniques; general contractors' perception on risks and the use of risk management techniques; and contractors' application of various analytical techniques for risk assessment (Abu Bakar, et al., 2012; Abu Bakar, et al., 2012; Ahmed, et al., 1999; Bosher, et al., 2007; Hansen-Addy & Fekpe, 2015). Owing to the risky and unpredictable nature of the construction industry, it is imperative that project managers, teams and organisations employ adequate risk management practices.

5.0 METHODOLOGY

5.1 Research Design

The study employed a cross-sectional design. A cross-sectional research is one in which data is gathered from a sample of a population once at a particular time (Boateng, 2014). The study was a cross-sectional because this design produces a 'snapshot' of the population at a particular point in time (Creswell, 2013). This facilitated the data collection for this study to be quicker and more convenient.

Furthermore, the purpose of this study was descriptive. Saunders *et al*. (2012) explained three main purposes of all researches as exploratory, descriptive, and explanatory. Exploratory research seeks fresh knowledge in a social phenomenon; descriptive research tends to describe existing phenomena; while explanatory research aims to establish associations among a study's variables. Thus, the purpose of this study is descriptive as is seeks to describe the practice of risk management in the organisation under study.

5.2 Research Approach

The study employed the qualitative approach. A qualitative research approach is explained as a systematic subjective approach used to explore or describe life experiences and situations to give them meaning (Burns & Grove, 2003, p. 19). In employing the qualitative approach, the researcher collects open-ended data with the primary intent of developing themes from the data (Creswell, 2013, p. 18). Thus, researchers use qualitative approaches to explore human behaviour and perspectives, as well as the experiences and feelings of people and highlight the understanding of these elements. The researcher deemed this approach appropriate because it

helped to describe the practice of risk management and its implications for successful projects at the El-Virtues Construction Limited.

5.3 Population

A study population, according to Weiers (2005), is as any group of items that can be measured or observed theoretically. The population for this study was made up of employees at the the El-Virtues Construction Limited. The number of this population is approximately seventy (70) employees.

5.4 Sample and Sampling Technique

According to Sekeran (2000) a sample is "a subset of a population being studied" (p. 266). According to Mason (2010), it is appropriate for qualitative researchers to have a sample size between 5 and 50 respondents. Thus, the study sampled twenty (20) respondents for interviews. Sampling techniques refer to the procedures involved in selecting a sample from a population (Boateng, 2014). For this study, the convenience sampling technique was employed. Convenience sampling is a non-probability sampling technique, which involves sampling people or units that are most readily available (Zikmund, 2003, cited in Boateng, 2014). This technique was employed due to the busy schedule of the respondents and thus, the study sampled the employees that were ready and willing to participate in the survey.

5.5 Sources of Data

The study collected data from the primary source. The primary source was the semi-structured interviews employed to collect data using structured interview guides/questionnaire to meet the objectives and answer the research questions.

5.6 Data Collection Instrument

Data was collected primarily using a structured interview guide. The guide comprised sections on demographic details of the respondents as well as questions on risk management understanding, practices and challenges. These questions are developed based on the literature review, and with the guidance of the supervisor to answer the research questions.

5.7 Data Collection Procedure

An introductory letter was obtained from the Department of Organisation and Human Resource Management, University of Ghana Business School, signed by the supervisor, and taken to the organisation so as to obtain permission to use the employees as participants of this study. Once the permission was given, the researcher interviewed the employees who were ready and willing to fill them. Prior to this, the employees selected were informed about the purpose of this study and their right to withdraw from participating in it.

5.8 Data Analysis

Data obtained from the interviews was analysed using thematic analysis and descriptive statistics. According to Braun and Clarke (2006), thematic analysis is a basic approach for analysing qualitative data and it comprises six (6) steps; familiarizing with the data, generating

initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. Thus, responses obtained from the interviews were analysed in order to generate and define common themes for each objective. Additionally, supporting statement are presented to buttress the generated themes. The descriptive statistics such as frequencies and percentages are presented in the form of tables.

5.9 Ethical Considerations

In the conduct of this study, all relevant research ethics were given due consideration and upheld. Respondents were adequately informed of the purpose of this study, which was purely academic, and their right to withdraw from participating in the study at any point in time. Also, they were assured of confidentiality of the information that they provide and their anonymity throughout the study.

5.10 Brief Profile of Organisation under study

El-Virtues Construction Limited is a private entity established in 2001. The company is located at Pantang, El-Virtues Estate. The company is into real estate development, as well as private and state-funded construction works. El-Virtues executes between six (6) to ten (10) houses on an average every year. The company employs about seventy (70) people, 50% permanent workers and 50% casual and temporary workers. Some categories of employees in the company are masons (10), carpenters (10), labourers (10), plumbers (5), electricians (6), painters (5), tilers (10), welders (6), an architect, a quantity surveyor and foremen (10).

6.0 EMPIRICAL DATA FROM THE ORGANISATION

The study gathered data through semi-structured interviews and with the use of a questionnaire made up of closed and open-ended questions, among workers of El-Virtues Construction Limited. Twenty (20) employees were sampled. This section presents the results of the analysis of the data obtained from the field study. It starts with the demographic profile of the respondents, and continues with presentation of findings for each research question.

6.1 Demographic Details of Respondents

The demographic details of the respondents with regard to gender, educational levels, job title and tenure of office are presented in Table 6.1.

Gender of Respondents

From Table 6.1, it is seen that all the respondents were males (20, representing 100%). This distribution, however, is not surprising as jobs that are highly technical and require great physical effort such as labourers, masons, engineers, architects, among others, are dominated by males in Ghana; thus this is a true reflection of the population.

Educational Qualification of Respondents

From Table 6.1, it can be seen that majority of the respondents had acquired basic education (Other- primary and Junior High School, 12, representing 60%). Two respondents had obtained a bachelor's degree (10%); while three (3) respondents each had obtained a WASSCE/SSCE (15%) and A/O' Level (15%) qualifications. It can thus be said that all the respondents had obtained some basic formal education which enabled them to understand the questions appropriately.

Table 6.1 Demographic Distribution of Respondents

Gender	Frequency	Percent
Male	20	100.0
Female	0	0.0
Total	**20**	**100.0**
Educational Qualification		
SSCE/WASSCE	3	15.0
O/A' Level	3	15.0
Bachelor	2	10.0
Other (Primary, JHS etc)	12	60.0
Total	**20**	**100.0**
Job Titles		
Labourers	6	30.0
Masons	8	40.0
Electrician	3	15.0
Foreman	1	5.0
Quantity Surveyor	1	5.0
Architect	1	5.0
Total	**20**	**100.0**
Tenure of Office (years)		
1-5	5	25.0
6-10	10	50.0
11-15	3	15.0
Above 15	2	10.0
Total	**20**	**100.0**

Field Data (2019)

Job Titles of Respondents

Table 6.1 indicates that majority of the respondents were masons (8, representing 40%); followed labourers (6, representing 30%); then by electricians (3, representing 15%). One

respondent each was a foreman (5%), a quantity surveyor (5%) and an architect (5%). This distribution shows that most of the job titles were represented in the sample which can afford this study very useful information.

Respondents' Tenure of Office

Lastly, Table 6.1 shows that majority of the respondents had worked between 6 and 10 years (10, representing 40%); followed by those who had between 1 and 5 years (5, representing 25%); then by those who had worked between 11 and 15 years (3, representing 15%). The least number had worked for more than 15 years (2, representing 10%). This distribution shows that majority of the respondents had worked for a significant number of years which affords them adequate experience in their fields which enriches the subject matter of this study.

6.2 Research Question One: What is the general understanding of risk management among the workers?

The first objective of the study sought to ascertain the understanding of risk management among the workers in the organisation. Respondents were presented with a number of statements and requested to tick all that applied to risk management. Table 6.2 presents the statements and the responses.

From Table 6.2, it is seen that about 80 percent of the respondents understood risk management as a tool to facilitate the project, a systematic application of management policies, processes and procedures on risks and the treating and monitoring of risks. All the respondents (100%) understood risk management to include the establishment of the context of and identifying risks as well as the analyzing and assessing risks; while 50% understood it to include the

communication of risks. Sixty percent (60%) of the respondents understood risk management as including all the above statement indicating that majority of the respondents had some adequate understanding of risk management.

Table 6.2 Understanding of Risk Management

Statements	Respondents that ticked (%)
1. A tool to facilitate the project	80
2. Systematic application of management policies, processes and procedures on risks	80
3. Establishing the context of and identifying risks	100
4. Analyzing and assessing risks	100
5. Treating and monitoring risks	80
6. Communicating risks	50
7. All statements	60

Field Data (2019)

The study then went further to ascertain the most prevalent risks associated with construction works and the industry. Respondents were asked to tick all that were applicable. The study found that the following risks were selected by at least one respondent as being prevalent in the industry. These risks are: failure to meet project schedule, cost and quality estimates, health and safety issues, delays in release of funds, failure to detect defects early, inadequate skilled labour, poor communication and coordination among team members, inadequate technology, unforeseen adverse site and weather conditions, and poor definition of project scope.

6.3 Research Question Two: What are the commonly employed risk management practices in the organisation?

The next objective of the study sought to determine the commonly employed risk management practices in the organisation. The respondents were thus asked to indicate if such practices and methods were in place. The responses indicated that largely, there was no laid-down procedure for doing risk management. However, risk management seemed to be done in an ad hoc manner, that is, as and when they are confronted with risks. Nonetheless, there were a few practices that the organisation generally engaged in to ensure low occurrence of risks. Some of the respondents had these to say:

> "*Okay for our organisation, I do not know of any laid-down procedure that we use in managing risks. We only deal with risks when they become clear or when they occur on the site. But the organisation provides us with protective gears and equipment such as boots, helmets and others*." [Respondent 2]

> "*As for this organisation, we have not finished drawing up a comprehensive policy and procedure on risk management but we are able to anticipate some risks well and prevent them. Risks such as ill health and safety of workers are prevented by using PPEs and good working ethics. But I admit that we still have a long way to go when it comes to adequate risk management*". [Respondent 5]

The study then went further to ascertain the understanding and practice of the steps of risk management among the respondents, namely: risk identification, risk assessment/analysis, risk response, and risk monitoring and control. The findings showed that majority of the respondents did not understand these steps and they were not generally employed in the organisation. A few of them seemed to have fair ideas about what some of these steps entailed and how they played

out in their organisation. For instance, risk identification through their experiences and risk response by avoidance. Some of them had these to say:

> *"I understand some of the steps. In this organisation, risk identification is done using managerial and workers' experiences. So based on their experiences and encounters on previous projects, they are able to anticipate and identify risks to be dealt with."* [Respondent 1]

> *"Risk identification is mainly done by using our experiences in past years. Also, my understanding of risk response in this organisation is that it is done through avoidance. When any risk is identified, all possible activities that may lead to the risk occurring will be avoided."* [Respondent 6]

6.4 Research Question Three: Are these risk management practices effective for successful project management?

The third objective sought to ascertain the effectiveness of risk management practices for success of projects. Respondents were requested to indicate their perceptions with regard to the extent of effectiveness of these practices. Table 6.3 presents the results of this.

Table 6.3 Effectives of Risk Management

Question	**Responses (%)**				
	LE	**GE**	**NS**	**ME**	**SE**
To what extent would you say the risk management in your organisation is effective?	0	50	20	20	10

Field Data (2019) **Note:** *LE- large extent; GE- good extent, NS- not sure; ME- moderate extent; SE- small extent*

From Table 6.3, it is seen that majority of the respondents (50%) felt that the risk management in the organisation was effective to a good extent; 20 percent were not sure and another 20 percent felt that it was to a moderate extent. Ten percent felt that risk management was effective to a small extent while none of the respondents felt it was effective to a large extent.

Furthermore, respondents were asked to indicate how the organisation determines the effectiveness of risk management practices and procedures employed. The findings showed that there was no laid-down procedure to determine that risk management has been effective. They relied heavily on experiences as they work from project to project. One respondent had this to say:

> *"We have not put down any steps or procedure to measure the effectiveness of risk management practices that are employed. However, project team leaders and their members are able to determine to some extent that the occurrence of a risk has been reduced from one project to another."* [Respondent 12]

6.5 Research Question Four: What are the major challenges encountered in managing risks in the organisation?

The last objective of the study sought to ascertain the major challenges that are encountered when the organisation is doing risk management. Respondents were asked to respond to some stated challenges by ticking all that were applicable. Table 6.4 presents the results of this.

Table 6.4 Challenges of Risk Management

Statements	Respondents that ticked (%)
1. High level of complexity, size and difficulty on a project	100
2. Financial constraints and demands	100
3. Environmental factors (the project's surrounding, location and overall regulations)	100
4. Schedule of the project	70
5. Design and quality of the project	80
6. Technology used	100
7. Organization's risks (reputation, structural, managerial)	100
7. All statements	80

Field Data (2019)

From Table 6.4, it is seen that all the respondents (100%) indicated that risk management challenges included high level of complexity, size and difficulty on a project, financial constraints and demands, environmental factors (the project's surrounding, location and overall regulations), technology use and demands as well as organization's risks (reputation, structural, managerial). Eighty percent (80%) included design and quality of project as a major challenge while 70 percent included the schedule of the project as a major challenge. Most significantly, a huge majority (80%) indicated that all of these were major challenges to risk management in the organisation.

7.0 DISCUSSION

The study first found that among the workers, majority of them understood risk management as a tool to facilitate the project, a systematic application of management policies, processes and procedures on risks, establishing the context of and identifying risks, the analyzing and assessing risks of risks, the treating and monitoring of risks and the communication of risks. This understanding resonates with and reaffirms the definitions and explanations given by researchers such as Cooper et al. (2015) and Smith et al. (2006) in the literature on risk management. The findings however show that about half of the respondents did not understand risk management to include communication of risks. This is worrisome as Smith et al. (2006) maintain that the communication of risks in a timely and effective manner is essential to promoting adequate risk management in an organisation. The study also found that some of the most prevalent risks in the organisation were the failure to meet project schedule, cost and quality estimates, health and safety issues, delays in release of funds, failure to detect defects early, inadequate skilled labour, poor communication and coordination among team members, inadequate technology, unforeseen adverse site and weather conditions, and poor definition of project scope which are also in line with those identified by previous studies (Abdul-Rahman et al., 2012; Ahmed et al., 1999; Chileshe & Yirenkyi-Fianko, 2011; Perera et al., 2009; Rahman & Kumaraswamy, 2002).

The second finding of the study showed that there was no laid-down procedure for doing risk management. However, risk management seemed to be done in an ad hoc manner, that is, as and when they are confronted with risks. The organisation engaged in a few practices such as provision of personal protective equipment (PPE). Additionally, the findings showed that majority of the respondents did not understand these steps and they were not generally employed

in the organisation. A few of them seemed to have fair ideas about what some of these steps entailed and how they played out in their organisation. For instance, risk identification was seen to be done through experiences on previous projects while risk response was generally done by avoidance of activities that can lead to the occurrence of risk. This is also a cause for concern as Smith et al. (2006) maintained that risk management steps are important and all steps in the risk management process should be included when dealing with risks, in order to efficiently implement the process in the project. Winch (2002) also indicated that risk management should be done in a systematic manner with laid-down procedures and policies in organisations in order to make it effective.

The next finding of the study showed that majority of respondents felt risk management was effective to a good extent. However, there was no laid-down procedure to determine that risk management has been effective and they relied heavily on subjective experiences as they work from project to project. Thomas (2009) is of the view that to maximize the effectiveness of risk management, the risk management process should be continuously and systematically developed during the entire project. In this way, risks will be discovered and managed throughout all the phases to determine and enhance the effectiveness of risk management (Smith et al., 2006). When risk management is effective, the benefits from risk management are not only reserved for the project itself, but also for the actors involved (Thomas, 2009). Therefore, a systematic system and procedure for determining the effectiveness of risk management is of essence to organisations.

Lastly, the study found that a huge majority indicated that major risk management challenges included high level of complexity, size and difficulty on a project, financial constraints and demands, environmental factors (the project's surrounding, location and overall regulations), technology use and demands as well as organization's risks (reputation, structural, managerial), design and quality of project and the schedule of the project. These findings are similar to those of previous studies (Abdul-Rahman et al., 2012; Ahmed et al., 1999; Chileshe & Yirenkyi-Fianko, 2011; Perera et al., 2009; Rahman & Kumaraswamy, 2002) that found a myriad of challenges that accrue to construction projects and the construction industry. In fact, Dao et al. (2016) maintained that the construction industry is arguably the most complex and risky industry. This lends credence to the importance of effective and systematic project risk management among construction organisations.

8.0 CONCLUSION

It has been ascertained that many projects suffer overrun in cost, delayed schedule, failure and even abandonment. In Ghana, Bawumia (2015) notes that the success of many projects in Ghana is doubtful as a result of the many project failures that have been registered in the industry over the years. Daily Graphic (2006, cited in Amponsah, 2010) maintains that project failure rates in Ghana are high and the costs involved are excessively high; where reports generally indicate that failures in projects is likely to be 1 in every 3 projects in Ghana (Amponsah, 2010). Risk management has therefore been deemed one essential way of ensuring success of projects (Frigueiredo & Kitson, 2009), especially in developing countries such as Ghana. This study examined the concept and practice of risk management in a private construction firm. The findings showed some adequate understanding of risk management in the organisation. However, the practice of risk management is generally seen to be unstructured and ad hoc in the organisations. Also, there seems to be no objective method for measuring the effectiveness of risk management but it is heavily dependent on the subjective experiences of the workers. In addition, the organisation seems to be facing major internal and external challenges that hinders it from engaging in effective and structured risk management. These findings of this study reaffirm the assertion project failures are quite high in the Ghanaian construction industry. The organisation must therefore pursue adequate strategies and measures to improve risk management significantly.

9.0 RECOMMENDED STRATEGIES

Based on the findings, the following recommendations are made:

1. The findings showed that risk management practices were not systematic but were done in an ad hoc manner. As such, the organisation must endeavour to draw up a comprehensive risk management policy that is all encompassing, taking into consideration the factors and characteristics of the industry and context. This will help to guide the workers in managing risks better.
2. Secondly, the organisation can engage the services of research consultants in developing the comprehensive and systematic procedure and policy for managing risks effectively. These consultants can help to incorporate the industry and country factors when drawing up the policy to make risk management more effective.
3. Furthermore, the organisation must ensure that all employees, whether skilled or unskilled, are taken through frequent, periodic training on how to effectively identify, respond and manage risks. This can create that enabling culture that promotes risk effective management in the organisation.
4. Moreover, the organisation must ensure that adequate guidelines for determining and measuring effectiveness of risk management practices are included in the risk management policy. This will allow the organisation to make a more objective and reliable analyses of how effective risk management has been on their projects.
5. Lastly, the organisation must endeavour to promote a culture and climate that upholds effective risk management and understands the importance of risk management for the success of projects. This can be done through adequate awareness and sensitization of employees to the concept and practice of effective risk management.

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APPENDIX

RESEARCH QUESTIONNAIRE

Dear Respondent,

I am an MA student of the University of Ghana Business School, researching the topic **"AN ASSESSMENT OF RISK MANAGEMENT PRACTICES: A CASE STUDY OF EL-VIRTUES CONSTRUCTION LIMITED."** The study is entirely for academic purpose, hence any information provided would be considered valuable and confidential. It is hoped that you would be as candid and detailed as possible. Thank you.

Contact Details: 0244734261

SECTION A: DEMOGRAPHIC DETAILS

1. Gender: Male [ ] Female [ ]
2. Highest academic qualification: SSCE/WASSCE [ ] Diploma/HND [ ]
   Bachelors [ ] Masters [ ] Other [ ] Specify……
3. Tenure of office: 0-5yrs [ ] 6-10yrs [ ] 11-15yrs [ ] above 15yrs [ ]
4. Job Title: ……

SECTION B: UNDERSTANDING OF RISK MANAGEMENT

5. What is your understanding of risk management? Tick all that are applicable.

[ ] A tool to facilitate the project

[ ] Systematic application of management policies, processes and procedures on risks

[ ] Establishing the context of and identifying risks

[ ] Analyzing and assessing risks

[ ] Treating and monitoring risks

[ ] Communicating risks

5b. What are some of the prevalent risks associated with construction works and the industry? Tick all that are applicable:

[ ] Failure to meet project schedule, cost and quality estimates

[ ] Health and safety issues

[ ] Delays in release of funds

[ ] Failure to detect defects early

[ ] Poor quality of materials and equipment

[ ] Inadequate project planning

[ ] Inadequate skilled labour

[ ] Poor communication and coordination among team members

[ ] Inadequate technology

[ ] Unforeseen adverse site and weather conditions

[ ] Delays in procurements

[ ] Poor definition of project scope

[ ] Environmental laws and issues

SECTION C: RISK MANAGEMENT PRACTICES

6. What are some of the specific risk management tools and practices that your organisation uses in dealing with risks on projects and at work?

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7. Briefly indicate your understanding of the following steps and how they play out in your organisation.

(a) Risk identification

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(b) Risk Assessment/analysis

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(c) Risk Response

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(d) Risk monitoring and control

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SECTION D: EFFECTIVENESS OF RISK MANAGEMENT

8a. To what extent would you say the risk management in your organisation is effective? Choose one of the following:

[ ] To a large extent

[ ] To a good extent

[ ] Not sure

[ ] To a moderate extent

[ ] To a small extent

8b. How does your organisation determine that risk management practices and processes employed have been effective? Briefly indicate below.

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SECTION E: CHALLENGES OF RISK MANAGEMENT

10. What are some of the challenges that encountered in risk management in the organisation? Kindly tick all that are applicable.

[ ] high level of complexity, size and difficulty on a project

[ ] Financial constraints and demands

[ ] Environmental factors (the project's surrounding, location and overall regulations)

[ ] Schedule of the project

[ ] Design and quality of the project

[ ] Technology used

[ ] Organization's risks (reputation, structural, managerial)

Other challenges:

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……

Thank you.