

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY,  
KUMASI-GHANA**

**Project Performance in Financial Distress Economy in the Ghanaian Construction  
Industry**

**By**

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Management, College of Art and Built Environment in partial fulfillment of the  
requirements for the degree of**

**MASTER OF SCIENCE**

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## DECLARATION

I hereby declare that this submission is my own work towards the MSc. and that, to the best of my knowledge, it contains no material previously published by another person, nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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## ABSTRACT

The construction industry is of much relevance to every nation's development by delivering products that offers the basis for industrial production and all activities carried out by individuals, the public, cooperate groups, organizations and others. Also, in terms of economic development, the industry employs lots of individuals when carrying out its operations. However, there have been a lot of concerns raised on the topic of project performance assessment and many countries from different economy has come to appreciate the relevance of improving project performance in their construction industry. Nevertheless, in financial distress economy regardless of a firm's nature or size presents substantial dangers to its projects performance. The financial strength of the construction industry is a critical necessity for stability in the economy and development. As a result, the appraisal of financial conditions of project is an essential objective for various project participants. The cost of failure of projects is very massive therefore, a success in the performance of project in financial distress economy needs fast initiatives by authorities to rescue them before failure. The aim of this research was to examine project performance in financial distress economy in the Ghanaian construction industry. Three objectives were set on which literature review was conducted. The first objective was to conduct a critical literature survey to establish a characterization and a theory for financial distress construction economy. The second objective was to explore the underlying impeding constraints to project performance in financial distress construction economy and the third objective was to establish the determinants for improvements of project performance in financial distress construction economy. Philosophically, this study leaned towards the positivism paradigm culminating into the adoption of quantitative method in which survey questionnaires were administered to respondents involved with project management yielding a response rate of 80 percent. The statistical tools utilized in data analysis include mean score; Relative Important Index (RII) and descriptive statistics. The findings of the research indicated that "High interest rates chargeable on loans; Lack of regularly cash flow forecasting; Increment of foreign exchange rate are characterization of financial distress construction economy. It was recommended that project stakeholders should ensure effective construction waste management, adequate labor supervision and effective materials and equipment's management in financial distress economy. Moreover, there must be effective planning and coordination of project activities and effective and fast communication among project stakeholders.

**Keywords:** Project performance, Financial distress, Construction economy.

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## **DEDICATION**

This dissertation is dedicated to the Almighty God for his mercies, my mum who laid the foundation for my education, all my family members, friends and loved ones most especially my wife and children.

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## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background**

A summary of the study is presented in this chapter which climax the research in terms of the study's background and problem statement. The study's aim, objectives, justification and methodology adopted for the study's conduct is introduced in this chapter as well as research organization.

#### **1.2 Background of the Study**

The construction sector comprise of participants from different fields of work that come together to form part of the economy. The construction sector contributes greatly in the welfare of the nation by undertaking developmental projects such as building offices, houses, transport facilities, educational facilities, industrial plants, health facilities and other facilities for the public usage (Hendrickson and Au, 2003). The industry is of much relevance due to the roles played by their products. Construction products offers the basis for industrial production and all activities carried out by individuals, the public, cooperate groups, organizations and others. Also, in terms of economic development, the industry employs lots of individuals when carrying out its operations. However, there have been a lot of concerns raised on the topic of performance assessment and many countries from different economy has come to appreciate the relevance of improving project performance in their construction industry.

Ofori (2002), asserted that there have being supports from government in developing countries to improve project performance in the industry due to the dissatisfaction with it status. In view of the reports from Egan (1998) and Latham (1994), the construction industry in UK specifically has turned to utilizing various measures to improve project performance in solving matters raised on improvement of project performance in the construction industry. With respect to worldwide anxiety for advancement of construction industry, utilization of measures to project performance in accomplishing this goal is emphasized in many countries that are developed. Nevertheless, financial distress regardless of a firm's nature or size presents substantial dangers to these firms (Beatham *et al.*, 2004).

The term financial distress is utilized as a part of a negative meaning to portray monetary related circumstance of an organization challenged with a brief absence of liquidity and resulting problems when satisfying financial commitments according to plan (Outecheva, 2007). Firms are financially distress as indicated by Brownbridge (1998), when they are in fact bankrupt and additionally illiquid. Bankruptcy is incapability of an organization to gain adequate resources to shield its liabilities. A circumstance in which an organization cash inflows are inadequate to fulfill present commitments and organization is compelled to sort for remedy. The budgetary strength of the construction industry is a critical necessity for stability in the economy and development. As a result, the appraisal of financial conditions of project is an essential objective for various project participants. The cost of failure of projects is very massive therefore, a success in the performance of project in financial distress economy needs fast initiatives by authorities to rescue them before failure.

### **1.3 Problem Statement**

The substance of construction activities globally continues to change in view of concerns of the environment, competition and complex customer necessities. In efforts to give customers value for their money invested, contractors have contrived advance methods for executing works to ensure they remain in business. Flexible contractors worldwide have created techniques and frameworks to guarantee the mitigation or decrease of waste to minimal to win would-be customers (Samson and Lema, 2005). The construction industry is coupled with competition and requires advancement and rebranding of firms and their way of operation to meet varying progression if organizations genuinely need sustenance in business. Firms who neglect to adjust and react to recent business condition are probably going to encounter survival issues (Lee *et al.*, 2001). The construction industry has complex performance issues to deal with (Shaban, 2008). Financial distress has been a great problem all over the world and cannot be ignored. It leads to bankruptcy which eventually leads to firms' failures. Ghana is not an exception and many firms have collapsed due to financial distress. Criticism of the construction industry has been in existence for long due to its relation with shoddy works and project abandonment as a result of inadequate funding (Russell, 1991).

According to Huang *et al.* (2008) the inadequate financing of construction projects are as a result of the present economic hardship. Badu *et al.* (2012) stated that, getting funding in Ghana is a primary issue that small and large contractors encounter. This circumstance regularly leads to the neglect of projects. In Ghana clients delay in paying contractors is a key problem in the construction industry. Contractors mostly need to sit tight for a considerable length of time and most often years to get paid for works to continue. Thus it is very important for construction firms to be able to tell and predict if they are in

financial distress so as to salvage themselves before it's too late and avoid project failure (Adams, 2008).

Several research have exhibited over a scope of points of view that the issue of failure of projects in economic downturns in construction is not just local, rather a worldwide issue (Langford *et al.*, 1993). Langford *et al.* (1993) described the failure of construction firms as resulting from poor project performance due to the current economic hardships resulting in inadequate financing. For example in the United States, the number of contractors operating between 2004 to 2005 declined from 850.029 firms in 2004 to 649.602 in 2005, which was a decline of nearly 24%. According to "The New York Times" (April, 2002) as cited by (Peterson, 2005), the two biggest contractors in Japan, "Sato Kogy Company" and "Nissan Construction" have pronounced for insolvency.

A comparative circumstance was encountered by the second biggest contractor in Germany, "Philipp Holzmann AG," which has been in business for over 150 years, when it professed insolvency. In addition, in Saudi Arabia studies by (Assaf *et al.*, 1995; Osama, 1997; Assaf and Al-Hejji, 2006), (Aibinu and Jagboro, 2002) in Negaria, in Ghana (Frimpong *et al.*, 2003), (Sweis *et al.*, 2008) in Jordan, described how many construction firms have failed due to poor project performance as a result of financial distress. Sambasivan and Soon (2007) reported the failure of many contractors to complete their project on schedule due to inadequate financing. Hence, a number of construction projects in Malaysia have experienced overruns in cost and time (Bashir, 2000).

Several studies have analyzed the performance of contractors in the construction industry, such as (Navon, 1996; Osama, 1997; Arditi *et al.*, 2000; Davidson and Maguire, 2003; Munaain, 2006; Assaf and Al- Hejji, 2006). These studies found that financial factors significantly caused the failure of contractors. Further, the significance of these studies has added to the disclosure of the four financial related factors which has lead the challenges encountered by many contractors.

First, contractors encounters deficiency in finance in construction project delivery. Secondly, contractors receives little benefit or debt from operations. Thirdly, there is huge burden of debt on the company. Fourthly, the asset of construction companies are not efficiently managed. However, according to the best of the knowledge of the researcher, no comprehensive research has been done to clarify the performance of project in financial distress economy. These studies did not focus on project performance, and were more interested in the general view of the factors that led to the failure of a contractor performance as well as non-financial factors. This gap has prompted the researcher to perform in-depth studies to analyze performance of construction projects in financial distress economy in Ghana.

Also, this investigation is roused by the need to ascertain the extent to which financial distress influence the performance of project in the construction industry. This will enhance firms to take preventive and remedial measures promptly if they find themselves in financial distress economy to avoid the devastating results. It is very important to ensure the growth of the construction sector in Ghana to enable it not crippled by factors such as financial distress which can be predicted and appropriate measures taken to ensure its sustainability.

### **1.4 Aim of the Research**

This study aims to thoroughly examine project performance in financial distress economy in the construction industry of Ghana.

### **1.5 Objectives of the Study**

To attain above aim stated, these specific objectives were realized:

1. To conduct a critical literature survey to establish a characterization and a theory for financial distress construction economy.
2. To identify the underlying impeding constraints to project performance in financial distress construction economy.
3. To identify the determinants for improvements of project performance in financial distress construction economy.

### **1.6 Research Questions**

1. What are the characterization of financial distress construction economy?
2. What are the underlying impeding constraints to project performance in financial distress construction economy?
3. What are the determinants for improvements of project performance in financial distress construction economy?

### **1.7 Scope of the Research**

Geologically and contextually, the focus of the study was on SME construction firms in Ghana operating in the Greater Accra region. Research emphasis in Accra emanates as a result of high concentration of construction activities. The prevalence of the Accra Metropolitan Assembly as a regulatory, instructive, modern and business Center has



pulled in individuals from everywhere throughout the nation. The territory keeps on being the significant strength for quick populace development, with migration paying to more than 35% of the populace increment (Ghana Statistical Service, 2000). The populace of Accra like other urban area is mostly youthful with 56% of the populace younger than 24years with 75% businesses in small-scale.

Similarly, the SME construction firms was made the focused due to their vulnerability in a financially distressed economy. More so, the targeted region is due to their greater number in the Greater Accra region. A study's population as stated by Burns and Grove (1993) refers to people, places or objects which are made part of a study due to their conformance to the set criteria. The research seeks views of key personnel like the project managers within these organizations.

### **1.8 Research Methodology**

The study adopts quantitative approach which leans in positivist belief as a result of data collected was analyzed with statistical procedures. As noted by Naoum (2002) quantitative approach to a research produces statistics with the utilization of survey works which are of large-scale. Naoum (2002) further contends that lot of individuals are reached by using quantitative research approach and also it presents a much quicker contact with these individuals.

Review of literatures were undertaken as initial phase to unveil theoretical constructs underpinning the subject and which helped to identify the financial distress relation to project performance. This facilitated development of the conceptual and contextual of the study. Review of literatures sourced credible data and data which are scientific from journals and books.

The following phase proceeded with sample frame development which was targeted on small-medium-construction firms operating within the catchment zone of Accra. Survey questionnaires were largely dependent upon during the enquiry which gathered from the field, data which are empirical. To enhance easy synthesis and categorizing, questions were placed on the Likert scale rating. More so the questions were close-ended in the questionnaire. Statistical Package for Social Sciences (SPSS) was engaged to analyze retrieved data.

### **1.9 Justification of the Study**

The current crises of finance in lots of markets which are emerging have present awareness to relevance of mechanisms which are efficient in resolving financial distress. More importantly, it is very crucial to find ways and means to identify firm projects having problems that could ultimately lead to failure. Thus, the most important question that arises is how to predict financial distress. Most of the literature on financial distress relates on how to predict failure resulting from financial distress and survival tactics for firms. During firm evaluation, prediction of financial distress is vital to stakeholders to enhance appropriate and efficient decision-making. Thus, when effective and efficient managerial practices are carried out in construction project administration, project performance can be improved in a financially distressed economy. Currently, bankruptcy rate has increased and harder to estimate as there is complexities in the growth of companies and projects undertaken.

Wruck (1990) points out that firm value can be improved through financial distress by compelling managers to take decisions which are difficult and would have avoided when engaged with project in financial distress. Thus, a reliable model that can be engaged to forecast project failure in finance can be engaged by management to take preventive measures. For example, the managers of firms once they detect financial distress they can, reduce their spending, abandon unprofitable projects and other investments to spare money.

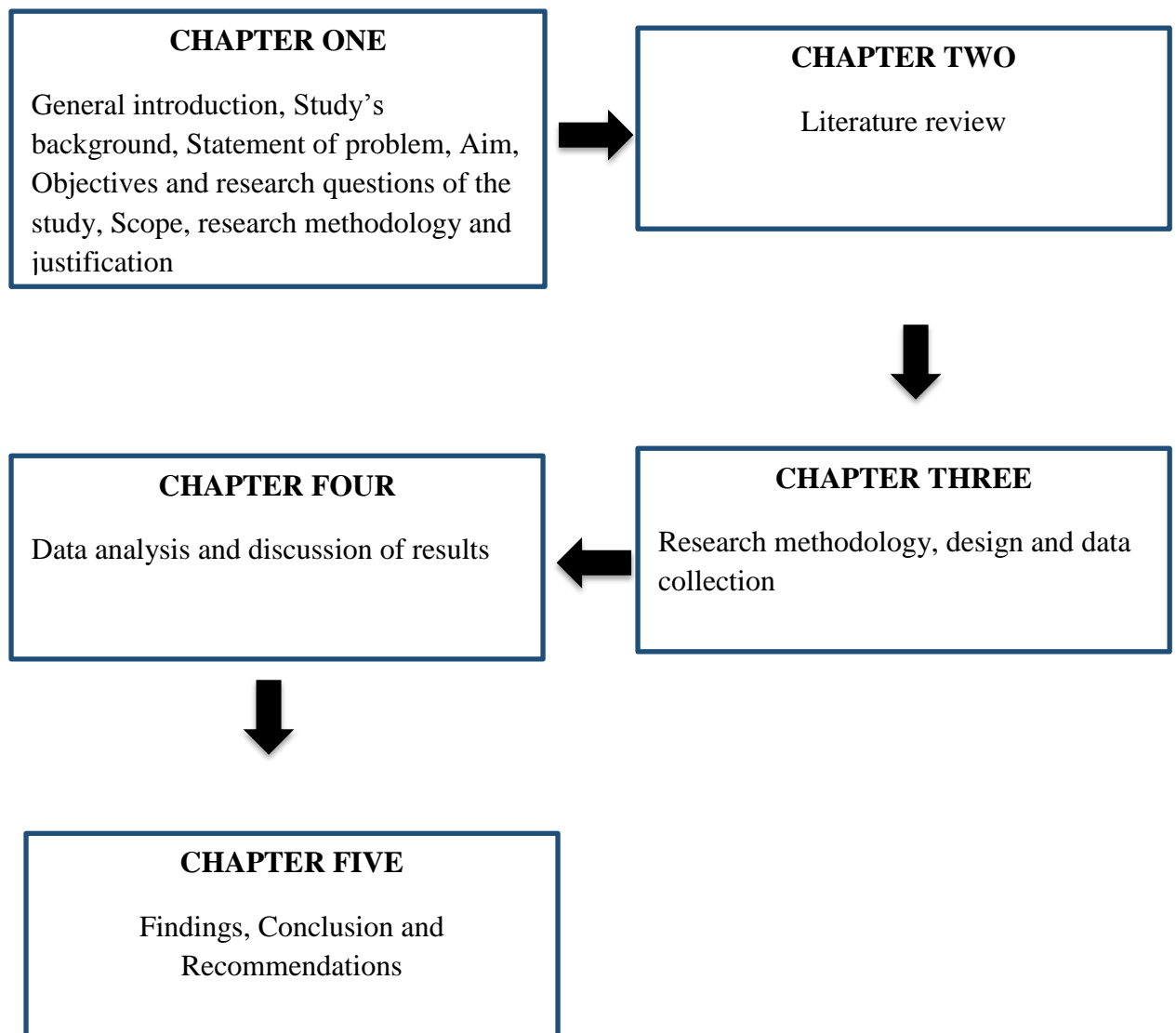
This study provides empirical data to serve as a management tool to construction firms. Thus, aiding and abetting these firms in carrying out a successful project performance in financial distress economy. Moreover, the study serves as a major and critical contribution to knowledge which subsequently drive researchers to conduct advanced and detailed research on construction project performance.

It is also expected that outcome of this study is of importance to the Bank of Ghana, government and other cooperate bodies. The study is relevant to financial analysts in providing information vital to their clients in taking financial decisions when financially distress. In policies development the government can engage the study's findings as guideline in all sectors of the economy.

#### **1.10 Research Organization**

The structure of the thesis composed of five chapters which are interdependent, and conforms to the outline as follows. Chapter one highlighting on the research background, statement of problem, study's aim, objectives as well as research questions, study's scope, justification and methodology. Chapter two throws lights on literature review comprising earlier works concerning the subject of financial distress in construction industry. In chapter three, research methodology was presented including philosophical

stance of the study, population, sample size consideration, data collection procedures and instrumentation that was used to gather data for the study. Chapter four elaborate the analysis on findings and made discussion on findings of the study. The final chapter, thus chapter five summarizes the findings obtained and gave recommendation for further study conduct.



**Figure 1.1: Flow Diagram of Research Process**

### **1.11 Chapter Summary**

In this section research introduction and background of the study is been discussed. There is also presentation of the research problem statement, aim, objectives, questions and study's scope. Further, there is presentation of the adopted methodology for the research which concludes with the presentation of the study's significance and research organization.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter discusses financial distress and project performance for purposes of improving the development of construction in Ghana. It begins by highlighting on the construction industry as a whole and then the stakeholders in the Ghanaian construction industry. This is followed by a review of financial distress, characterization of financially distressed construction economy, underlying impeding constraints to project performance in a financially distressed construction economy and concludes with determinants for improving project performance in a financially distressed construction economy.

#### **2.2 Review of the Construction Industry**

Construction industry comprise of various fields and individuals which associate to form part of the economic sector. Construction plays a vital role in welfare of a nation by housing development, development of educational and office facilities, transport and health facilities, industrial plants development and refurbishment of existing infrastructures (Hendrickson and Au, 2003). The relevance of construction emanate from its products function providing foundation for industrial production. Also Hendrickson and Au (2003) stated that, the industry has a great impact on the economy of the nation which are beyond measurement by the value added by its output and number of individuals which gain employment in its operations.

According to Du Plessis (2002), in national capital investment, construction comprise more than half and consumes more than half of available raw material and almost half of a countries energy. \$200 billion is invested yearly by developing countries in new infrastructure development. Zawdie and Langford (2000) stated that with regards to construction industry socio-economic importance, it contributes in many countries 50% of total investment in capital goods. World Bank (1994) commented that the rate of growth in infrastructure is linked with the output of the economy. Which implies a percent increment in infrastructural development is linked with a percentage increment of gross domestic product. Infrastructural development enables the enhancement of the process of growth of a nation by increasing its productivity, poverty mitigation by provision of housing facilities, development of educational and office facilities, transport and health facilities.

Ofori (2000) stated that due to the significance of the construction industry, many countries from diverse socio-economic development level have recognized the relevance of instituting measures to improve their construction industry performance to ascertain the ambition of its developmental goals. According to CIB (1999) development of the construction industry aims at improving the effectiveness and capability of the industry to meet civil and building products demand and give support to sustain national social and economic developmental goals.

### **2.3 Financial Distress**

The term financial distress is utilized as a part of a negative meaning to portray monetary related circumstance of an organization challenged with a brief absence of liquidity and resulting problems when satisfying financial commitments according to plan (Outecheva, 2007). Firms are financially distress as indicated by Brownbridge (1998), when they are

in fact bankrupt and additionally illiquid. Bankruptcy is incapability of an organization to gain adequate resources to shield its liabilities. A circumstance in which an organization cash inflows are inadequate to fulfill present commitments and organization is compelled to sort for remedy. According to Outecheva (2007), there are four subdivision of financial distress which involves performance deterioration, insolvency, default and failure. Financial default and insolvency affects the liquidity of a company while failure and deterioration affects the company's profitability. In general, financial distress of a firm is characterized by a decrement in its value and performance.

Failure does not happen suddenly but it is a gradual process. As Outecheva (2007) points out, it's a dynamic process where a company moves in and out of financial crisis. This means that there is variation in financial distress in accordance with time and when company's becomes financially distressed, it does not remain in its state until been liquidated or till it recovery. The budgetary strength of the construction industry is a critical necessity for stability in the economy and development. As a result, the appraisal of financial conditions of project is an essential objective for various project participants. The cost of failure of projects is very massive therefore, a success in the performance of project in financial distress economy needs fast initiatives by authorities to rescue them before failure.

## **2.4 Characterization of Financially Distressed Construction Economy**

In construction firm management, financial distress encompasses failure, default, bankruptcy, or distressed restructuring (ibid). Among these varied forms of financial distress, construction firms are likely to encounter default being worst form of financial distress (Outecheva, 2007); failure and bankruptcy in most cases are related to



construction related firms because of the nature of their formation, in the case of distressed restructuring, construction firms do not in most cases assume the structure of other corporate entities being governed by board room rules but on few occasions when construction firms have progressed very well and transform into well-established conglomerate and holdings, distressed restructuring may occur.

Financial distress involves two key stakeholders mostly- the debtor and the creditor, within the construction industry, the debtor is represented by the supplier of materials and capital or other forms of resources for construction activities to proceed while the debtor represents the construction firm or even the contractor (Outecheva, 2007).

Construction firms enter into financial distress when their fund raising capabilities are weak leading to the debt amount exceeding the value of firm's available asset (Outecheva, 2007). According to Tsai (2014), financial distress is characterized by numerous factors, example is: absence of frequent cash flow forecasting; high charge on loans interest rates; low profit margins; difficulties in accessing loans; and inappropriate credit arrangement with financiers and creditors (Tsai, 2014).

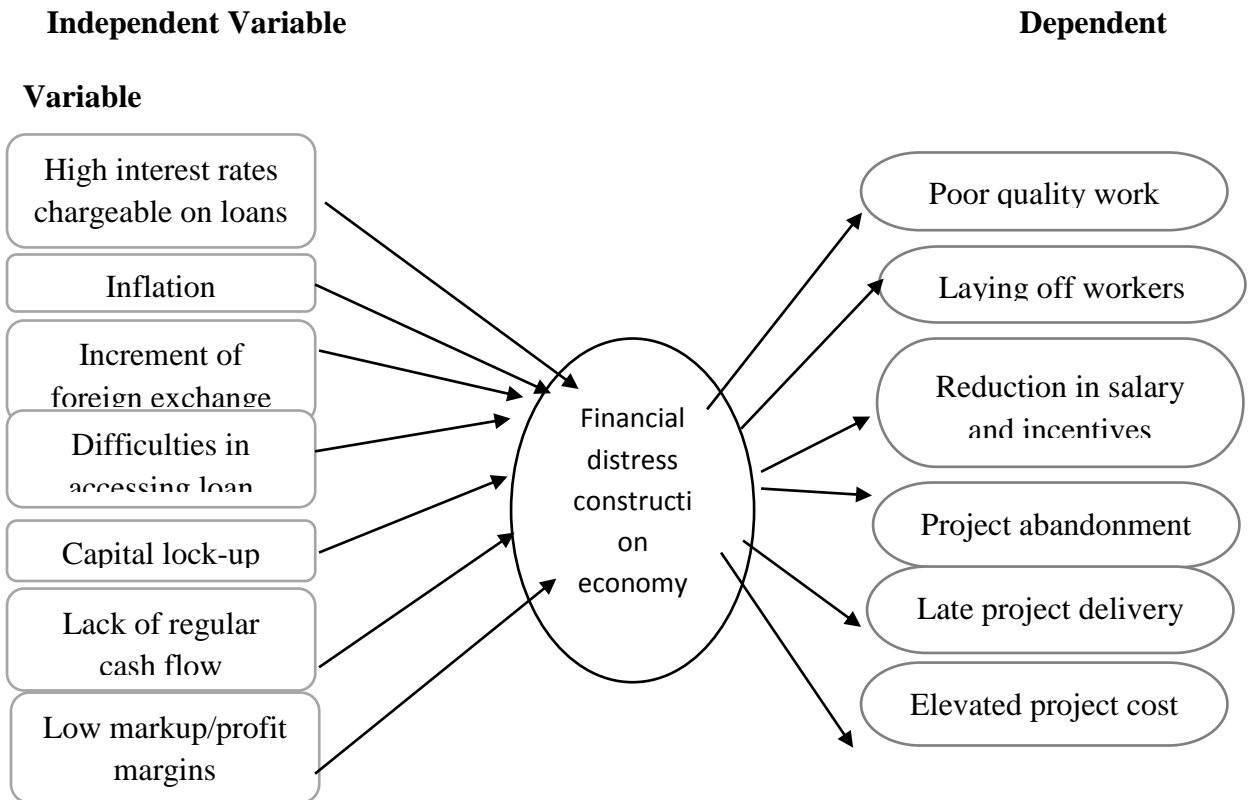
Several other authors attributed financial distress to (i) High charge on loan interest rate: Amounts charged as rewards for financial institutions for providing services to clients (Kayed, 2012), (ii) Unstable Inflation rate: Erratic price levels of goods and services (material prices, labour wages, transportation costs) (Liozu *et al.*, 2014), (iii) Increment of foreign exchange rate: Erratic price levels on imported materials and plants (Liozu *et al.*, 2014), (iv) Difficulties in getting loan from financiers: Inability to secure financial assistance from financial institutions (Chowdhury and Maung, 2013), (v) Capital lock-up: Investment of financial resources in a manner that they cannot have alternative uses

(Hackett, 2014), (vi) Lack of regularly cash flow forecasting: delay payment and fluctuations in the flow of funds (Javier and Herminio, 2014), (vii) High insurance cost: Expenses incurred during indemnification for projects (Lu *et al.*, 2011) and (viii) High tax allocation: Government charges on profits for development related projects (Shah and Whalley, 1990).

Nevertheless, financial distress have negative effect on the construction industry and the nation as a whole. Financial distress in the construction economy have negative impact on the quality of project delivered. Due to high prices of quality materials, contractors are forced to use inferior goods as a result of insufficient funding of project. Also in a financial distress construction economy, firms lay off their labor force due to insufficient internal funds for payment which adversely lead to unemployment. More so, retained labor force in the firms are more likely to face salary and incentives reduction which will also leads to a reduction in productivity since workers are not extrinsically motivated. In most cases projects are abandoned in the construction industry when faced with financial distress. Late project delivery and elevated project cost are also encountered when construction economy is challenged with financial distress.

#### **2.4.1 Theoretical Framework for Distress Construction Economy**

Figure 2.1 shows the characteristics of financial distress construction economy and its effect on project performance and the construction industry as a whole. Independent variables represent the causes of financial distress while the dependent variable represents the possible outcomes of a financial distressed construction economy.



**Figure 2.1: Theoretical framework for distress construction economy**

*Source: Author's Construct*

## 2.5 Constraints to Project Performance in a Financial Distress Construction

### Economy

Measurement of the performance of a project in the last 50 years has been linked with project time, cost and quality. There is a constant tension among these factors and failure in one of the factors affects the performance of project. Perhaps this is not surprising since these factors are included in project management description (Atkinson 1999). Factors that affect construction project performance according to Chan *et al.* (2004) can be put into categories in accordance with the functions of their entities in and around the project. These are Project characteristics factors, Project procurement factors, Management factors, Project participants related factors and External factors.

### **2.5.1 Project Characteristics Related Factors**

Project characteristic related factors are related to the inherent nature of a project, e.g. type, size, complexity, etc. As every project is unique, so are its characteristics. There are many types of project in the construction industry. They are built on the needs of the world's inhabitants to provide shelter, conquer distances, harness energy, create public spaces, protect from natural disasters and build historical monuments. Typical examples are buildings, highways, drainages, bridges, city sidewalks, dams, tunnels, marinas, harbors, structures in the deep open sea, thermal power plants, petroleum refineries, mining developments, rapid transit systems and water treatment plants (Gould and Joyce 2003). The size of a project determines a project cost. However, the absolute cost of a project will also depend on the location of the project. More so, the higher the complexity of a project, the higher are its risk and its requirement for higher skilled labor thereby resulting in a high cost of project.

Complexity of project may also be discussed in terms of the level of technology required. Therefore project characteristics related factors determine if the project will perform well in a financial distress economy where access to funding's for the project is problematic. It can therefore be said that a simple building with no complex features can be sustained or perform better in conditions of financial distress. Projects performance will be constrained when it is complex and involves high risk of cost in a financial distress construction economy.

### **2.5.2 Procurement Related Factors**

The scope of procurement is defined as the framework within which construction is brought about, acquired or obtained (Dissanayaka and Kumaraswamy 1999). Procurement related factors are concerned with the process of getting together the required resources, such as land, material, equipment, money, and people, generally via contractual arrangements prior to the actual construction process. Procurement related factors may include (i) inadequate feasibility study, (ii) inappropriate contract arrangements, (iii) poor contract administration and (iv) faulty tender process. Inadequate feasibility study pose a risk of cost overruns and time overruns which inhibit project performance in financial distress economy prone to difficulties in getting loan from financiers to cater for cost overruns which was initially not budgeted (Dissanayaka and Kumaraswamy 1999). More so as the project delays it maximize fluctuations on the project and as inflation increases in a financial distress economy, prices of materials also escalate. This imposes lot of pressure on project performance which may be abandoned due to lack of finance.

Also, the resultant effect of inappropriate contract arrangement will be lapse of project completion time which will also incur other forms of cost bearing to the project. Example is high insurance cost as the project delays, increased in material prices as inflation elevates. Further, poor contract administration may result in a halt of the project. Incomplete specifications and drawings poses extra treat to project performance in financial distress as it introduce extra cost which may be difficult to access. In addition, faulty tender process results in low motivation and high risk of challenges in cash flow amongst project team participants due to inappropriate pricing. These will retard project performance in financial distress as team members may not give their best

in carrying out the project due to lack of expected motivation. More so the project may suffer quality as inferior materials may be use by the contractor to meet cost as prices rises and creditors accessibility is challenging in financial distress.

### **2.5.3 Project Management Factors**

Project management factors are factors that results from ineffective project manager, such as problems of communication and coordination, inappropriate project planning, control and scheduling, etc. Individual characteristics of managers in construction firms suspect in financial distress; these characteristics are perceived to be capacity for self-control; planning and patience (McCarthy, 2011). Hence behavioral factors are important in determining the financial distress of construction firms; for instance, if the management of a particular construction firms are not financial discipline at the individual level, this phenomenon will translate into the management of the corporate finance of which could be of devastating consequences.

The absence of communication among project members for appropriate project coordination will result in poor project performance in financial distress. When communication is strongly establish among team members deficiencies identified are quickly communicated to prevent re-do thereby eliminating extra cost that will be incurred. Also, inappropriate project planning, control and scheduling can result in project delay and cost overruns. When resources required are not well identified with appropriate cost allocation, project performance will be constrained as it will be coupled with extra cost which is not easily accessible. Project may be halted to chase money to cater for the unplanned.

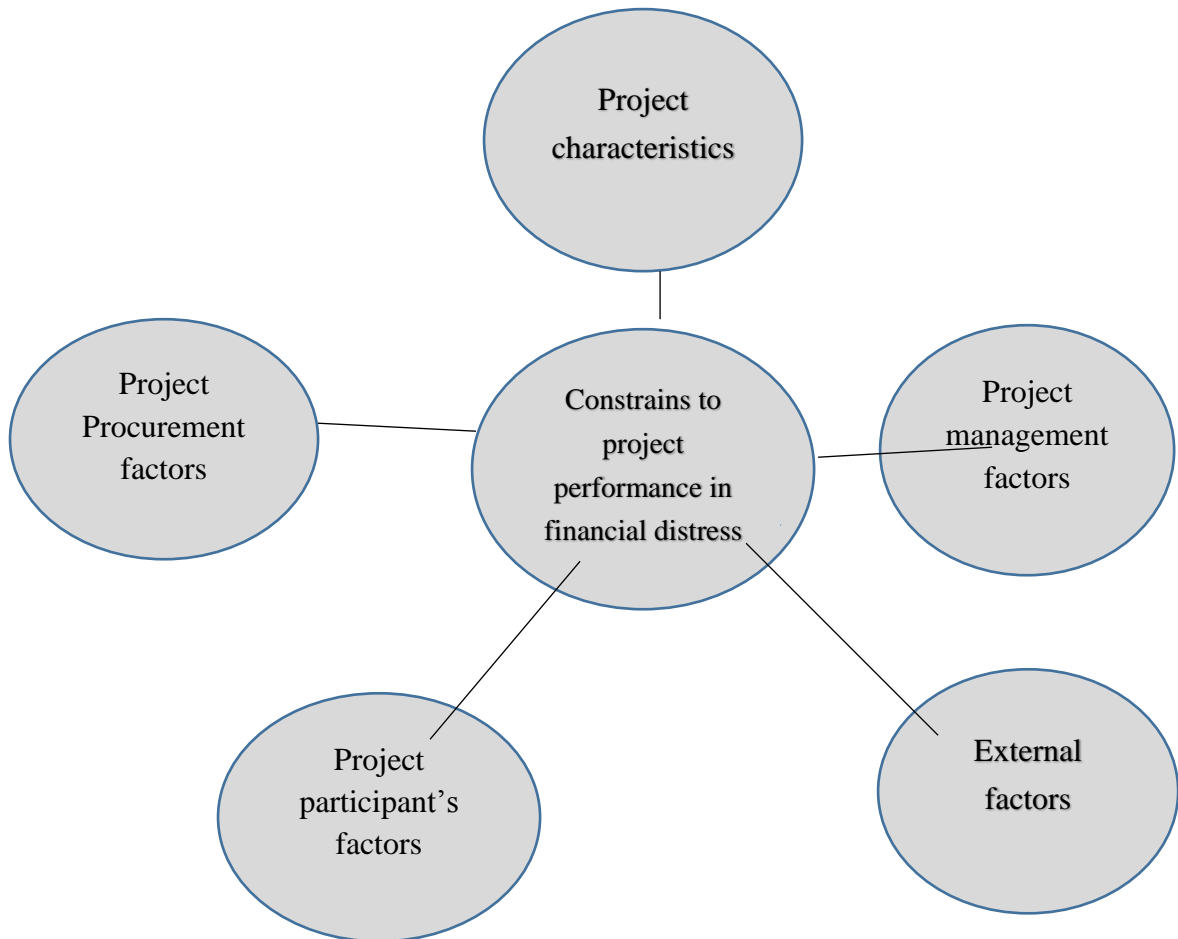
#### **2.5.4 Project Participants Related Factors**

Project participants related factors are mainly concerning clients/owners, consultants, contractors, subcontractors, site workers, and suppliers. These may include (i) Contractor's invalid claim: Attempting to acquire rewards for works not duly executed (Korley 2014). (ii) Withhold of payment certificates: The tendency of not releasing payment documents to the contractor promptly (Marchais-Roubelat, 2012), (iii) Client's poor financial and business management: The inability to efficiently control and monitor budgetary and business activities (Orobia *et al.* 2013). (iv) High overhead expenses: Compensations in the form of salaries, bonuses and benefits associated with payroll (Cotterman, 2014), (v) Underestimation of project cost: Providing expenses less than the actual expenditures of the project (Bowers and Khorakian, 2014). (vi) Contractor handling many projects at the same time: Contractor executing many works within a particular period (Korley 2014). (vii) Divulging funds: Releasing monies without authority (Brand and Davenport, 2012). (viii) Inaccuracy in valuation for work done by consultants: Assigning wrong values to works executed by project professionals (Amoatey *et al.*, 2015).

#### **2.5.5 External Factors**

External factors are factors out of the control of project participants. Example is unexpected ground conditions, obstruction due to underground utilities and adverse weather or acts of god (Frimpong *et al.*, 2003). Bad weather and unforeseen ground condition are among factors that cause schedule delay and cost overruns. For example, limestone areas are characterized as some of the most difficult ground conditions which poses difficulties both during design and construction of foundations.

It was observed in this research that excluding the challenges of environmental issues such as weather and ground conditions, all factors mentioned above which constrains project performance in financial distress construction economy are associated with human risk factors. It is therefore necessary that all approaches to improve and address project performance problems be directed to human related factors



**Figure 2.2: Constrains to project performance in financial distress**



## **2.6 Determinants for Improvements of Project Performance in A Financially**

### **Distressed Construction Economy**

The factors influencing the success/failure of construction projects have received similar attention from many authors. Also known to as critical success factors, the researchers placed focus on the product or business unit level. This implies that firms must develop a set of strategic strength areas which are of relevance to the environment and industry in which they operate. Torp *et al.* (2004) approves that identification of critical success factors and possible pitfalls in project at the beginning helps project teams to minimize firefighting, instinctive and unplanned approach in uncertainties management.

Managing construction projects aims at project planning, coordinating and controlling of project activities and resources according to the requirements of project stakeholders in an efficient and effective way. Managing construction projects involves a lot of processes and procedures such as project scope definition, estimating project cost, and defining the responsibilities and roles of project participants (Harris and McCaffer, 2013). According to Heagney (2011), for the successful performance of a project, fundamental knowledge on project management is necessary and is needed for delivering project timely, to the desired quality and estimated cost of the project.

However, construction industry in the last decades has faced many criticism due to its productivity and performance as compared to other industries. In construction, there is the challenge of attaining an acceptable performance level of projects. Due to inefficient or ineffective procedures to project management, each year huge expenditures of money, time and resources are put to waste (Harris *et al.*, 2014). Also, in construction according to Griffith and Watson (2004), due to its highly complex, dynamic and competitive

environment, satisfactory level of projects have been an issue for a period of time in achieving on time and within budget and desire quality.

Karl (2002) emphasized that in construction, poor project performance is a commonly known occurrence. Also, construction projects performance in financial distress is a prevailing problem in the industry and is mainly as a result of improper project management. Financial distress has been a great problem all over the world and cannot be ignored. It leads to bankruptcy which eventually leads to firms' failures. Ghana is not an exception and many firms have collapsed due to financial distress. Criticism of the construction industry has been in existence for long due to its relation with shoddy works and project abandonment as a result of inadequate funding (Russell, 1991).

In conclusion, the researcher adopts a framework of Belassi and Tukel (1996) in inquiry into the relevant factors for improvements of project performance in financially distressed construction economy in Ghana. Below are identified factors that improves project performance in financial distress economy: (i) Construction waste management, (ii) Effective materials and equipment's management (iii) Adequate labor supervision, (iv) Adequate and comprehensive drawings and specifications, (v) Proficient experience and competence of consultant, (vi) Projection of contractor cash-flow, (vii) Proficient experience and competence of Contractor, (viii) Absence of fraudulent practices, corruption, lack of ethics of project participants, (ix) Appropriate project bidding system, (x) Communication effectiveness and speed of flow of information among participants of a project, (xi) Precise definition of project scope and objectives, (xii) Effective planning, monitoring and coordination of project activities.

## **2.7 Chapter Summary**

From the literature review it was ascertain that financial distress is utilized as a part of a negative meaning to portray monetary related circumstance of an organization challenged with a brief absence of liquidity and resulting problems when satisfying financial commitments according to plan. Further, firms are financially distress when they are in fact bankrupt and additionally illiquid. Also the review posit that financial distress in the construction economy can be characterized by High interest rate chargeable on loans, Unstable Inflation rate, Increment of foreign exchange rate, Loan accessibility difficulties, Capital lock-up, Absence of regularly cash flow forecasting, High insurance cost, High tax allocation. It further asserted that the effect of financial distress in the construction economy contributes to poor quality of projects, laying-off workers, reduction in salary and incentives, project abandonment, late project delivery and elevated project cost.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter is very vital to the conduct of this study as it is the pivot around which all activities of the research revolve. It comprises of the key strategy adopted for the research and its finding followed by the rationale for the adoption of such a strategy. The research design comprises of data sources which involves desk survey which aided in the identification of key research variables; questionnaire development, distribution and statistical tools for data analysis.

The primary objectives of choosing a research methodology and design is to give instructions to plan and conduct the study in a manner which will promote the attainment of set goals. According to Burns and Grove (1993), research methodology is the guide for undertaken the study. Also it can be referred as strategies and procedures engaged to collect and conduct a data analysis when conducting a research. According to Christou *et al.* (2008), research methodology is an approach to gaining knowledge of the world, is about discovering ways of engaging in a task to access what is believed to be the truth. Research methodology involves designing, sampling, collection of data and conducting analysis on data retrieved.

### **3.2 Philosophical Consideration**

A chosen research paradigm guides the philosophical stand of a research work. Pollack (2013) defined research paradigm as a set of commonly shared assumptions ideas or tenets within a community with constitutes and guides the way of perceiving reality. Since the definition refers to a common shared assumption within a group of people, research paradigms vary with conditions. Consequently, a number of positions are presented from which the most suitable for this study is chosen.

In social research there are two main philosophical positions, of which this research consists of, namely ontology and epistemology (Bryman, 2004). According to Pollack (2013), the beliefs of the researcher concerning the nature of the social world and what may be known of it is termed ontology. Realist and relativist are the two position of ontology. The realist position sees the external world to comprise of pre-existing hard and tangible structures which independently exist of the ability of individual's to acquire knowledge. The realist position does not concern with life idealistic view but rather practical. The relativist position is described as holding the multiple existences of realities as subjective constructions of the mind. In this position, the perception of reality is directed by socially changing terms and differs according to culture and language.

The philosophy at the ontological level underpinning this research is the realist position. This is because project performance in financially distress economy in the Ghanaian construction industry occur as external facts which cannot be influenced by the researcher. These financial stress in the construction industry are realities that are objective and not researcher's constructions.

Epistemology is concerned with what is portraying what is regarded as true knowledge about the social world (Panas & Pantouvakis, 2010.) Saunders *et al.*, (2009) stated that the epistemological philosophy describes the researchers position on what is regarded as acceptable knowledge. Several researchers have identified the two main paradigms of the epistemology philosophy as Positivism and Interpretivism. The positivist view is concerned with the quantitative approach and that of the interpretivist leans towards the qualitative approach. Farrell *et al.*, (2011) on the positivist approach of the Epistemological philosophy indicated that verified facts established through scientific study in an objective manner for replication constitute the positivist approach. Very important to the positivist is the idea that the social world can create verifiable understandings from the use of scientific tools.

Interpretivism, on the other hand, believes that the researcher and the society interact with each other such that what is believe to be facts are not static and lacks objectivity as they are subjected to the ideas of the research (Farrell *et al.*, 2011). It relies on the interaction and the experience of the researcher and the social world to understand the phenomena. It is important to note that while in the positivism approach, the researcher is not part of the observations, the researcher however is part of the study under Interpretivism. Positivism measures concepts for generalization through statistical methods, contrary to the Interpretivism idea where concepts are incorporated as per the perspective of stakeholders.

This study leans towards the positivism paradigm of the epistemological approach since it is guided by objective evaluation and predictions. According to Pathirage *et al.*, (2005), a study that requires an objective evaluation and prediction lean towards the

positivism paradigm for its epistemological stance. They further stated that positivism makes it possible for the correlation of an observation to the literature or the theories identified and that the continuous acquisition of true knowledge can create a scientific body of knowledge. Further, the primary objective of the study is to thoroughly examine project performance in a financially distressed economy in the Ghanaian construction industry. This stipulates observations and objective evaluation and predictions and therefore the choice of positivism under the epistemological consideration.

### **3.3 Research Strategy**

According to Naoum (2002), in undertaking a study, it is relevant to clarify the researcher's orientation. The research strategy dwells on the manner in which the objectives of the study are questioned. Qualitative, triangulation and quantitative are the three main strategies. Naoum (2002) stated that, the choice of engaging a particular research approach is dependent on the study's aim and also type of information available for the conduct of the study. This research follows a quantitative strategy by the utilization of survey questionnaires to elicit data from respondents. The quantitative strategy is suitable for this research because of the desire of the researcher to measure the opinions of respondents using scientific basis (positivist) approach. By adopting the quantitative strategy, the researcher was entirely detached from the research phenomenon unlike the other strategies like the qualitative strategy which seeks to explore phenomenon. It is envisaged that project management are phenomenon experienced by managers of construction firms.

### **3.4 Research Approach**

Research approach refers the step by step procedures and action plans adopted for a research from the stage of general assumption up to data interpretation (Creswell, 2013). Two main approaches have been identified and named as the Deductive and Inductive research approach. The Deductive approach deals with what is already known as existing theories or ideas about a subject by identifying the theory and testing through observation to confirm the theory (Creswell, 2013). This approach involves a top-down approach in the formulation of the theory and testing of hypothesis while maintaining the independence of the researcher. That is to say that, the process starts from the identification of the relevant theories and the use of scientific study through observations to confirm these theories. The research is therefore used to test specific propositions (Creswell, 2013).

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



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

### **3.5 Research Design**

The design of a research deals with framework that will be used to collect data and make analysis to these retrieved data. It serve as guide to execute the technique to collect and analyze data. It further provides connections between data which are empirical and provides a logical sequence to make conclusions to the study's research questions. Case study, experimental, action research and survey are the forms of research design (Bryman, 2004). Survey as a form of research design was engaged in the conduct of the study. Due to the need to generalized research finding across the construction industry, a survey questionnaire was adopted. Oppenheim (2003) stated that the utilization of a survey questionnaire improves replication and give reliability of observation due to its in-built uniform measurement and sampling techniques.

### **3.6 Data Collection**

#### **3.6.1 Population of the Study**

In every research, defining the population of the study is very essential. The population of the study defines the actual group the study is interested in. The population of target is the whole combination of respondents that meet the established research criteria (Burns and Groove, 1993). Population of a study may comprise of members in an organizations, villages, places or events selected due to their significance to the achievement of research set objectives. The study limits its target population to SME construction firms operating in the Greater Accra region of Ghana. The population chosen was as a result of their frequent engagement in many developmental projects in Ghana. With this a more consistent and reliable information can be presented.

#### **3.6.2 Sampling Technique and Sample size**

In the conduct of the research, sampling technique utilized was purposive sampling technique due to the fact that the researcher decided on the group of respondents required to be involved in the study conduct. That is the researcher decides what needs to be known and sets out to find people who can and are willing to provide the information by virtue of knowledge or experience. A representative sample size of seventy-five (75) respondents were used in the study. This was due to the fact that the researcher believes the responses from the sampled respondents can be a representative of the entire population and more over is large enough to conduct analysis using statistical tools of data analysis. Key respondent namely contractor, project manager and quantity surveyor were identified using the purposive sampling technique.

These category of respondents were engaged as a result of their various engagement in project management in the construction industry and it is believed that experiences in project performance in financial distress economy will enhance the reliability and validity of their responses giving.

Further, snowball sampling technique was adopted in selecting respondents for the research due to difficulties encountered in assessing the population size. The snowball sampling is a technique used in locating respondents who are very visible for administration of questionnaires at first instance and based on a network from these initial respondents other key respondents are located for questionnaire administration. The reason for utilizing the snowball technique is as a result of the inability to easily locate respondents whose office or places of work cannot be located by the researcher with ease because of structural planning problems within the scope of the study.

### **3.6.3 Questionnaire Development**

According to Oppenheim (2003), for questions relevant to the study to be set, it is vital to initially establish the required information which needs to be gathered. In the development of the questionnaire, lots of considerations were made to ensure that respondents are able to easily read the questions and make meaning out of it to provide the required answers intended by the researcher. All the questions in the questionnaires were closed ended placed on a Likert scale of 1 to 5. The scale measures the intensity or strength of the opinion of respondents.

The questionnaire consisted of six (6) questions: the purposes of the first three questions were to determine profession, educational background and years of experience of respondents. The last three questions sought to ascertain respondents view on project performance under the research objectives i.e. the characterization of a financial distress construction economy; Constraints to project performance in financial distress construction economy and determinants for improvements of project performance in financial distress construction economy.

#### **3.6.4 Questionnaire Distribution**

The 75 questionnaires were evenly distributed among respondents. Out of this 60 questionnaires representing 80 percent of the respondent gave response to the questionnaire administered. These retrieved questionnaires formed the basis for the conduct of the analysis. According to Farrell (2011), the rate to the response of the questionnaire by respondents indicates the fraction of questionnaires completed by respondents. Moreover, he further stated that in literature a high rate of response from respondents indicates the study's validity of its findings.

From this statement it can be concluded that, the response rate of 80% is deemed adequate for data analysis to be conducted on data retrieved from respondents. The entire field survey was completed in two weeks and the higher rate of response from respondents can be accredited to the researcher constant follow ups on questionnaires for collection and also the ease of reading and understanding the questions by the respondents.

### **3.6.5 Data Sources**

In research study field and desk survey are the approaches to data collection. According to Farrell (2011), desk survey involve the review of literatures and forms a relevant part of the conduct of the research as it provide the opportunity to gather data to develop questionnaires for dissemination to retrieve data from the field. Field survey is mainly collecting data from respondents using questionnaires developed from the desk survey. Desk survey culminated into the identification of key variables in quality management which were used in the development of questionnaires which were administered to respondents to collect data for analysis.

### **3.7 Data Analysis**

After the questionnaire retrieved they were prepared by coding and fed into the Statistical Packages for Social Sciences (SPSS version 20.0) for data aggregation and subsequent analysis. The type of variables obtained influence the test that will be adopted in the analysis of retrieved data. The variables can either be categorical variables, ordinal variable or interval and also if these variables are distributed normally. In this research both descriptive and inferential statistics was utilize in analyzing correlation between the various issues the literature identified. This study therefore employed percentages for the analysis of the background information while the mean scores as a measure of central tendency, standard deviation as a measure of the dispersion and Relative Importance Index (RII) were used in the measurement of the variables.

### **3.8 Reliability and Validity**

Reliability is the extent to results consistency of retrieved data and procedures of data analysis and the repeatability of the study's results while validity concerns with research findings precision (Saunders *et al.*, 2009). The internal validity and reliability of data retrieved and rate of response rely mostly on the questionnaire design and the structure. The questionnaires must be understood by the respondent as intended by the researcher, and the answers must be understood by the researcher as intended by the respondents. Hence, a valid questionnaire enhance the collection of accurate data.

Preparation is key in order to avoid or reduce potential data quality issues related to reliability and response bias. Measures were taken to provide participants with relevant information and question themes before answering, thus enabling respondents to consider the information being requested and also allowing them time to assemble any potential documentation needed. These efforts should promote the validity, reliability and overall credibility of the research.

### **3.9 Research Ethics**

The study observes to the ethical consideration for the conduct of the research. Respondents were briefed on the purpose of the study and what will be done with their responses given. They were assured of given much confidentiality to responses provided by them and that their responses will only be engaged for the purpose of this research conduct. Also they were given assurance of not being obliged to undertake the research process and that they are free to dismiss themselves from the data collection process. These information and assurances relayed to respondents encouraged them to be involved in the conduct of the study.

### **3.10 Chapter Summary**

The chapter three has dwelt extensively on the procedures that were adopted in conducting the research. The key methodological dimensions of this study include the usage of quantitative research strategy; data collection instrument design in which survey questionnaire was utilized; the distribution of the survey questionnaire was solely by face-to-face using purposive and snow ball sampling to locate respondents in Accra. The retrieved data was analyzed using SPSS which churned out interesting results in its output for analysis in chapter four below.

## **CHAPTER FOUR**

### **DATA ANALYSIS AND DISCUSSION OF RESULTS**

#### **4.1 Introduction**

In the preceding chapters, pertinent literature in view of the study's objectives has been assessed and methodology adopted has been established. These were conducted to ensure that data gathered are of relevance to the study. This chapter presents analysis of gathered data and discussions into detail which is linked to reviewed literature to answer objectives of the study. The immediate part of the analysis was on respondent profile engaged in the conduct of the study. Moreover, the profile of respondent influence the data retrieved therefore it was deemed necessary to analyze their profile to ascertain how these attributes of the respondent will influence the research. The specific objectives of the study was analyzed in the second section of this chapter of the research which includes the characterization of financial distress construction economy, constraints to project performance in a financially distressed construction economy and ways of enhancing project performance in a financially distressed construction economy.

The research questionnaires retrieved which form a total of 60 questionnaires was engaged in the research analysis. From the retrieved data all the variables were rated by respondents therefore there were no missing values. The researcher attributes the high rate of response to constant follow ups on questionnaires for collection and also the ease of reading and understanding the questions by the respondents.

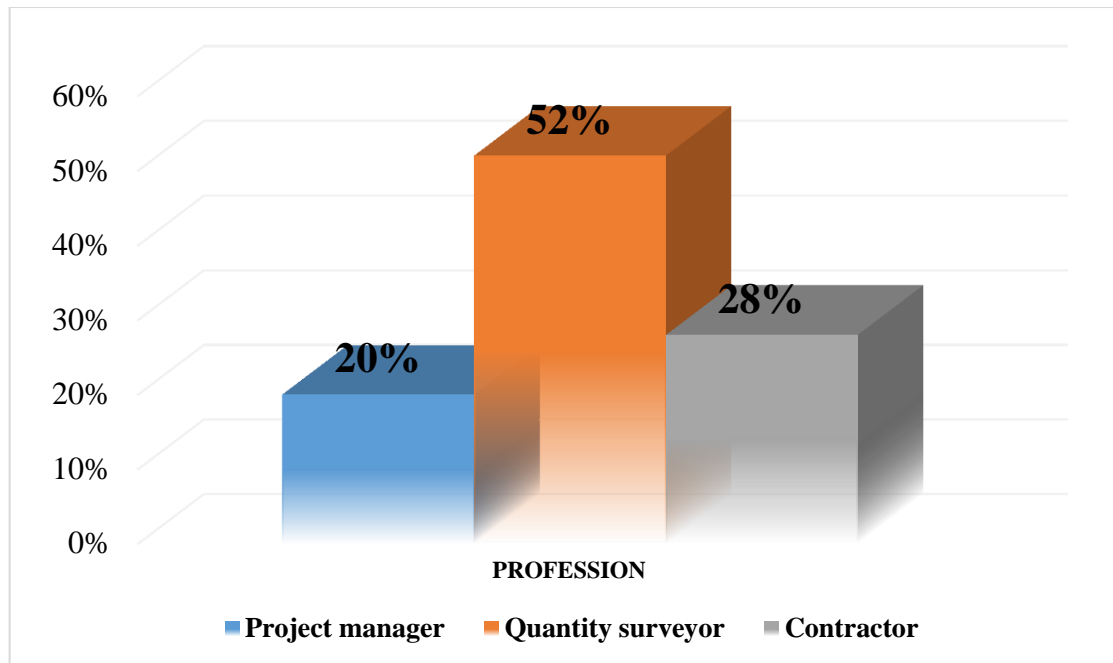


## **4.2 Respondent Profile Analysis**

The aim of this section was to help in providing understanding of respondent's profile. Knowledge of the background of respondents helps generate confidence in the reliability of collected data. Figure 4.1 to 4.3 presents the results of the data analysis on the background of the respondents.

### **4.2.1 Profession of Respondents**

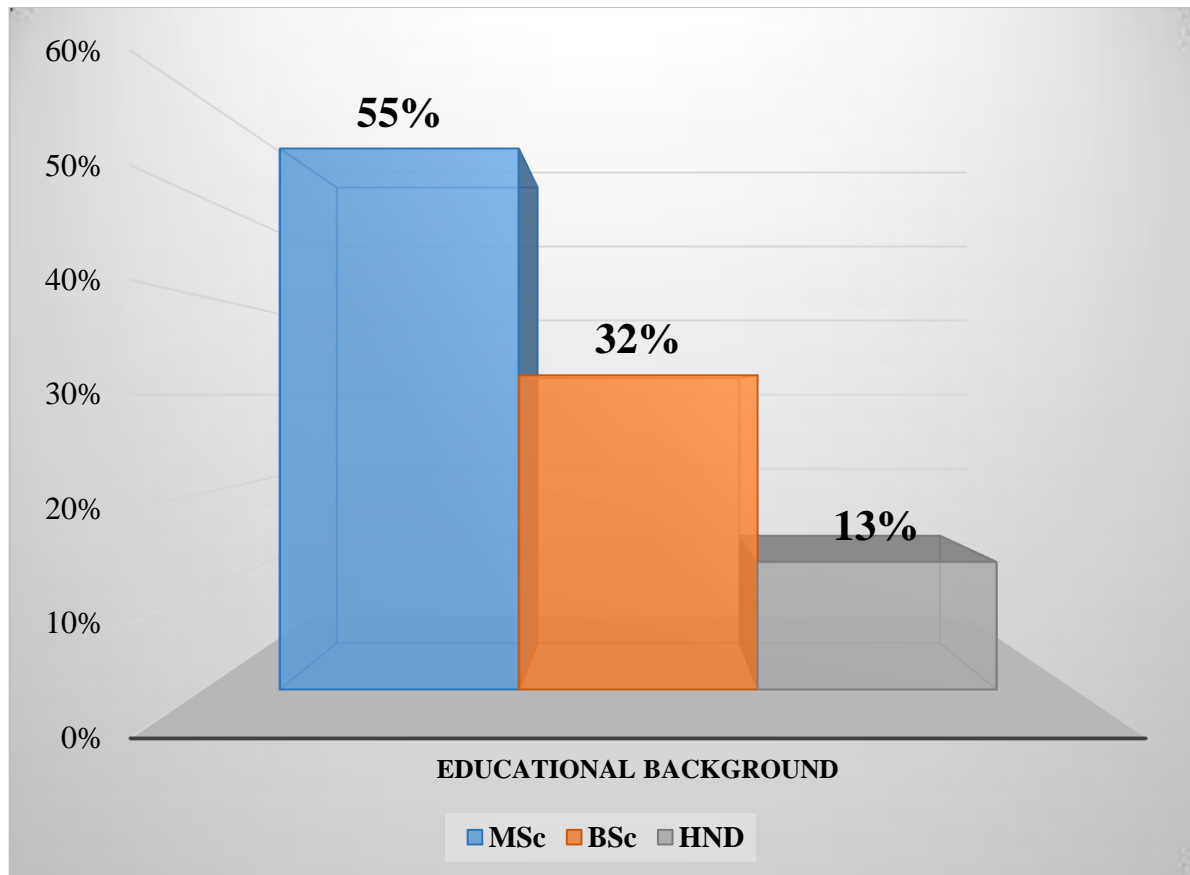
Respondents were asked to indicate their profession so as to be certain that the questionnaires were completed by the respondents who were actually targeted. The targeted respondents were of only three professions that is the project manager, quantity surveyor and contractor. The results of the analysis indicated that, 12 of the respondents were project managers which represents a percentage of 20%, 31 of the respondents were quantity surveyors which represents a percentage of 52% and the remaining 17 respondents were contractors which represents a percentage of 28%. Figure 4.1 summarizes the profession of respondents engaged in the conduct of the survey.



**Figure 4.1: Profession of Respondents**

#### **4.2.2 Educational Background of Respondents**

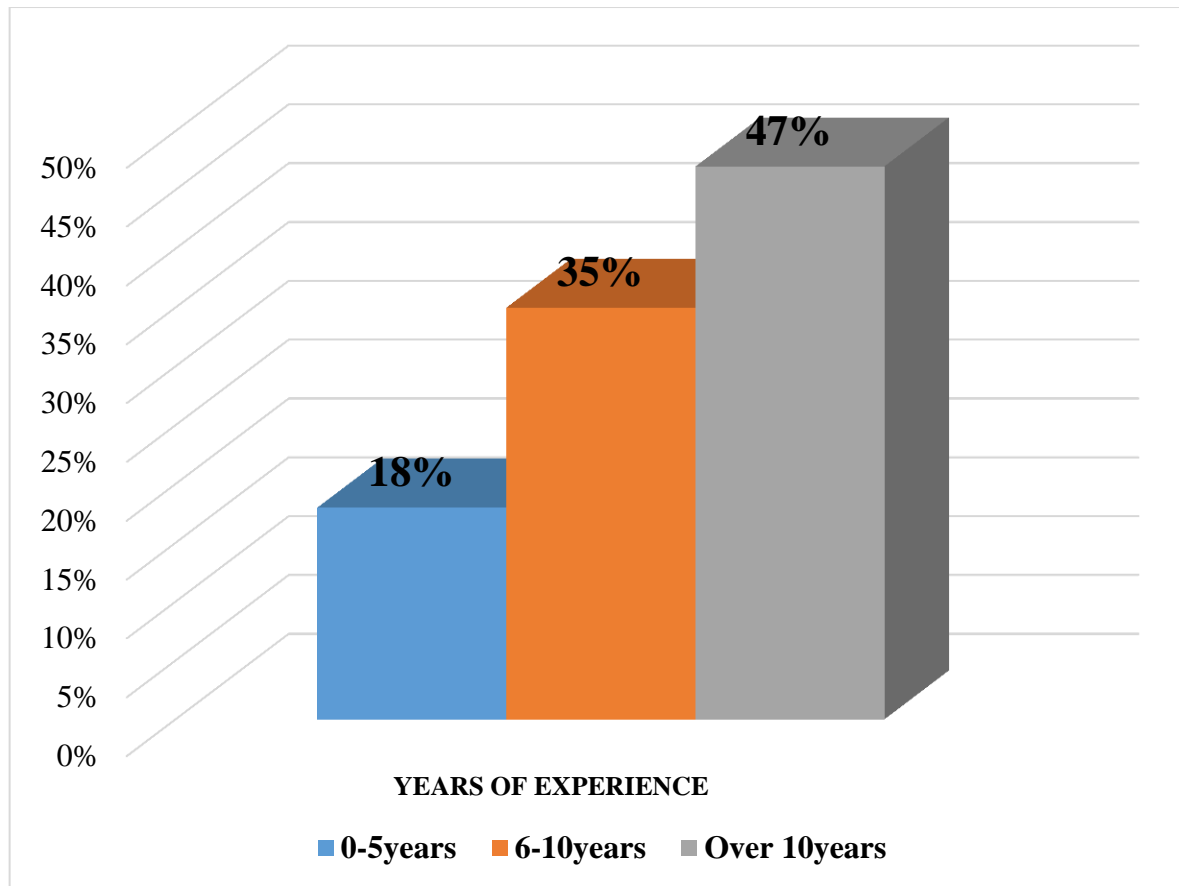
Respondents were asked to indicate their educational background to be certain that the questionnaires were completed by the respondents who are erudite in project management in the construction industry. The results of the analysis of educational background of respondents shows that, 33 of the respondents were having master's educational background which represents a percentage of 55%. 19 of the respondents were having bachelor's educational background which represents a percentage of 32% and the remaining 8 of the respondents were having HND as their educational background which represents a percentage of 13%. Figure 4.2 summarizes the educational background of respondents engaged in the conduct of the survey.



**Figure 4.2: Educational Background of Respondents**

#### **4.2.3 Years of Experience of Respondents**

Respondents were asked to indicate their years of experience to be certain that the questionnaires were completed by the respondents who have gained enough experience in project management in the construction industry. The results of the analysis of years of experience of respondents shows that, 11 of the respondents' years of experience were between 1 -5 years which represents a percentage of 18%. 21 of the respondents' years of experience were between 6 -10 years which represents a percentage of 35% and the remaining 28 of the respondents' years of experience were over 10 years which represents a percentage of 47%. Figure 4.3 summarizes the years of experience of respondents engaged in the conduct of the survey.



**Figure 4.3: Years of Experience of Respondents**

#### **4.3 Characterization of Financial Distress Construction Economy**

The analysis of the first objective pose in the study is discussed below. To fulfill the first objective of the research it deemed necessary to collect data to establish from respondents characterization of financial distress construction economy. Also it was considered that knowledge of this area will provide some basis to gain insight into what contributes to financial distress in construction. Subsequently, respondents were questioned to rate the variables identified in terms of their agreement as characterization of financial distress construction economy from a Likert scale of 1 to 5, where 1 represents Strongly disagree, 2 represents Disagree, 3 represents Neutral, 4 represents Agree and 5 represents Strongly agree. Table 4.3.1 below shows a summary of analysis

conducted to evaluate the identified variables from the responses of the respondents based on their mean scores and standard deviation.

From table 4.3.1 below it can be ascertained from the analysis that there were no missing numbers and that all the variables were rated by respondents thereby having a total number of 60 each in table 4.3.1 below. More so, in terms of the rating from the Likert scale of 1 to 5, the minimum rating by respondents which represents Neutral was 3 and the maximum rating by respondents which represents Strongly agree was 5. Also all the variables were deemed to be characterization of financial distress construction economy by respondents thereby all having a maximum rating of 5. This can be concluded that the various respondents in one way or the other strongly agree with the identified variable based on their experience.

**Table 4.1: Descriptive statistics of the characterization of financial distress  
construction economy**

<b>Characterization of financial distress</b>	<b>Mini.</b>	<b>Maxi.</b>	<b>Mean</b>	<b>Std.</b>		
<b>construction economy</b>	<b>Total</b>	<b>Rating</b>	<b>Rating</b>	<b>Score</b>	<b>Deviation</b>	<b>Ranking</b>
Lack of regularly cash flow forecasting	60	3	5	4.467	0.7241	1st
High interest rates chargeable on loans	60	3	5	4.350	0.7552	2nd
Increment of foreign exchange rate	60	3	5	4.233	0.8102	3rd
High insurance cost	60	3	5	4.017	0.8334	4th
Low markup/profit margins	60	3	5	3.883	0.8253	5th
Difficulties in getting loan from financiers	60	3	5	3.833	0.8061	6th
High tax allocation	60	3	5	3.783	0.8253	7th
Inflation	60	3	5	3.767	0.8309	8th
Capital lock-up	60	3	5	3.733	0.8410	9th

In addition from the rating there were no rating of 1 and 2 which represents Strongly disagree and Disagree respectively by respondents. This can be said that, respondents at least are in neutral agreement to the fact that variables identified are characterization of financial distress construction economy.

Further, in terms of their mean scores all the variables scored above the average mean score of 2.5 which indicates that variables identified are rated above the level of Neutral agreement (3) based on the minimum mean of “3.733” and a maximum mean of “4.467”. This may also be considered that respondents are in agreement with the variables identified as been a source of their past failure experience in project management.

More so, the standard deviation of a minimum value of “0.7241” and a maximum of “0.8410” indicates their closeness to zero and to each other and therefore are not too dispersed or deviated from each other which makes the respondents homogenous group, thereby shares similar ideas on the characterization of financial distress construction economy.

However, from the ranking in table 4.3.1 above it can be concluded that “Lack of regularly cash flow forecasting” was rated 1<sup>st</sup> by respondents as the most significant characterization of financial distress construction economy with the highest mean of “4.467”. Also, High interest rates chargeable on loans; Increment of foreign exchange rate; High insurance cost; Low markup/profit margins; Difficulties in getting loan from financiers; High tax allocation and Inflation were rated 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> respectively by respondents as characterization of financial distress construction economy. “Capital lock-up” which was rated 9<sup>th</sup> had the least significant characterization of financial distress construction economy with the lowest mean of “3.733”.

#### **4.4 Constraints to Project Performance In Financial Distress Construction**

##### **Economy**

The analysis of the second objective pose in the study is discussed below. To fulfill the second objective of the research it deemed necessary to establish from respondents constraints to project performance in financial distress construction economy. Also it was considered that knowledge of this area will provide some basis to gain insight into what hinders project performance in financial distress. Subsequently, respondents were questioned to rate the variables identified in terms of their agreement as constraints to project performance in financial distress construction economy from a Likert scale of 1

to 5, where 1 represents Strongly disagree, 2 represents Disagree, 3 represents Neutral, 4 represents Agree and 5 represents Strongly agree. Table 4.4.1 below shows a summary of analysis conducted to evaluate the identified variables from the responses of the respondents based on their mean scores and standard deviation.

**Table 4.2: Descriptive statistics of the constraints to project performance in financial distress construction economy**

<b>Constraints to project performance in financial distress</b>	<b>Total</b>	<b>Mini. Rating</b>	<b>Maxi. Rating</b>	<b>Mean Score</b>	<b>Std. Deviation</b>	<b>Ranking</b>
High overhead expenses	60	3	5	4.250	0.8949	1st
Contractor handling many projects at the same time	60	3	5	4.233	0.8900	2nd
Underestimation of project cost	60	3	5	4.217	0.8847	3rd
Withhold of payment certificates	60	3	5	4.183	0.8732	4th
Poor contract administration	60	3	5	4.167	0.8668	5th
Problems related to change orders / variation orders	60	3	5	4.117	0.8456	6th
Project characteristics related factors (type, size, complexity)	60	3	5	4.100	0.8377	7th
Client's poor financial and business management	60	3	5	4.083	0.8294	8th
Faulty tender process	60	3	5	4.067	0.8206	9th
Contractor's invalid claim	60	3	5	4.050	0.8115	10th
Problems of communication and coordination	60	3	5	4.033	0.8018	11th
Inadequate feasibility studies	60	3	5	3.983	0.8129	12th
Inaccuracy in valuation for work done by consultants	60	3	5	3.933	0.8206	13th
Inappropriate project planning, control and scheduling	60	3	5	3.883	0.8045	14th
Poor relationship among project team members	60	3	5	3.850	0.8198	15th

From table 4.4.1 above it can be ascertained from the analysis that there were no missing numbers and that all the variables were rated by respondents thereby having a total number of 60 each in table 4.4.1 above. More so, in terms of the rating from the Likert scale of 1 to 5, the minimum rating by respondents which represents Neutral was 3 and the maximum rating by respondents which represents Strongly agree was 5. Also all the



variables were deemed to be constraints to project performance in financial distress by respondents thereby all having a maximum rating of 5. This can be concluded that the various respondents in one way or the other strongly agree with the identified variable based on their experience.

In addition from the rating there were no rating of 1 and 2 which represents Strongly disagree and Disagree respectively by respondents. This can be said that, respondents at least are in neutral agreement to the fact that variables identified are constraints to project performance in financial distress.

Further, in terms of their mean scores all the variables scored above the average mean score of 2.5 which indicates that variables identified are rated above the level of Neutral agreement (3) based on the minimum mean of “3.850” and a maximum mean of “4.250”. This may also be considered that respondents are in agreement with the variables identified as been a source of their past challenging experience in project management. More so, the standard deviation of a minimum value of “0.8018” and a maximum of “0.8949” indicates their closeness to zero and to each other and therefore are not too dispersed or deviated from each other which makes the respondents homogenous group, thereby shares similar ideas on the constraints to project performance in financial distress construction economy.

However, from the ranking in table 4.4.1 above it can be concluded that “High overhead expenses” was rated 1<sup>st</sup> as the most significant constraint to project performance in financial distress with the highest mean of “4.250”. Contractor handling many projects at the same time; Underestimation of project cost; Withhold of payment certificates; and

Poor contract administration were rated 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup>, respectively by respondents as constraint to project performance in financial distress. “Poor relationship among project team members” which was rated 15<sup>th</sup> had the least significant constraint to project performance in financial distress with the lowest mean of “3.850”.

#### **4.5 Ways of Enhancing Project Performance in a Financially Distressed**

##### **Construction Economy**

The analysis of the third objective pose in the study is discussed below. To fulfill the third objective of the research it deemed necessary to establish from respondents ways to enhance project performance in financial distressed construction economy. Also it was considered that knowledge of this area will provide some basis to gain insight into how to improve project performance in financial distress. Subsequently, respondents were questioned to rate the variables identified in terms of their importance as ways to enhance project performance in financial distress from a Likert scale of 1 to 5, where 1 represents Not important, 2 represents Less important, 3 represents Moderately important, 4 represents Important and 5 represents Very important. Table 4.5.1 below shows a summary of their calculated mean scores and Relative Importance Index (RII) scores.

**Table 4.3: Ways of enhancing project performance in a financially distressed construction economy**

<i>Ways of enhancing project performance in financial distress</i>	<i>Score <math>\Sigma W</math></i>	<i>Mean Score</i>	<i>Std. Deviation</i>	<i>RII</i>	<i>Ranking</i>
Contractors' cash-flow projections	278	4.633	0.4860	0.927	1st
Adequate labor supervision	276	4.600	0.4940	0.920	2nd
Effective communication and speed of information flow amongst project participants	274	4.567	0.4997	0.913	3rd
Proficient consultant's competence and experience	271	4.517	0.5039	0.903	4th
Proficient Contractor's experience and competence	268	4.467	0.5957	0.893	5th
Construction waste management	261	4.350	0.6331	0.870	6th
Adequate and comprehensive drawings and specifications	254	4.233	0.6979	0.847	7th
Effective planning, monitoring and coordination of project activities	241	4.017	0.7247	0.803	8th
Precise definition of project scope and objectives	233	3.883	0.7152	0.777	9th
Absence of fraudulent practices, corruption of project participants	230	3.833	0.6930	0.767	10th
Appropriate project bidding system	227	3.783	0.7152	0.757	11th
Effective materials and equipment's management	226	3.767	0.7217	0.753	12th

From table 4.5.1 above it can be ascertained from the analysis that in terms of their mean scores all the variables scored above the average mean score of 2.5 which indicates that variables identified are rated above the level of “moderately important” (3) based on the minimum mean of “3.767” and a maximum mean of “4.633”. This may also be considered that respondents are in agreement with the variables identified as been a source of their past success experience in project management.

More so, the standard deviation of a minimum value of “0.4860” and a maximum of “0.7247” indicates their closeness to zero and to each other and therefore are not too dispersed or deviated from each other which makes the respondents homogenous group,

thereby shares similar ideas on the ways to enhance project performance in financial distressed construction economy.

However, from the ranking in table 4.5.1 above it can be ascertain that “Contractors' cash-flow projections” was rated 1<sup>st</sup> by respondents as the most significant way to enhance project performance in financial distress with the highest RII of “0.927”. “Effective materials and equipment’s management” which was rated 12<sup>th</sup> had the least significant way to enhance project performance in financial distress with the lowest RII of “0.753”.

#### **4.6 Chapter Summary**

Data obtained from field survey was subject to analysis and discussion in this chapter. This chapter of the research was closed with RII analysis of ways to enhance project performance in financial distressed construction economy.

## **CHAPTER FIVE**

### **CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

The study has explore project performance in financially distress economy. More so, it has establish the characterization of financial distress construction economy, identify constraints to project performance in financially distressed construction economy and ways of enhancing project performance in financially distressed construction economy.

The preceding chapters has explored the theoretical, procedural and practical approaches to address the aim of the study and objectives. This chapter represents final chapter of the research which provides summary of the whole work and suggest recommendations for policy making in Ghana to enhance project performance in financial distress in the construction industry.

#### **5.2 Review of Objectives**

The study was set off with the principal aim to assess project performance in financially distress economy. Three objectives were set to attain the research aim stated. The objectives were attained through reviews of literature to obtained secondary data which were further undertaken through field survey with the use of questionnaire to solicit primary data. The objectives are further been discussed below.

**1. To conduct a critical literature survey to establish a characterization and a theory for financially distressed construction economy;**

The first objective was attained by reviewing literatures on project management which covered a number of relevant issues. Questionnaires were administered to project managers, quantity surveyors and contractors to solicit their views on the variables identified from the literature review as characterization of financial distress construction economy. Their responses were analyzed using descriptive statistics based on their mean and standard deviation. From the analysis “Lack of regularly cash flow forecasting” obtained the most significant characterization of financial distress construction economy and “Capital lock-up” which was ranked last and obtained the least significant characterization of financial distress construction economy.

**2. To explore the underlying impeding constraints to project performance in financially distressed construction economy;**

The second objective was attained by reviewing literatures on project management which covered a number of relevant issues. Questionnaires were administered to project managers, quantity surveyors and contractors to solicit their views on the variables identified from literature review as constraints to project performance in financial distressed construction economy. Their responses were analyzed using descriptive statistics based on their mean and standard deviation. From the analysis “High overhead expenses” obtained the most significant constraint to project performance in financial distress and “Poor relationship among project team members” which was ranked last and obtained the least significant constraint to project performance in financial distress.

**3. To establish the determinants for improvements of project performance in financially distressed construction economy;**

The third objective was attained by reviewing literatures on project management which covered a number of relevant issues. Questionnaires were administered to project managers, quantity surveyors and contractors to solicit their views on the variables identified from the literature review as ways of enhancing project performance in a financially distressed construction economy. Their responses were analyzed using descriptive statistics based on their mean and standard deviation. From the analysis “Contractors' cash-flow projections” obtained the most significant way to enhance project performance in financial distress and “Effective materials and equipment’s management” which was ranked last obtained the least significant way to enhance project performance in financial distress.

**5.3 Recommendations**

The construction sector comprise of participants from different fields of work that come together to form a part of the economy. The construction sector contributes greatly in the welfare of the nation by undertaking developmental projects such as building offices, houses, transport facilities, educational facilities, industrial plants, health facilities and other facilities for the public usage (Hendrickson and Au, 2003). The industry is of much relevance due to the roles played by their products. Construction products offers the basis for industrial production and all activities carried out by individuals, the public, cooperate groups, organizations and others. Also, in terms of economic development, the industry employs lots of individuals when carrying out its operations.

However, there have been a lot of concerns raised on the topic of performance assessment and many countries from different economy has come to appreciate the relevance of improving project performance in their construction industry. Nevertheless, financial distress regardless of a firm's nature or size presents substantial dangers to these firms. The term financial distress is utilized as a negative meaning to portray monetary related circumstance of an organization challenged with a brief absence of liquidity and with problems that result in satisfying financial commitments on plan and to the full degree (Outecheva, 2007). The budgetary strength of the construction industry is a critical necessity for stability in the economy and development. As a result, the appraisal of financial conditions of project is an essential objective for various project participants. The cost of failure of projects is very massive therefore, a success in the performance of project in financial distress economy needs fast initiatives by authorities to rescue them before failure.

In respect of this, the following recommendations to ensure effective project performance in financial distress are made:

- Project stakeholders are entreated to ensure effective construction waste management, adequate labor supervision and Effective materials and equipment's management.
- Project stakeholders should ensure that there is adequate and comprehensive preparation of drawings and specifications and appropriate project bidding system.
- Also there must be effective planning, monitoring and coordination of project activities and effective and fast communication among project stakeholders.



- More so there should be a system established to enhance contractors' cash-flow projections and ensuring absence of fraudulent practices and corruption of project participants

#### **5.4 Limitations of the Research**

The study was bound to some limitations likewise other study's conducted. The limitation in this study is anticipated to give foundation for research work that may be conducted in the future. The study limits its scope to SME construction firms operating in the Greater Accra region of Ghana. More so, the engagement of a relatively small sample size for the research could have been enhanced on sample size which is huge say, hundred and over, for the deployed statistical tools to be robust.

However, this would not invalidate conclusions that were drawn, given that relevant preliminary test which is associated with adequacy of the sample size proved favorable to proceed the analysis. Further, published literatures were used in the study's analysis and conclusions drawn to this study were based on data and results retrieved from respondents using questionnaires.

#### **5.5 Direction for Future Research**

The study exposed a number of areas which requires research attention. Recommendations made for future research are as follows:

- Improving performance of construction projects in the construction industry.
- Assessment of factors affecting construction performance in SME firms.
- Investigating challenges in financing contractors for public sector projects in developing countries.

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**APPENDIX**  
**QUESTIONNAIRE DESIGN**

**TOPIC:**

**PROJECT PERFORMANCE IN A FINANCIALLY DISTRESSED ECONOMY  
IN THE GHANAIAN CONSTRUCTION INDUSTRY**

This study aims to assess project performance in financially distress economy. Also determine constraints to project performance in a financially distressed construction economy and ways of enhancing project performance in a financially distressed construction economy. Please kindly respond to the questions by ticking the appropriate box for each item. Please note that all information provided will be strictly confidential.

Thank you for your assistance.

**BY**

**AGBONU DANIEL**

**PART A**

1. Please indicate your profession:
  - a. Project Manager
  - b. Quantity Surveyor
  - c. Contractor
  
2. Please indicate your educational background:
  - a. MSc
  - b. BSc
  - c. HND

3. Please indicate your years of experience:

- a. 0 – 5 years
- b. 6 – 10 years
- c. Over 10 years

## **PART B**

4. Please rate the following variables in terms of your agreement as a characterization of financial distress construction economy on a scale of 1 – 5. Where 1 = Strongly disagree; 2 = Disagree Strongly; 3 = Neutral; 4 = Agree and 5 = Strongly agree.

No.	Characterization of financial distress	1	2	3	4	5
	construction economy					
1	High interest rates chargeable on loans					
2	Inflation					
3	Increment of foreign exchange rate					
4	Difficulties in getting loan from financiers					
5	Capital lock-up					
6	Lack of regularly cash flow forecasting					
7	Low markup/profit margins					
8	High insurance cost					
9	High tax allocation					

5. Please rate the following variables in terms of your agreement as constraints to project performance in financial distress construction economy on a scale of 1 – 5. Where 1 = Strongly disagree; 2 = Disagree Strongly; 3 = Neutral; 4 = Agree and 5 = Strongly agree.

<b>No.</b>	<b>Constraints to project performance in financial distress construction economy</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	Underestimation of project cost					
2	Contractor's invalid claim					
3	Inaccuracy in valuation for work done by consultants					
4	Inappropriate project planning, control and scheduling					
5	Problems of communication and coordination					
6	Poor contract administration					
7	Client's poor financial and business management					
8	Poor relationship among project team members					
9	Project characteristics related factors (type, size, complexity)					
10	Withhold of payment certificates					
11	Inadequate feasibility studies					
12	High overhead expenses					
13	Contractor handling many projects at the same time					
14	Problems related to change orders / variation orders					
15	Faulty tender process					

6. Please rate the following factors in terms of their importance in the improvement of project performance in financial distress construction economy on a scale of 1 – 5 where 1 = Not Important; 2 = Less Important; 3 = Moderately Important; 4 = Important; 5 = Very Important

<b>No.</b>	<b>Improvement of project performance in financial distress construction economy</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	Construction waste management					
2	Effective materials and equipment's management					
3	Adequate labor supervision					
4	Adequate and comprehensive drawings and specifications					
5	Absence of fraudulent practices, corruption of project participants					
6	Precise definition of project scope and objectives					
7	Proficient consultant's competence and experience					
8	Proficient Contractor's experience and competence					
9	Effective communication and speed of information flow amongst project participants					
10	Contractors' cash-flow projections					
11	Effective planning, monitoring and coordination of project activities					
12	Appropriate project bidding system					