

UNIVERSITY OF EDUCATION, WINNEBA
COLLEGE OF TECHNOLOGY EDUCATION, KUMASI

**AN ASSESSMENT OF THE LOW PERFORMANCE OF LOCAL
CONSTRUCTION FIRMS: A CASE STUDY OF WA MUNICIPALITY**



MOHAMMED ABDUL-LATIF

DECEMBER, 2016



**UNIVERSITY OF EDUCATION, WINNEBA
COLLEGE OF TECHNOLOGY EDUCATION, KUMASI**

**AN ASSESSMENT OF THE LOW PERFORMANCE OF LOCAL
CONSTRUCTION FIRMS: A CASE STUDY OF WA MUNICIPALITY**

MOHAMMED ABDUL-LATIF



7141190021

**A Dissertation in the Department of CONSTRUCTION AND WOOD
TECHNOLOGY, Faculty of TECHNICAL EDUCATION, submitted to the
School of Graduate Studies, University of Education, Winneba in partial
fulfillment of the requirements for the award of Master of Technology Education
(Construction) degree**

DECEMBER, 2016

DECLARATION

CANDIDATE'S DECLARATION

I, Mohammed Abdul-Latif, declare that, this Dissertation with the exception of quotations and references contained in published works which have all been identified and acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE.....

DATE.....



SUPERVISOR'S DECLARATION

I hereby declare that the preparation and presentation of the Dissertation were supervised in accordance with the guidelines on supervision of Dissertation laid down by the University of Education, Winneba.

NAME: MR. MICHAEL K. TSORGALI

SIGNATURE.....

DATE.....

ACKNOWLEDGEMENTS

The studies upon which this research is based received tremendous support from many areas. I wish to acknowledge the support and encouragement of the people of Nusrat Johan Ahmadiyya teacher training college.

My unreserved thanks go to Mr. Michael Tsorgali, my supervisor, of the report for his proof-editing work and encouragement in the production of this piece of work. His momentous annotations, inputs and serenity at all stages of this study contributed immeasurably to the outcome of this research.

I wish to thank Madam Sophia Suglo Latif, my dear wife, for her help throughout this study, Mohammed Abubarkari, thank you for your efforts and encouragement.

My profound thanks go to my entire family, colleagues and compatriots for painstakingly providing me with the needed data for this report especially Mr. Frimpong Daniel for his support.

The findings from this report however, do not necessarily replicate the observations for those who contributed to its production, therefore any inaccuracy of facts of analyses are the researcher's responsibility.

DEDICATION

To my lovely children Yasmine and Ramzy and to the whole family for their support.



TABLE OF CONTENTS

Content	Page
DECLARATION	ii
ACKNOWLEDGEMENTS	iii
DEDICATION	iv
TABLE OF CONTENTS	v
LIST OF TABLES	ix
LIST OF FIGURES	x
ABSTRACT	xi
CHAPTER ONE: INTRODUCTION	1
1.1 Background of the Study	1
1.2 Problem Statement	2
1.3 Purpose of the Study	3
1.4 Objectives of the Study	4
1.5 Research Questions	4
1.6 Significance of the Study	4
1.7 Scope of the Study	5
1.8 Limitations of the Study	5
1.9 Organization of the Study	6
CHAPTER TWO: LITERATURE REVIEW	7
2.1 Introduction	7
2.2 Characteristics of Local Construction Firms	7
2.3 Relevance of the Local Construction Industry	9
2.4 Factors Affecting Local Construction Firms	11

2.4.1 Problem of Cashflow	12
2.4.2 Construction management skills	14
2.4.3 Contract Documentation	15
2.4.4 Working Relationships.....	15
2.4.5 Facilities and Equipment.....	17
2.4.6 Communication.....	17
2.4.7 Culture and Construction	20
2.4.8 Financial Management Skills.....	22
2.4.9 Procurement problems	22
2.4.1.0 Design problems	23
2.4.1.1 Absenteeism of Labour	24
2.4.1.2 Technological problems.....	24
2.5.1 Dealing with Communication Problems in the Construction Industry.....	25
2.5.1.1 Interpersonal Communication in the Construction Industry.....	27
2.5.2 Ensuring Efficient Cash Flow	28
2.5.2.1 Forecasting.....	29
2.5.2 Dealing with the issue of Contracts	30
2.5.3 Effective Financial Management within the Construction Industry	32
2.5.4 Punctuality in the Construction Industry	34
2.5.5 Managing the issue of Culture in the Construction Industry	36
2.6 Conceptual Framework of the Study	37
CHAPTER THREE: METHODOLOGY	39
3.0 Introduction	39
3.1 Study area.....	39
3.2 Research Design.....	40

3.3 Population of the Study.....	40
3.4 Sampling Techniques and Sample Size	41
3.5 Research Instrument.....	41
3.5.1 Questionnaire	41
3.5.2 Interview	42
3.5.3 Observation	43
3.6 Data Collection Procedure	43
3.7 Data Analysis Procedure.....	44
CHAPTER FOUR: RESULTS AND DISCUSSION	45
4.1 Introduction.....	45
4.2 Results and Discussion of Questionnaire.....	45
4.2.1 Results and Discussion of Questionnaire from Structural Engineers	52
4.2.2 Results and Discussion of Questionnaire from Quantity Surveyors.....	56
4.2.3 Results and Discussion of Questionnaire from Site Engineers.....	58
4.3 Results and Discussion of Interview	60
4.3.1 Results and Discussion of Interview from Masons.....	61
4.3.2 Results and Discussion of Interview from Steel Benders	64
4.3.3 Results and Discussion of Interview from Electricians	66
4.4 Results and Discussion of Observation.....	68
4.4.1 Results and Discussion of Observation at Kperisi.....	68
4.4.2 Results and Discussion of Observation at Charia	69
CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND	
RECOMMENDATIONS.....	75
5.1 Introduction.....	75
5.2 Summary of the Major Findings.	75

5.3 Conclusion	76
5.4 Recommendations.....	77
5.6 Suggestion for further study.....	78
REFERENCES	79
APPENDICES	89



LIST OF TABLES

Table 4.1 Demographic profile of participant.....	46
Table 4.2 Structural Engineers perceived causes of low performance of local construction firms	52
Table 4.3 Quantity surveyors perceived causes of low performance of local construction firms	56
Table 4.4 Superficial causes of low performance of local construction firms by Site engineers	59
Table 4.5: Measures to curb local construction firm’s low performance	72



LIST OF FIGURES

Figure 4.1 Classification of construction experts	47
Figure 4.2 Construction Classification in Wa municipality.....	48
Figure 4.3 Performance measurement of local construction firms	49
Figure 4.4 Equipment availability in local construction firms	51
Figure 4.5 opinion of Masons as causes of low construction performance.	61
Figure 4.6 Steel Benders views on causes of low construction performance.....	64
Figure 4.7 crack in floors of the Primary School at Charia	70
Figure 4. 8 faded and peeled off paints at Charia Primary school.....	70
Figure4.9 defected pillar at Charia M/A Block „B“ junior High School	71



ABSTRACT

The progress of many institutions relies on a well - functioning physical infrastructural development. The involvement of local construction firms in constructing infrastructure projects cannot be over emphasized. However, most of the local construction firms perform abysmally as far as quality delivery was concerned. Many projects undertaken by local construction firms experience delays and other substandard performance. The aim of this study was to assess the causes of poor performance of local construction firms. The study adopted a mixed method design involving the administration of survey questionnaires, interviews and observation to a sample of 71 respondents made of Quantity Surveyors, Site engineers, Structural engineers, Masons Steel benders and Electricians The collected data was analyzed using statistical package for social science (SPSS) version 21. The results were presented using percentages and mean values in Tables and charts .The findings of the study suggested that lack of adequate technical expertise, inadequate construction equipment and lack adequate skilled laborshortage of materials, improper design, unreliable sub-contractors, complexity of the project, unclear details in drawings, equipment unavailability were the key factors causing low performance of local construction firms in Wa Municipality. The study recommends that sub-contractors should be selected based on their past experience. Contractors should not be selected only based on their lowest bid. Local construction firms should have competent – spot supervisors to ensure persuasive execution of the project in time. The study finally recommends that local construction firms should ensure they have necessary capital to purchase equipment and machinery for easy and prompt delivery of projects.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Construction industry plays a major role in development and achievement in the goals of society. Construction is one of the largest industries and contributes to about 10% of the gross national product (GNP) in industrialized countries (Navon, 2005).

Construction industry has complexity in its nature because it contains large number of parties as clients, contractors, consultants, stakeholders, shareholders and regulators (Enshassi, 2008). The performance of the construction industry is affected by national economies (Navon, 2005). The importance of identifying construction performance is evident throughout the markets worldwide (Kagioglou et al., 2000). It has therefore become imperative to assess the performance of construction firms. This means that in measuring the performance of construction firms, the set of criteria used should be appreciated by potential customers, employees and investors.

In Ghana, the construction industry plays an essential role in the socio-economic development of the country, since in 2006 and 2007, the industry contributed 0.7% and 1.0% respectively to Gross Domestic Product (GDP) (ISSER, 2007). The activities of the industry have great significance to the achievement of national socio-economic goals of providing infrastructure, sanctuary and employment (Owusu-Sechere, 2008). It includes hospitals, schools, townships, offices, houses and other buildings; urban infrastructure (including water supply, sewage, drainage) highways, roads, ports, railways, airports, power systems, irrigation and agricultural systems, telecommunications etc.

Although, the significance of the industry in terms of contribution to the assets and employment are well recognized, there have been constant criticisms of the performance of the major players, especially contractors. These criticisms have in the recent past led to a number of studies that focused on assessing the factors affecting the performance of construction firms. Owusu-Tawiah (1999) identified two critical factors affecting Ghanaian owned construction firms. The two factors were financial and managerial factors. Under the financial factors, bureaucratic payment procedures, access to capital, obtaining interim payments among others constituted critical financial factors confronting Ghanaian owned construction firms. Again, under the managerial factors, poor accounting and financial management, materials control on site, theft and fraud by own employees, project planning, site management and lack of technical expertise among others constituted critical managerial factors confronting Ghanaian owned construction firms.

1.2 Problem Statement

Local Construction firms, who constitute over 90% of the job market, have often been left out of the sampling frame. Although these firms are classified as small, in financial terms, they collectively contribute substantially to overall construction GDP, especially in the development of decentralized and local government areas. Indeed, these small firms could also be accounting for over 50% (cost-wise) of all building materials production and nearly 80% of all short-term employment (including casual labour), especially for unskilled workers in many deprived communities in Ghana (drawing from Ganessian, 1983; GSTDP, 2010). It is contended that, given that these “so-called” small firms provide a structural base to the economy and also determine the productivity of investment and, accordingly, the rate of

development in decentralized and rural areas of the economy, their evaluation of the factors affecting construction performance would go a long way in helping to develop a useful framework for improving construction performance in the sector Banwell (1964).

Despite over five decades of independence, general construction activity in Ghana is dominated by large overseas construction companies, mainly from China, Germany and even Brazil who undertake major engineering and building construction projects funded by the private and public sector Barret (1995).

The large expatriate companies have access to finance, equipment, material and management and technical expertise, which enable them to move around the country to undertake large construction projects. On the other hand, the small indigenous construction companies compete for small construction projects within the town or city where they operate and rarely move out to expand their business. The researcher by his observation of construction firms in the Wa Municipality found the following problems as being integral to the performance of construction firms in the Municipality; poor managerial skills, lack of technical staff as well as poor skilled and unskilled labour. Other factors that affect the performance of construction firms in the Wa Municipality included dealing with the issue of project management, poor feedback and leadership skills coupled with political, economic and cultural issues. It is on the backdrop of this that the researcher has found it a priority to evaluate the factors affecting the performance of local construction firms.

1.3 Purpose of the Study

The main purpose of the study is to evaluate the factors that affect the performance of local construction firms in the Wa Municipality.

1.4 Objectives of the Study

The following are the objectives of the study:

1. To examine the performance of local construction firms in the Wa Municipality.
2. To identify the factors that hinder the successful operations of local construction firms in the country.
3. To devise strategies to enhance the factors of operations of local construction firms in the Wa Municipality

1.5 Research Questions

The researcher seeks to find answers to the following questions:

1. What is the performance of local construction firms in Wa?
2. What factors affect the performance of local construction firms in Wa?
3. What measures can be developed to curtail the problems that affect the performance of local construction firms in Wa?

1.6 Significance of the Study

The following are the significance of the study:

- To enable the government take appropriate steps to allocating funds for contracts given to local construction firms.
- The study will enlighten the Managers of various construction firms in the country to come out with efficient techniques for managing employees employed on projects.
- The study will however enable construction firms develop the appropriate construction management skills during project or contract execution.

- The study will also help construction firms“ deal with issues of working relationships and contract documentation.

1.7 Scope of the Study

This study was undertaken within the Wa Municipality of the Upper West Region. The study concentrated on issues concerning the general performance of local construction firms in the Wa Municipality. The factors that affect the performance of local construction firms were also examined as wells the measures that can be taken to curtail these problems.

Communication within the construction industry in Ghana is broad and could involve a lot of work especially if there are no concentrations in the study. Construction industry in Ghana comprises of all players (Contractors, Consultants and Clients) involved in the building of both roads and buildings. The study concentrated on the players within the building sector because of the fact that the building subsector is more developed locally than the road sector. Again, there were further concentration on the bigger firms within the building sector because they were presumed to be using effectively all the possible communication structure this research was likely to deal with.

1.8 Limitations of the Study

The study encountered a number of challenges. Key among them was the issue of funding. Activities such as transportation, printing of questionnaires and interview guide, pretesting of questionnaires and interview guide and other relevant documents proved financially burdensome.

Another limitation was the relatively short period (five months) within which the research was carried out. As a student who is also a full time worker, the researcher was constrained with time and this was quite challenging. The researcher was not oblivious of and was not overwhelmed by these challenges and took steps to as much as possible minimize the effects of these challenges on the study.

1.9 Organization of the Study

The study had been organized into five (5) chapters. Chapter one which is General Introduction presents the background of the study, problem statement, research objectives, and research questions, scope of study, relevance and limitations of the study.

Chapter Two is a presentation of the relevant literature on the subject that was reviewed. It looks at concepts and theories as they relate to the research topic and research questions.

Chapter Three discusses the research methodology that was adopted. It outlines the research design, data collection techniques, sources of secondary data, the research instruments used and sampling technique. The target population, analytical and presentation tools that were used are also explained.

Chapter Four is a detailed account of the findings and results of the study. It discusses the researcher's analysis of the responses to the issues that were investigated.

Chapter Five, the final chapter is a presentation of the conclusions that were drawn from the findings and recommendations to enhance of the performance of local construction firms.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section of the study consists of a review of existing literature on the topic. Firstly, the characteristics of local construction firms in the country will be given. Moreover, a commentary will be given on the relevance of local construction firms especially those in the Wa Municipality will be given. An examination of the various factors that affect the performance of local construction firms will also be captured, with the final part of the literature concentrating on the measures that can be taken to reduce or eradicate these problems.

2.2 Characteristics of Local Construction Firms

In Ghana, the agency responsible for the registration of construction firms (i.e., building or civil construction firms) is the Ministry of Water Resources, Works and Housing (MOWWH). The MOWWH does this in collaboration with the Registrar General's Department under Act 179 (1963) of the companies' registration code. On registration, construction firms are classified based on a number of guidelines, including the following: plant equipment holding, financial standing, previous performance and technical expertise. The MOWWH has two main classifications for contractors: Category 'D' for general building works and category 'K' for civil works.

According to MOWWH bulletin, inclusion of a contractor's name in the Ministry's classification register is not compulsory, but then it is only those who are duly registered who can tender for government contracts. The construction firms for

the categories mentioned above are sub-divided into four classes, ranging from class D1, D2, D3, D4 for building construction firms and K1, K2, K3, K4 for civil works.

Class D3/D4 and K3/K4 construction firms are commonly referred to as the small-scale building contractors (SSBCs) and D1/D2 and K1/K2 are typically referred to as big firms.

A feature of local construction firms which are mostly small scale in nature in the Ghana Construction Industry ranking is that, they are often believed to be one-man enterprises, having low financial and capital base and also lacking the requisite managerial skills to adequately face up to the numerous and difficult challenges they constantly have to encounter in a typical developing economy such as Ghana's (Ahadzie, 2007).

Notwithstanding the difficulties however, these small firms tend to have a very wide geographical dispersion championing local government development in the many rural and remotest parts of Ghana (Amoah et al., 2011).

Official statistics indicates that, indeed, these so-called small construction firms represent over 95% of construction companies operating in the economy. In this respect, their activities are useful in stimulating growth in many rural and deprived communities where the government is rigorously championing local development.

Within the foregoing context, it can also be noted that, the dominant role of small construction firms by classification in the Ghanaian construction sector is not by accident (Ganesan, 1983; Hillebrandt, 1990; Wells, 2007).

Typically, construction is essentially a large industry of small firms in all construction economies (Fellows, et al., 1983; Wells, 2007). Among others, this dominance of local construction firms is dictated by particular characteristics of the industry, such as the wide dispersion of the demand, flexibility in the scale of

production, lack of standardization of materials, the effect of climatic controls on the use of materials, some of which can be very bulky; the low capital requirement for entry, especially for craft-based jobs (Ganesan, 1983; Hillebrandt, 1990; Wells, 2007).

2.3 Relevance of the Local Construction Industry

The construction industry remains very critical in the socio-economic development of every nation. Fugarand Agyakwa-Baah (2010) indicated that the construction industry is an important sector of the every developing economy. In Ghana, the industry has been adjudged as one of the main determinants of a country's Gross Domestic Product (GDP), as it contributed an average of 8.9% to its GDP (Ghana Statistical Service, 2010). The industry further plays a pivotal role in the development of local and rural communities and provides employment to a greater portion of the populace (Amoah, et al., 2011).

Similar stories can be told in other countries, for example in India, the construction industry contributes 45% of the industrial production, 80% of industrial employment and 35% of total exports (Verma, 2005). According to Verma (2005), the contribution of Small Scale construction companies/industries to GDP (gross domestic product) of India was to the tune of 37.94% between 1999 and 2000. The construction industry in every nation can best be access base on its stakeholders, thus the professionals (architect, quantity surveyor, project manager, and engineers), contractor and client (Amoah et al., 2011).

The need for best practices in the field has been a cost to be paid by stakeholders such as governments and contractors to achieve the ultimate in quality performance base on the agreed specifications. In a conglomeration market economy

like the construction industry, the importance of small companies serve as major job suppliers, innovators and source of growth is widely recognized (Lussier and Pfeifer, 2001).

Furthermore, Acs and Audretsch (1991), indicated four key contributions of small construction firms which was reemphasized by Barrett and Sexton (2006): they play an important part in the process of technological change; generate much of the turbulence that not only creates an additional dimension of competition; but also provide a mechanism for (market) regeneration; international competitiveness in newly created product niches and job generation.

In the United Kingdom (UK), Small scale construction companies/firms have at most 100 employees, but have large numbers as they account for approximately 98.6% of all companies in UK (Selset *al.*, 2002). In Ghana construction firms constitute about 90% of registered construction companies as reported by Amoah *et al.*, 2011. The importance of small scale construction firms to the economy of Ghana and other developing Africa countries as a whole cannot be over emphasized (Antony *et al.*, 2005). Japan remain outstanding example of countries, which have achieved rapid industrialization through the small Scale construction industry. Likewise, Taiwan has 90% of its industrial output coming out of small scale construction industries which employ not more than 15 workers each. However, throughout the world, one finds out that construction firms are playing a critical role in the creation of employment, penetrating new markets and generally expanding economies in creative and innovative ways. In Sub-Saharan Africa, the evidence is very clear that the Small and medium scale construction firms are on the increase, with many from the private sector (Amoah *et al.*, 2011).

To this small scale construction industry requires innovative strategies in order to achieve its optimum performance in project delivery to time, cost and quality. Small Scale Construction firms in Ghana face constraints not only to their development but also issues with performing effectively on projects. These problems mainly originate from the socio-cultural and economic situation of the country.

2.4 Factors Affecting Local Construction Firms

Most literature in Ghana have identified numerous potential factors that could affect the performance of contractors on construction projects. For instance, evidence provided by Edmonds and Miles (1984) and Ofori (1984) about three decades ago revealed chronic delay in the payments of contractors for work done, lack of credit facilities for firms, poor communication structures and an unreliable material supply base. In other studies, Ahadzie (1995), also reported evidence of lack of finance and credit facilities for contractors, delay in the payment of contractors for work done, design changes and/or variations, low morale and motivation of craftsmen, poor planning, supervision and low mechanization, as some of the important factors that could be affecting construction performance. In their procurement of audit of Ghana, the World Bank (1996, 2003), Westring (1997) and Crown Agents (1998), have continuously reported documentary evidence of contracts taking very lengthy periods to reach financial closure and also, often subjected to unnecessary delays, poor coordination and communication structures, fiscal constraints and extensive systems of controls and land ownership disputes.

In a recent study, Fugar and Agyarkwa-Baah (2010) synthesized a number of these factors towards highlighting their relevance in contemporary Ghanaian construction practice. They concluded that the factors affecting construction

performance could be classified under the following themes: materials, manpower, equipment, financing, environment, changes, government action, contractual relationships and scheduling and controlling techniques.

Indeed, there are a lot of studies on factors affecting construction performance in Ghana. Although these significant bodies of knowledge exist in the Ghanaian context, extant review of the literature suggests that there is a lack of rigorous theoretical and empirical examination to establish the underlying characteristics of the numerous factors identified as affecting the performance of construction firms, especially with regard to the performance of local construction firms. It is contended that, given that small scale construction firms account for over 95% of building firms operating in the Ghanaian Construction Industry (GCI), and also in financial terms contributing substantially to construction GDP at decentralized and Local Government areas in Ghana, their evaluation of the knowledge of the factors influencing performance in the construction industry could be useful in developing a framework towards effective performance management and improvement in a very crucial sector of the Ghanaian Construction Industry.

2.4.1 Problem of Cashflow

The level of insolvency in the construction industry is high, when compared to other sectors. Failure is undesirable and avoidable and it can be prevented by good cash flow management (Arditi et al., 2000).

Local construction firms in developing countries are often the ones on the fringe of the construction industry and undertake work unwanted by the large contractors. Most of their work, comprising construction, maintenance and refurbishment work is from the public sector.

Consequently, local construction firms are likely to be greatly affected by the state of the country's economy because of, for example, changes in the government's expenditure policy (Ruddock, 1992). Evident from the fact that most government agencies experience financial problems, there are delays of payments to contractors – with a consequent adverse effect on the contractor's cash flow (Ofori, 1991). This then affects the operation of the contractor, ultimately hindering the projects from being delivered as required (Adam, 1997; Jannadi, 1997).

Many local construction firms also experience difficulties in obtaining money from financial institutions to finance their business due to the high levels of bankruptcy in the industry; hence the initial capital for the business must come from the contractor (Miles, 1979). In addition, most local construction firms in developing countries have very limited funds as they are seldom able to offer the necessary fixed assets as collateral (Ofori, 1991).

Local construction firms therefore operate on very tight budgets, and when they make a loss on one project they tend not to have sufficient resources to continue in business (Stretton, 1984). Stretton (1984), further noted that the success of small indigenous construction firms is dependent on the type of contract used - lump sum contracts requiring firms to have sufficient finances for purchasing materials and paying workers.

In Ghana, all public funded projects are let on lump sum contracts with funds only released to construction firms for payment of work done. The MWWOH, being aware of contractors' cash flow problems, make mostly monthly or yearly payments to contractors of local construction firms.

However, local construction firms including those in Wa still experience problems with delay in progress payments. Many construction firms in Wa do not

have credit arrangements with major building materials suppliers or financial institutions, and operate on a cash basis. Delays in payment are therefore expected to greatly affect their cash flow.

2.4.2 Construction management skills

Deficiency in planning and management skills is said to be the greatest single problem for small-scale construction firms (ILO, 1987). In developing countries like Ghana, the local construction industry lacks the capacity and capability of undertaking large construction projects, resulting in the continual domination of expatriate construction companies in undertaking all major construction projects (Adam, 1997). Consequently, smaller construction firms find it hard to acquire experience in their type of project (Jannadi, 1997), leading to contractors with limited management and technical skills (Ofori, 1991). This affects their ability to acquire building materials, manage their workers, successfully bid for work (Stretton, 1984) and generally contributing to poor performance (Ofori, 1991).

Given the fluctuation in the construction industry, employment in the construction industry in third world countries offers less employment security (Stretton, 1984). In addition, local construction firms in developing countries experience a shortage in skilled labour due to the salary and the security of employment offered by large construction companies being greater than that offered by the small contractor (ILO, 1987). Furthermore, more young graduates are being assigned to oversee projects and their “lack of skills and experience at both the supervisor and worker level” has been a contributing factor to the poor performance of local construction firms (Lewis, 1984).

2.4.3 Contract Documentation

Inappropriate contract documents have been identified as one of the most common problems affecting the operation of small contractors Ofori (1991). In developing countries, most public sector clients do not use a standard set of contract documents and building plans. The methods of construction are also different which often confuses the contractors.

In PNG, public housing construction drawings provided by NHC are based on the assumption that the site is flat. Any site work is considered as extras and the contractor can claim for work done. However, extra work is not paid for until after practically completed when all extra work is measured and paid out. This places a consequent strain on the contractors' cash flow.

It should be noted that by local construction firms that Oral Agreements are Contracts but Not Documents. In general, the only obligations that can be enforced by the owner or contractor against the other are those that appear as a requirement in one of the contract documents. Likewise, no rights are acquired by either unless they are conferred by some provision of a contract document.

2.4.4 Working Relationships

The success of any human endeavor depends on the quality of the relationships between those involved. A good working relationship, just like a good friendship, builds rapport and understanding between the parties (IPENZ, 2005). To achieve such a relationship takes more than clear and regular communication, although this certainly makes a contribution. It requires investing time and effort by construction firms into understanding the client and his or her situation. According to IPENZ,

(2005), building and maintaining effective and rewarding relationships with clients have many benefits.

A good working relationship allows the contractor to demonstrate their credibility, professionalism and other non-technical qualities (IPENZ, 2005). Contractors offer intangible services, the quality of which cannot be judged by prospective clients. Therefore a client's experience is one of the most significant ways by which the construction firm will be judged. Regardless of marketing and promotional material, actions speak louder than words. The client's experience will shape the comments they make in public and contribute to the construction firm's reputation, and that of his or her firm, in the market-place (IPENZ, 2005).

Although it takes time, building and maintaining a client relationship is a cost-effective exercise which contributes to productivity and efficiency. Complaints and misunderstandings cost time and money – a good client relationship is like an insurance policy that ensures there will be a quicker and easier resolution of any difficulties or conflicts (IPENZ, 2005).

In Ghana, most local construction firms often do not want a bad working relationship with the client, given that this may jeopardize their chances of getting any further work or contract. Clients are hard to find and easy to lose and a construction firm who finishes a contract on time and with a good reputation will be one step ahead of his competitor when the next invitation to tender comes along (Miles, 1980).

However, local construction firms have been known to express disappointment with their working relationship with the client's representative - mainly because of the unsympathetic attitude to the contractor's problems regarding shortage of materials and the delay in payments.

2.4.5 Facilities and Equipment

Given the size of their company, many local contractors that are owner managed and operated, run their work from their own residence. Without office equipment like fax and photocopying machines, urgent information or queries take time to reach the parties concerned.

Much as construction firms need on field equipment like shovels wheelbarrows, tracks etc., they require also an effective and efficient running office to take care of all boardroom stuffs. The researcher by his observation found out that most construction firms in the Wa Municipality had poor running offices with some none. This as it were brings the reputation of the construction business into this repute.

2.4.6 Communication

Communication in small construction firms is often good, although poor communication skills of the manager can be a problem (Fryer, 1985). In developing countries, there is often no means of communication between the workers on site and the contractor's office. Urgent site problems, therefore, cannot be solved immediately because the site workers cannot talk to their manager or owner. In Ghana, site representatives cannot communicate urgent information to the contractor, thus it has to be relayed through the workers on site. This may lead to information being given to the wrong person or the information being misinterpreted when relayed.

In project management, the importance of communication is emphasized by Sievert (1986), who says that a high percentage of the problems in working relationships may be attributed to poor communication.

ILO (1987) further noted that the level of supervision by the client can also affect the performance of the contractor if the client supervisor is not qualified, or there is no effective communication between the contractor and the client.

Since the early 1940s, literature on communication in construction has appeared, mainly based on the situation in the developed countries (Emmitt and Gorse 2003). Many problems concerning communication have been reported, with a focus on intra-supplier communication within the construction sector; demand-supply communication during the design phase; and communication between and within single demand and supply side parties, during whole the construction process. In this division the demand side contains (representatives of) principals, users, investors, etc. and the supply side architects, (sub) contractors, advisors, etc. Based on an overview of this study, the importance of improved communication in construction and the main factors influencing communication are discussed.

The efficiency and effectiveness of the construction process strongly depend on the quality of communication. Previous studies have revealed four reasons why improvements in communication are needed. The first reason is that an improvement in the communication within the building team (Higgin and Jessop, 1965), in project teams (Thomas et al., 1998) and between project manager and contractors (Franks, 1998), (Somogyi, 1999) could reduce failure.

Secondly, more open communication at all levels could lead to innovations (Lenard and Eckersley 1997) and better technical solutions (Sörensen, in Atkin the quality as perceived by all stakeholders involved (Emmit and Gorse 2003; Brown 2001); Usmani and Winch, 1993). Finally, improved communication during the briefing might lead to better decision-making, for example less haste in moving to

solutions and better ways of looking at the requirements first (Nutt, 1988; Barrett, 1995; Salisbury, 1998).

Communication especially within the construction industry is influenced by several factors. The first type of factors is related to the organization of the construction process. Main aspects are the difference between formal and informal communication routes during the design phase (Mackinder and Marvin, 1982) as well as during the phases of development (Pietroforte, 1992; Higgin and Jessop, 1965) and the divorce of design and production (Hill, 1995; Emmerson, 1962). The second type of factors is related to the stakeholders themselves. Opposing interests could lead to hidden agendas, often leading to restricted communication (Richardson, 1996; Brown, 2001; Cuff, 1996; Preiser, 1993; CIB, 1997; DETR, 1998), and all stakeholders' (assumed) frames of reference are found of great influence on communication as well (Moore and Dainty 2001; Salisbury and White, 1980; Gray et al., 1994; O'Reilly, 1996; Usmani and Winch, 1993).

Over the years, several studies concluded thus that the construction sector could benefit from improved communication. Although the studies highlight several aspects of communication in construction, no literature overview has been found on demand-supply communication in construction.

Studies focus on intra-supplier communication (between head- and subcontractors for example) or intra-demander communication (between principal and end user for example), or study just one phase of the building process. In the cases where communication between demand side parties and supply side parties was studied, the focus was on just a few stakeholders instead of taking into account many parties of each side.

Shortage or the lack of client supervision staff in some developing countries also contributes to the contractor's problem. This may result in the contractor doing remedial work, which can be very costly for small contractors – reducing profit margins and putting a strain on cash flow.

2.4.7 Culture and Construction

„Wantokism“ is the common cultural problem in local construction firms and is thought to lead to the downfall of local construction companies. As in all business ventures in Ghana that are family owned, members of the family are employed to work for the company. Local construction firms also employ people from their family, the clan and the village. It has been found that, when a contractor employs only relatives, work input is very low when the owner is away from the site (Stretton, 1984). Local contractors in Ghana are often culturally pressured to employ more of their relatives to maintain a relationship with the village. If the contractors decide otherwise and hire workers from outside the village they are alienated from the village (Stretton, 1984).

There are many different definitions of culture. The definitions differ greatly according to the research fields. Hofstede (1984), define organizations as, „the collective programming of the mind which distinguishes one group from another“: Barthorpe et al. (2000) presented an overview of the literature published on the subject of culture and defined it simply as „,what we are and what we do as a society“. A research carried out by Abeysekera (2002), showed that culture in the construction industry is considered to be about the “characteristics of the industry, approaches to construction, competence of craftsmen and people who work in the industry, and the goals, values and strategies of the organizations they work in”.

Culture has several properties which have also been widely accepted (Barthorpe et al. 2000; Loosemore, 1999). It is shared, learned, symbolic, tradition, shapes behaviour and can change over time.

Hofstede (1984) identified four dimensions of culture. These extensively used and well known dimensions are; power distance, uncertainty avoidance, individualism/collectivism and masculinity/femininity. The four dimensions provide a framework for considering the effects of cultural differences on construction firms.

Another study of how cultures differ has been developed by Trompenaars (1993) who identified seven dimensions of culture which are universalism-particularism, collectivism, individualism, neutral-emotional, diffuse-specific, achievement-aspiration, attitudes to time, and attitudes to the environment.

There is a growing interest in the studies on the culture of the construction industry, projects, and the effects of culture and cultural differences on construction. Hall (1999), investigated the links between cultural diversity and international construction activity from a British perspective. He found that British construction companies adopted an ethnocentric response to the cultural differences that they encountered when working overseas. Mahalingam et al., (2005) investigated which institutional or cultural differences had the most significant impacts on global projects. Liu and Fellows (1999), investigated the impact of culture on construction project goals. Several researchers conducted studies on the impact of cultural differences on management practices in construction such as quality management (Pheng and Alfelor, 2000), dispute resolution (Chan and Suen, 2005), and communication (Loosemore and Al Muslmani, 1999).

Previous studies and experiences in the construction industry showed that cultural differences have an impact on daily businesses, either negative or positive, of

construction enterprises working nationally or internationally. Cultural differences are therefore an issue which cannot be ignored in this industry and special attention should be given to the management of cultural differences.

2.4.8 Financial Management Skills

Local construction firms have very low financial reserves and use the profit from ongoing projects to finance their next projects; hence a loss in one project ultimately leads to a cash flow problem and liquidation (Stretton, 1984). This is exacerbated by the tendency for small scale construction firms in developing countries to take money out of the business for spending on personal items such as cars or a new house (ILO, 1987). Most indigenous contractors in Ghana are owner operated who also control the company financial matters. It is likely therefore, that project funds will sometimes be channeled into other personal matters which consequent financial strain to the projects.

In addition, delays in contractor payment caused by the cumbersome process of making contractor payments in the public sector create financial problems for the contractor. Unless well managed, this delay is very damaging to construction firms who are operating in a location remote from the client (Edmonds and Miles, 1984) like Wa.

2.4.9 Procurement problems

The procurement of construction work has predominantly followed the traditional approach. In this approach, the client engages separate organizations for the three key services of design, measurement and cost advice, and construction. The problems of traditional procurement can be summarized as follows:

- The need for the design to be fully developed before tenders are prepared leads to longer overall project duration, thus increasing project cost as the duration of the project increases.
- The ability to organize and control the work of nominated subcontractors is undermined by the nomination process, because such subcontractors usually have less loyalty to the contractor (or client) than to the architect who nominated them.
- The separation of design and construction tends to foster a 'them and us' attitude between designers and contractors thus reducing team spirit that is vital for project success.
- The traditional system has proved to be unsatisfactory for some large and complete projects, which require advanced management systems, structures and skills.
- The sequential nature of this system often results in lengthy design and construction periods, poor communication between clients and the project team (especially contractors), and problems of build ability.
- The facility of the traditional route to respond to late demands for change has been identified as one of the main causes of delay and increased cost.

Owing to these problems, alternative procurement strategies (such as Design and Build and partnering) have, and continue to evolve. However, there is no panacea - many of the alternatives have their particular 'problems'.

2.4.1.0 Design problems

Over-specification has been a problem for local construction firms for years, but the problem tends to become more acute at times of economic boom (Atkinson, 1995a). Reducing specification levels is not about cutting corners, but about cutting

out waste and unnecessary cost (*ibid.*). It has been suggested, that over-specification adds approximately fifteen per cent to the cost of construction work (D'Arcy, 1995).

Atkinson (1995) reported that many offices are designed to cope with sixty per cent have an unnecessary number of lifts, toilets and escape routes for the number of people in occupation; as well as the over-specification of lighting, small power and heating and ventilating systems. A comparative study between UK and US building costs in 1993 (Atkinson, 1995b), found that lower specification, more prefabrication, and greater reliance on standard components could lead to spectacular savings in the cost of construction. Similar situations could be recorded here in Ghana especially in the Wa Municipality.

2.4.1.1 Absenteeism of Labour

Absenteeism can create enormous problems for the construction industry, seriously affecting planning by reducing the effectiveness of teamwork and output, and by causing plant and machinery to stand idle (Burch, 1992; Lim and Alum, 1995). Lim and Alum (1995) further reported that each one per cent increase in absenteeism causes an increase in labour cost of 1.5 per cent. Hence, reducing absenteeism can lead to reduced labour cost. Furthermore, D'Arcy (1995b) noted that absenteeism accounts for a loss of 5 - 15 per cent of available work-time on site.

2.4.1.2 Technological problems

Traditionally, due to its labor-intensive nature, the use of plant and machinery in the construction industry has been less than that used in manufacturing. Nevertheless, there has been an underlying trend towards a greater use of equipment in construction.

The scale of modern construction work and the demand for shorter construction times, make the extensive (efficient) use of equipment essential. Equipment down-time needs to be minimized to ensure that the return on its investment is achieved.

However, the amount of time that plant is unused can be as much as 90 per cent. This low plant utilization places a capital burden on the contractor, and it is commonplace in the construction industry. Plant utilization cannot be ignored if contractors are to reduce construction costs (Kingston, 1995).

2.5.1 Dealing with Communication Problems in the Construction Industry

According to BRE (2011), most defects in the construction industry is as the result of poor communication. For example, a poorly detailed drawing, operatives being given incorrect instructions or technical information not being available.

Communication within the construction industry in Ghana is broad and could involve a lot of work. The researcher sought to find out how efficient communication in the Construction industry in Ghana could be generated between the major key players in the industry: construction firms, contractors, consultants and clients.

The right to communication is a basic human right, which points to every human being's basic need to express what he or she thinks about any matter (Affare, 2012). It is essential to that morality of inter-subjectivity whose prime characteristic is the relationship and also sets freedom, equality, and solidarity above all else (Affare, 2012). Since all democratic relationships presuppose interactions that are mutual, there can be no relationship without dialogue. To enter into relationships, to establish communities, to survive, people must communicate. Genuine communication is therefore a basic human need like food, clothing and shelter (Fisher and Harms,

1983). Individual members within a group of professionals therefore need to communicate with each other in order to accomplish their production and social functions within the organizations.

There are various ways and methods of communicating information in the construction industry. Although a vast majority of information is exchanged verbally and delegated, most data is exchanged in written format either as hard copy or electronically. Even if information is exchanged verbally such as through project meetings and instructions, this information is well documented and stored for future reference. Scope of work and details of construction are communicated by means of drawings, contract documents, addenda and specifications (Maslej, 2006). Contracts are commonly issued when one entity passes down work to another: for example, when an owner hires a consultant or designer they form a contractual relationship by means of signed contract. Same is true when a consultant, on behalf of the owner, hires a general contractor to execute the work designed by the consultant. The contractor may wish to sub-contract some of his work to subcontractors in which case, again a contractual relationship is formed. Unfortunately, miscommunication is a common occurrence in construction when work is passed down from one entity to another (Maslej, 2006).

For ease of classification, the forms and methods of communication in the construction industry are outlined below (Mehra, 2009);

- 1) Formal Writing – This takes the form of Project Plan, Project charter, Specifications, Reports, Metrics etc.
- 2) Formal Verbal – Presentation and speeches fall under this category \
- 3) Informal Writing – Examples of informal written methods of communication include memos, e-mail, notes, etc.

4) Informal verbal - Meetings, stakeholders and conversations are categorized under informal verbal method.

5) Nonverbal Messages – These are conveyed through our facial expressions as well as our postures and gestures and account for about 55% of what is perceived and understood by others.

6) Para-verbal Messages – These include the tone, pitch, and pacing of our voice and account for about 38% of what is perceived and understood by others.

Effective communication is a two-way process which involves active listening and reflects the accountability of speaker and listener. It also utilizes feedback to confirm understanding which makes it free of stress.

2.5.1.1 Interpersonal Communication in the Construction Industry

There exist numerous studies that have paid attention to the lack of effective communication in the construction industry (Emerson, 1962; Banwell 1964; Latham, 1994; Egan, 1998, 2002). Communication carries a special importance within the industry as a result of its project-based structure. Given that construction is such a fragmented, dynamic and disparate sector, effective communication becomes essential “for the successful delivery of performance goals (productivity, profitability and repeat working opportunities” (Dainty et al., 2006).

Interpersonal communication in construction projects takes three forms: oral, written (or graphic), and nonverbal communication. Oral communication refers to sending messages by using common spoken symbols. It includes face-to-face, telephone, meetings, and presentations. In a project environment, it is the appropriate medium for “timely exchange of information, rapid feedback, immediate synthesis of message, and timely closure” Carlsson et al., (2001). Written communication includes

e-mails, fax, memos, letters, reports, plans (strategic and tactical), legal documents and other forms of information to be transmitted. Writing bid proposals, progress reports, training manuals etc. is an important part of management of construction projects. Jergeas and Hartman (1994), suggested keeping good records and communications in order to avoid claims and disputes in construction projects. Gorse et al., (1999), investigated interpersonal communication behavior between designers and contractors during the construction phase of projects. Their findings reveal that informal approaches such as face-to-face are perceived to be the most effective medium of communication within the industry. Their results are also supported by Carlsson et.al. (2001), who conducted communication research within the Swedish construction industry. Carlsson et.al, (2001), argue that “barriers to effective communication are likely to be broken down by more integrated project delivery systems. In their study, Shohet and Frydman (2003), identified effective patterns of communication at the construction manager level in projects delivered by construction management procurement protocol in Israel. They found that verbal communication continues to be highly important in ensuring adherence to project objectives. Furthermore, Culp and Smith (2001), argue that personality type plays an important role in determining the success of interpersonal communication.

2.5.2 Ensuring Efficient Cash Flow

The study of construction project cash flow became increasingly popular in the 1970s and 1980s (Kenley and Wilson, 1986). While the importance of financial or cash flow management is normally discussed with reference to the company level, most of the models for cash flow forecasting are individually developed for specific project types (Navon, 1995).

Some developments applied logit transformation regression procedures in attempts to understand cash flow (Kenley, 1986; Kenley and Wilson, 1986). Kenley and Wilson (1986) concluded that forecasts of individual cash flows are invalid when derived from analysis of grouped data. Kenley (1986) investigated the cumulative gross cash flow profiles (S curves) and the cumulative net cash flow profiles of construction project cash flows. Kenley and Wilson (1989) proposed a construction project net cash flow model to provide a measure of a project's net cash flow trend over time.

In further developments, a stochastic model was used to simulate the levels of working capital available within a building firm, utilizing specific techniques for the management of cash flow on a large and systematic scale (Kenley, 1999). He concluded that careful management of cash flow through operations can yield a significant contribution to working capital.

2.5.2.1 Forecasting

There are numerous techniques for cash flow forecasting, differing in their levels of accuracy and detail, the degree of automation in compiling them, the method they use to integrate the time and the money elements, etc. Some of the techniques are probabilistic, but most are deterministic (Navon, 1995). The majority of models developed to assist in cash flow forecasts have been based on standard cost flow Scurves, developed using past construction projects (Boussabaine and Kaka, 1998, Boussabaine and Elhag 1999).

The accuracy of a cash flow forecast generated from standard cost curves depends on whether the adopted S-curve accurately represents the project to be constructed (Boussabaine and Kaka 1998).

Kaka and Price (1991) tested the reliability of a net cash flow model based on cost commitment curves. Skitmore (1992) attempted to predict the best parameter values of the models for cash flow forecasting. Navon (1995) discussed different approaches and models for project level cash flow forecasting. Kaka (1996) demonstrated that by merging further variables, the flexibility and reliability of cash flow forecasting are enhanced. Boussabaine and Kaka (1998) investigated the feasibility of using neural networks to predict the cost flow of construction projects. Boussabaine and Elhag (1999) presented an alternative approach to cash flow analysis for construction projects (fuzzy cash flow analysis). These developments prove the importance of cash flow forecasting, and show that companies should pay more attention to this issue.

2.5.2 Dealing with the issue of Contracts

The relationship between the contractor and the client is governed by the contract itself (Miles, 1996). A contract can be simply defined as an agreement between two or more parties which is intended to be legally binding (Miles, 1980). It apportions responsibility and apportions risk between the parties. Standard contracts have obvious advantages, in that the clauses have been tried and tested over the years, so their interpretation becomes easier and there is less need to become involved in costly litigation.

The most common international standard contract is that issued by the Federation Internationale des Ingenieurs Conseil (FIDIC). The conditions do at least recognize that there are different circumstances in different areas of the world, and there is some scope for modification to meet these. The first part, the general conditions, is designed to be “general” and should not be modified. The second parts,

the conditions of particular application, are specifically written for each contract, and sample clauses are provided to guide the user in tailoring their use to each specific situation.

On large projects where the responsibilities are onerous and the risks are great, detailed FIDIC contracts are needed and well justified (Miles, 1980). On small jobs executed by labour-based contractors, it is open to question whether complex contracts are really needed to protect a relatively wealthy and powerful client from a relatively poor and weak small entrepreneur.

Although verbal contracts of this kind can valid in law, they are usually too elementary to provide any kind of protection to the parties if things go wrong (Boussabaine and Elhag (1999)). However, it is worth showing that there is a spectrum of contractual complexity that is appropriate in any given case. Indeed, for those who accept the logic of Fritz Schumacher's argument that in development terms "small is beautiful", there is no reason why the principle should not be extended to designing small and simple (if not necessarily beautiful!) contract documents (Boussabaine and Elhag (1999)).

This leads to the proposition that the ideal contract document in any given case would be the simplest formulation that will permit effective accountability (Miles, 1980). It is also worth noting that clients are able to safeguard themselves in a variety of non-contractual ways, such as pre-qualification of acceptable firms or individuals with good track record and a refusal to sanction payment for unsatisfactory work. The likelihood of a small construction firm attempting to obtain legal redress against a public sector client is remote, even where the construction firm has a good case in law.

2.5.3 Effective Financial Management within the Construction Industry

In all businesses, financial statements are important for reflecting the financial health of a company (Tang, 2012). The construction industry is without exception. According to Tang (2012), two financial statements are most important for the construction firm; income statement (profit and loss account) and balance sheet. With respect to Tang's view, every construction firm (small, medium and large) needs efficient financial statements to enable these firms work effectively.

Tang (2012) believes that an „income statement“ shows the profit made or the loss incurred by the construction firm in a period of time (usually one year), and hence the name „profit and loss account“. The income statement shows the company's revenue, costs and other expenses including interest payment on loan (if any) and the income tax paid on projects completed. According to Tang (2012), the main purpose of the income statement is to show whether or not a company's business is profitable. Tang (2012) however proposed the use of the balance sheet by construction firms. In his opinion, the balance sheet shows a company's financial position as at a point of time (usually the last date of the company's fiscal year), like a snapshot picture of the company's financial situation at a particular time. The major items covered on the balance sheet include:

- **Assets**

Assets are classified as current assets and fixed assets. Assets represent what a company owns, and are usually presented at the top of a balance sheet. Current assets of a construction firm are usually cash, accounts receivable, construction material inventory etc. which have high liquidity (i.e. can be turned into cash easily). Fixed assets of a construction company are usually property and equipment, construction plant, trucks etc. which cannot be readily turned into cash in a short time. Fixed assets

are also known as Long-term assets. Total assets are a summation of fixed assets and current assets.

- **Liabilities**

According to Tang (2012), liabilities are usually presented at the middle part of the balance sheet. Liabilities are categorised as current liabilities and long-term liabilities. Current liabilities of a construction company include bank overdraft and short term bank loan, accounts payable to subcontractors, suppliers and employers, rents, utilities etc. They are debts the company has to pay, say, within a year. Long-term liabilities, however, are obligations with a period more than one year, usually a few years or even longer. They often refer to long-term bank loans or loans for mortgages of equipment, building, land, or even cars/trucks. These long-term debts are usually repaid by instalments.

- **Equity (net worth)**

Equity refers to the capital invested by the owner(s) of the construction firm. Equity in the construction arena is sometimes referred to as stockholders equity because most construction firms are owned by stockholders (Tang, 2012). Equity represents the net worth of the firm, and can be calculated by summing up the capital the owners have invested and the profits that have been accumulated (after deducting all the dividends paid so far to the owners) and retained up to the present moment since the business began.

In this regard the researcher believes all local construction firms should get for themselves an efficient finance section to take care of all transactions the firm is involved in. This will go a long way to ensure an appropriate financial management for the firm.

2.5.4 Punctuality in the Construction Industry

According to Marawar (2013), every construction firm needs a performance appraisal system to monitor employees' abilities and further growth within the firm.

Marawar (2013) believes performance appraisal is generally done in systematic ways which are as follows:

- The supervisors measure the pay of employees and compare it with targets and plans.
- The supervisor analyses the factors behind work performances of employees.
- The employers are in position to guide the employees for a better performance.

In Marawar's view performance appraisal serves the following functions for the construction firm:

- To maintain records in order to determine compensation packages, wage structure, salaries raises, etc.
- To identify the strengths and weaknesses of employees to place right men on right job.
- To maintain and assess the potential present in a person for further growth and development.
- To provide a feedback to employees regarding their performance and related status.
- To provide a feedback to employees regarding their performance and related status.
- It serves as a basis for influencing working habits of the employees.

- To review and retain the promotional and other training programs.

Characteristics of Performance Appraisal

According to Marawar (2013), all performance appraisal programs have the following characteristics:

1. Outside Judgment- Using the performance standards, each employee's individual actual work performance, behaviors, production, or traits are compared with the performance standards by someone other than the employee.
2. Specified Time Period- Employee ratings, judgments, and assessments relate to a specific time period rather than a particular work product or project (typically quarterly and/or annually).
3. Standardization- The process is systematically applied to all employees or class of employees.
4. Mandatory- The process is typically mandatory although certain upper-level executives may be excluded.
5. Documented- The results of the ratings, judgments, or assessments are recorded and preserved by someone in the organization other than the rated employee.

Factors Considered for Performance Appraisal

Miles (2003) believes the following factors should be considered when developing an effective performance appraisal system:

- **Performance Factor**

Miles (2003) believes an in-depth Job Knowledge, i.e. knowledge of duties and responsibilities of position as well as Quantity of Work (amount of work done during

workday) and an employee's Initiative (origination and development of vital job procedures) can be considered as an integral factor of a person's performance.

- **Behavioral Factor**

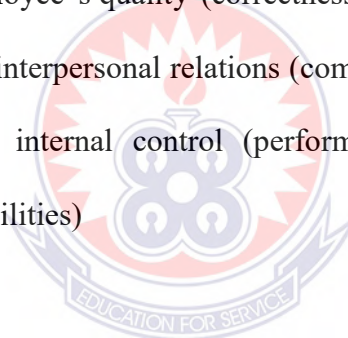
The behavioral factor encompasses an employee's sense of Responsibility and Dependability (willingness to take on assignments and be held accountable), and attendance and punctuality (conformity to work hours; timely attendance at meetings).

- **Grading System**

This encompasses an employee's effective use of time (ability to organize, prioritize and schedule)

- **Personal Effectiveness**

This include an employee's quality (correctness, completeness, and accuracy of work duties performed), interpersonal relations (communication and cooperation with fellow employees), and internal control (performance as related to individual's internal control responsibilities)



2.5.5 Managing the issue of Culture in the Construction Industry

Culture has the potential to impact on business activities. The importance of culture and national cultural differences has become more critical especially for companies operating in international markets or having employees from different cultures. Thus, companies have to consider the cultural concepts in their daily businesses to operate successfully in the global marketplace.

Culture and cultural differences are important issues for every organization in every industry. As Ankrah and Proverbs (2004) stated, these concepts become more critical in construction due to the nature of contracting, internationalization of procurement, joint venturing, and partnering in this industry. Like in other industries,

the increase in strategic alliances in construction also increases the significance of cultural differences due to the interaction of people from different cultures (Shore and Cross 2005).

Successfully managing cultural differences can enhance organisational effectiveness and give an organisation a strong competitive advantage. On the other hand, failure to manage cultural differences can cause serious problems such as delay of construction and decrease in productivity. Therefore, in order for a project to be successful, understanding and managing cultural differences in this industry is becoming an increasingly important topic especially in international construction projects which involve participants from different cultural backgrounds.

2.6 Conceptual Framework of the Study

It became evident throughout the literature that for various factors contribute to the poor performance of local construction firms in the country. Various problems such as cash overflow, financial management issues, issue of communication, procurement problems were the major factors that contributed to poor performance of construction firms.

The researcher thence drew the concept of ensuring that contractual terms for local construction firms are up to standard and thus a good communication process between the client and the construction firm could go a long to ensuring adequate performance of the construction firm.

However, much as it is integral that punctuality is ensured within employees of construction firms, they should equip themselves with good financial managers to manage their finances so as to ensure good profit margins for the construction firm.

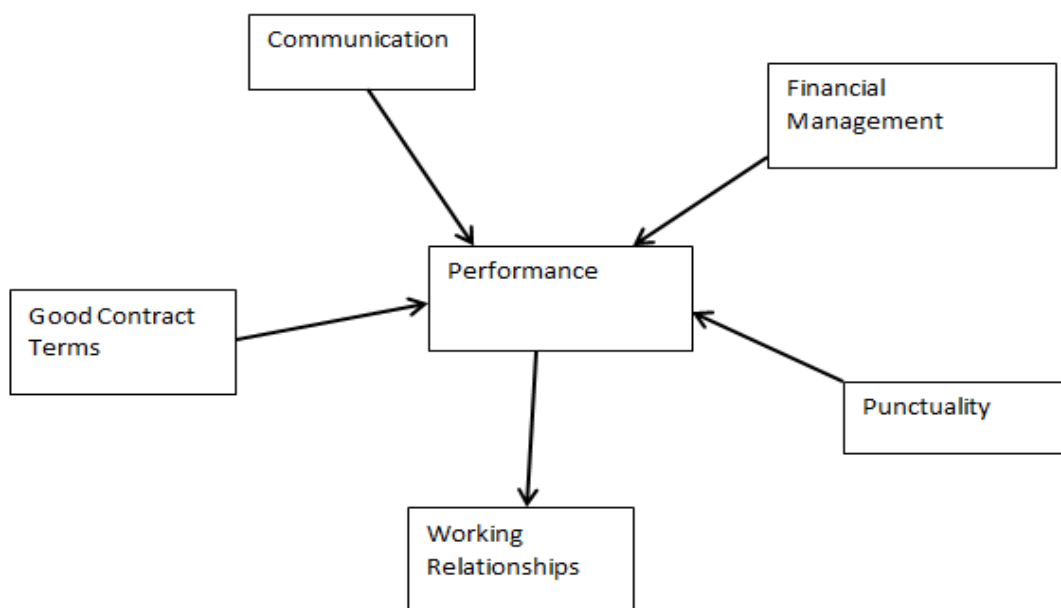


Figure 1: Conceptual Framework of the Study

(Source: Author)



CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter discusses the methods and procedures used in collecting data for the study. It involves the description of the research design, the targeted population, sample and sampling techniques, instruments used, data collection procedure and data analysis plan.

3.1 Study area

The study area is the Wa Municipality, specifically the Wa Township of the Upper West Region of Ghana. It was elevated to Municipal status in 2004 as part of the government's decentralization programme in bringing governance to the door steps of the ordinary people. The Wa Municipality is located in the southern part of the region and shares boundaries with the Wa – West District to the West, Wa – East district to the East and south, and the Nadoli District to the North. Most of the people in the study area are peasant farmers and traders. The population is heterogeneous, comprising Sissalas, Walas, Dagaabas, moshies, etc. etc and with a very low level of education in the Municipality. Basically, the agricultural sector supports the major economic activities of the Municipality and employs about 66.6% of the labour force. The major food crops grown in the area are millet, sorghum (guinea corn), maize, groundnuts, cowpea and yam. Cash crops such as cotton, shea-nut and dawadawa are also found in the area.

The regional Hospital, supported by three other known health centers (the Ahmadiyya, Islamic and Lotchu clinic) are the only health facilities found within the study area.

The development of the Wa Municipality is saddled with lack of funds and high rate of illiteracy to deal with when it comes to the collection of revenue for the Assembly. Sanitation facilities in the Municipality are steel very poor and Malaria continues to be a major disease in the area. Floods are the recent problems that besiege the area, simply because of the erection of illegal structures on water ways and violation of building regulations (GSS, 2014).

3.2 Research Design

This study considers the use of the mixed method research technique. Mixed method research is an approach to inquiry that combines or associates both qualitative and quantitative forms. It involves philosophical assumptions, the use of qualitative and quantitative approaches, and the mixing of both approaches in a study. Thus, it is more than simply collecting and analyzing both kinds of data; it also involves the use of both approaches in tandem so that the overall strength of a study is greater than either qualitative or quantitative research (Creswell & Plano Clark, 2007).

3.3 Population of the Study

The population of the study comprised of all construction firms within the Wa Municipality. There are about 16 registered construction firms in the Municipality (Ministry of Works and Housing, 2015).

3.4 Sampling Techniques and Sample Size

The researcher by the use of the judgmental sampling and simple random sampling techniques selected all construction firms within the Municipality. The researcher's choice is based on the fact that these construction firms are in close proximity to the home of the researcher; however these firms provided the data needed to make efficient generalizations for the study. The sample population was derived by the collation of list of construction and consultancy firms. The judgmental and simple random sampling techniques were used to select the sample of 80 respondents for the study. The judgmental sampling technique was used to pinpoint various construction and consultancy firms with the simple random technique used to select five (5) respondents each from various construction and consultancy firms. There were on the average 12 workers in each construction and consultancy firm. The researcher employed the lottery method of random sampling where numbers 1 up to 13 corresponding to respondents' names were written on pieces of papers and thoroughly mixed for respondents to pick. Workers who picked odd numbers were then selected into the sample. This technique was employed so that each worker had equal chance of being selected into the sample. The sample size obtained was 80.

3.5 Research Instrument

The instrument that the researcher employed for data collection is a set of questionnaires and interviews.

3.5.1 Questionnaire

The use of questionnaires promises a wider coverage since researchers can approach respondents more easily than other methods (Amehahe, 2002).

Questionnaires also provide a sense of uniformity since questionnaires are consistent without variation during data collection.

The set of questionnaire will elicit responses in closed-ended form. The questionnaire was divided into four sections: A, B, C and D. Section A contain data about respondent profile. Section B elicits data on the performance of local construction firms in the country. Section C deals with respondents' view on the effect of government policies and attitudes of construction firms on the performance of local construction firms. Finally, Section D also elicit data on how well various factors that affect the performance of local construction firms can be curtailed.

The revised four point Likert rating scale of Strongly Agree (SA), Agree (A), Neutral, Strongly Disagree (SD) and Disagree (D) were adopted for the study. All items are considered of approximately equal "attitude value" to which participants responded with degree, or intensity of satisfaction and disaffection.

3.5.2 Interview

Interview was another instrument used to collect data for the analysis. The researcher used a semi – structured interview guide. The interview technique was employed because it gives a richer feedback and also helped the researcher to probe further (Yin, 2003). The author maintains that, interview also helps researchers to keep the interviewee on track by guiding him/her to answer the questions. In all, Masons, Steel benders and Electricians in the various local firms in the Wa municipality were interviewed. The interviewees were carefully selected and the interview lasted for about forty – five (45) minutes.

3.5.3 Observation

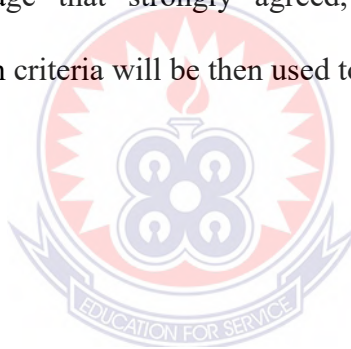
In soliciting for information about causes of low performance of local construction firms in the Wa Municipality, the researcher made a personal and careful observation to assess the performance of construction projects undertaken by local construction firms in the Municipality. The observation was made at “Kperisi”, and „Charia“ all in the Wa Municipality. At Kperisi the researcher observed the work performance of a recently commissioned ultra – modern market with an abattoir and a separate toilet facility which were all undertaken by different local construction firms. At Charia, the researcher observed the performance state of a 6 unit classroom block for Charia M/A basic „B“ primary school, Junior High School buildings and Teachers Bungalows which were all undertaken by local construction firms. The researcher did critical analysis, taking photograph of situation, noting down points and sometimes interacted with the portent under study.

3.6 Data Collection Procedure

The questionnaire was administered by the researcher. The researcher explains the purpose of the study to the Managers of various construction firms. They were made to understand that all information being provided would be treated with confidentiality and used for the purpose of research only. It took the researcher two weeks to administer and collect the questionnaire, due to the geographical location of the area. The researcher will use Cronbach Alpha reliability test to test the reliability of the questionnaire items.

3.7 Data Analysis Procedure

In relation to the related research questions and the items displayed in the questionnaire, descriptive statistics were used to analyse the questions. The results will be presented in percentages, and tables to display the data. Tables with frequencies and percentages will be used to ensure that the issues were made clear to give visual impression on values without necessarily reading long sentences and also to help in the discussion and interpretation of the data collected. The data will be coded and SPSS computer software will be employed to do the analysis accordingly. The appropriate numbers for each datum will be placed in the appropriate data file for the analysis. Summaries of all responses under each item will then be given, thus illustrating the percentage that strongly agreed, agreed, disagreed or strongly disagreed. The evaluation criteria will be then used to make value judgment.



CHAPTER FOUR

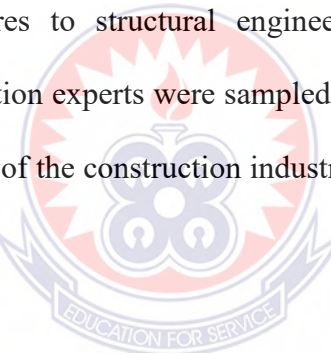
RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the results and discussion as obtained from questionnaires, interviews and observations.

4.2 Results and Discussion of Questionnaire

One of the major data collection instrument used for soliciting data was questionnaire. The data solicited was analyzed and presented. In all, the researcher administered questionnaires to structural engineers, quantity surveyors and site engineers. These construction experts were sampled for the fact that they form part of the consulting department of the construction industry and for that know the insight of construction performance.



Response Rate

A total of eighty (80) questionnaires were administered, out of which seventy – one (71) were completed and returned. The response rate was (88%) percent which was good for a construction research survey.

Demographic Characteristics of Respondents.

The researcher sampled seventy – one (71) participants for the purpose of this research. The demographic characteristics of these participants are presented in Table 4.1.

Table 4.1: Demographic profile of participant

Demographics	Frequency	
	n	%
Gender		
Female	11	15.0
Male	60	85.0
Age		
18 – 25 years	15	21.1
26 – 33 years	11	15.5
34 – 41 years	20	28.2
42 years and above	25	35.2
Educational qualification		
Basic	13	18.3
Secondary	16	22.5
CTC I and II	20	28.2
Tertiary	22	31.0
Years of practice		
1 – 5 years	15	21.1
6 – 10 years	19	26.8
11 – 15 years	11	15.5
16 years and above	26	36.6
Number of employees (permanent)		
Below 5	5	7.0
6 – 10	30	42.3
11 – 15	17	24.0
16 – 20	11	15.5
21 and above	8	11.2

N=71 (Source: Field Survey, 2016)

The results in Table 1 shows that of the seventy - one participants sampled for the purpose of this project, 15% of them were female whilst 85% were male participants. This gave a fair idea of the construction industry as a male dominated industry. The 15% female representative was clients and probably some of the unskilled labors. Table 1 further shows that more than one – fourth (36.6%) were participants who aged 33 or younger. However, majority of the participants (63.4%) reported to aged 34 years or older. Taking into account the level of education of these participants, a little more than one – fifth (22.5%) were secondary school certificate holders. More than half (59.2%) reported to have either attained their tertiary level

certificate or holds a CTC level of education whereas and (18.3%) basic school certificate holders.

An investigation into the number of years of these professionals had been in their respective professions revealed that, almost half of the respondents (47.9%) had been in their profession for 10 years or lesser. Again, about 15%, reported to be in their profession for between 11 and 15 years. Participants who reported to have been in the practice for 16 years or more constituted about 36.6%. This suggests that the respondents were really on the field of construction and therefore the information provided will help to ascertain the purpose of this research. Their experience in the construction industry will also contribute to accuracy of information provided.

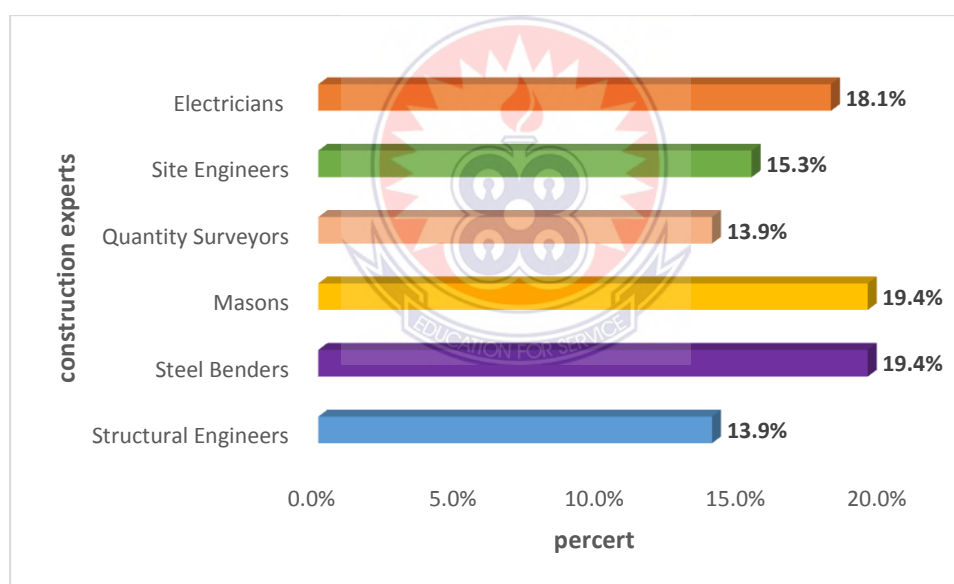


Figure 4.1 Classification of construction experts
(Source: Field Survey, 2016)

Presented in Figure 1 is the classification of construction experts sampled for the study. The information in the Figure 1 shows that 18.1% of the construction experts were electricians where as the site engineers constitutes 15.3% of the total respondents. Again the outcome revealed that there were 13.9% each of quantity surveyors and structural engineers. Information in figure 1 final shows that, Masons

and Steel benders sampled for the study constitute 19.4% each. These construction professionals were sampled for this study for the fact that almost all construction projects needed these experts at one point in time. They therefore stand high in providing the necessary information needed as far as this study was concerned. This is because they have worked on so many projects and know why some firms were performing better and why others performing poorly.

Construction firm's Registration

In assessing the causes of the low performance of local construction firms in the Wa Municipality, the researcher sought to find out the registration categories of the construction firms in the Municipality. This was to find out the firm's financial standings as well as their technical expertise. The outcome is presented in Figure 2

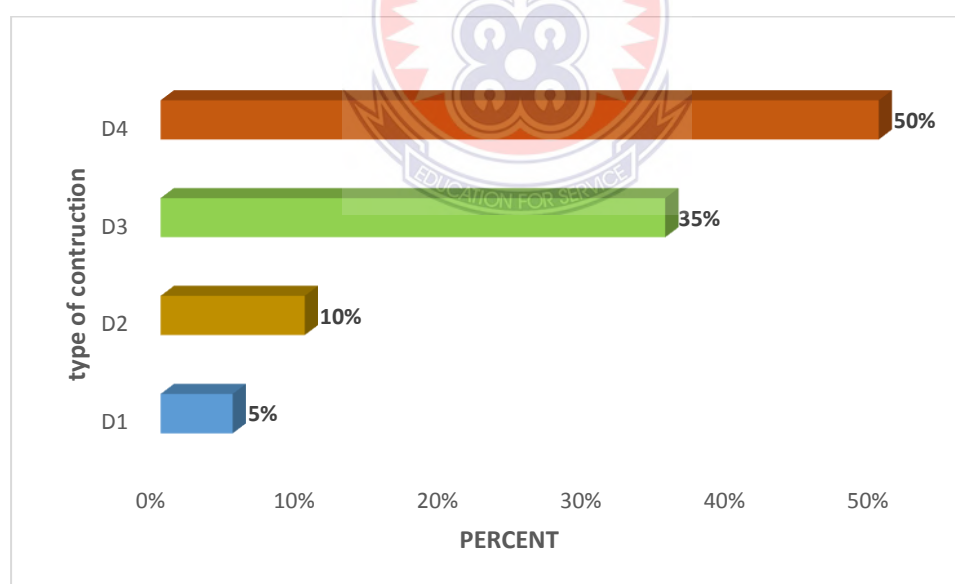


Figure 4.2: Construction Classification in Wa municipality

(Source: Field Survey, 2016)

The results revealed that exactly half (50%) of the construction firms were registered under the category D4. Furthermore (35%) were reported to be registered under the D3 category. The category D2 and category D1 constitutes 10% and 5%

respectively. This suggests that about 85% of the total registered building construction firms in the Wa Municipality were firms considered as small scale firms where as 15% of the construction firms were also considered as large firms. These firms were therefore considered to perform much better considering the circumstances such as their financial standings, plant equipment holding, prior enactment as well as their technical capability they offer that led in their classification registration.

Awareness of performance Measurement

In respect to the report given by the respondents as majority of the construction firms are registered under the small scale category, the researcher further investigated into the level of awareness of performance measurement in these construction firms and also found out if they perform performance measurement on projects awarded to them. Figure 4.3

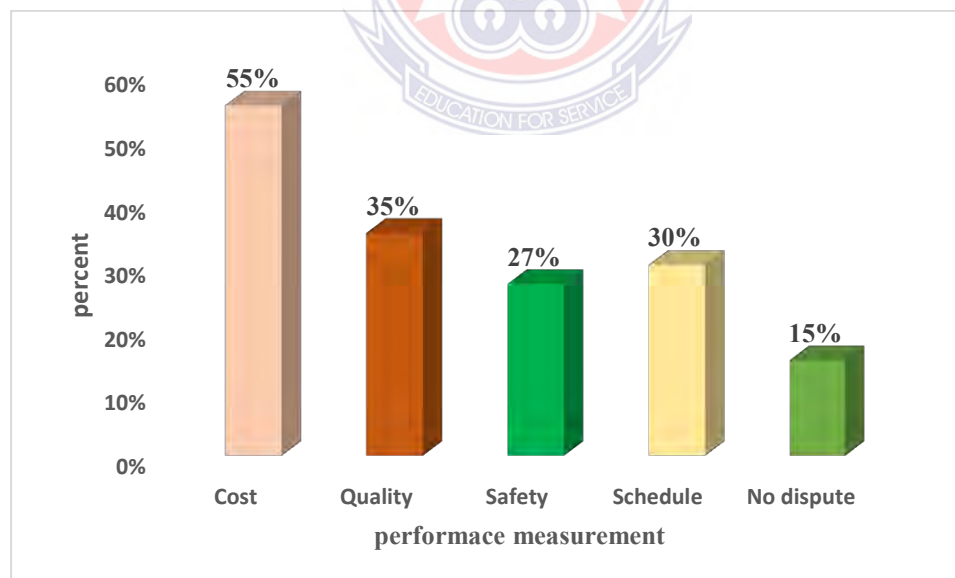


Figure 4.3: Performance measurement of local construction firms

(Source: Field Survey, 2016)

On the awareness of the performance measurement, more than 4 out of 5 (93%) of the firms reported that they were aware of performance measurement in the

construction industry. Their higher level of awareness might be attributed to their high level of education and/or the number of years they have been in the profession.

A further investigation to find out if their high level of awareness would reflect their performance measurement on projects awarded to them revealed that, in spite of the higher awareness of performance measurement on projects, construction firms hardly perform performance measurement on projects. For instances, a little more than half (55%) reported that their firms perform performance measurement on cost of projects awarded to them. Furthermore, less than 2 out of 5 (35%) were also of the view that they carried out performance measurement on quality of the project awarded. However, 27% of these small scale firms performs performance measurement on safety of the projects. On duration schedule of the project, (30%) of the firms responded to perform performance measurement. Moreover, on land dispute issues, as well as no-dispute over the project (15%) of the construction firms in the Wa Municipality considered taking performance measurement. This suggests that even with the higher level of awareness of performance measurement by these small scale firms, most of the performance measurement are not carried out. Hence their low performance in projects being awarded to them. Moreover, even if performance measurement were carried out, the researcher is of the view that it was not properly carried out. This has contributed to expatriates construction firms winning most of the major contracts. This confirms Verma (2010) opinion that expatriate contractors perform better than their indigenous counterparts due to the quality of performance. Ofori (1984) also points out that local construction firms in the Northern Region of Ghana were only interested in winning bids without considering performing most of performance analysis. As a result most sub – contracts were awarded them instead of major construction projects.

Available equipment in the construction firms

The accessibility of equipment in a firm, its fiscal eminences as well as the pedantic know - how it can offer were among the innumerable guidelines considered in registering construction firms under different categories. The researcher therefore sought to find out the available equipment in the local construction firms. Figure 4.4

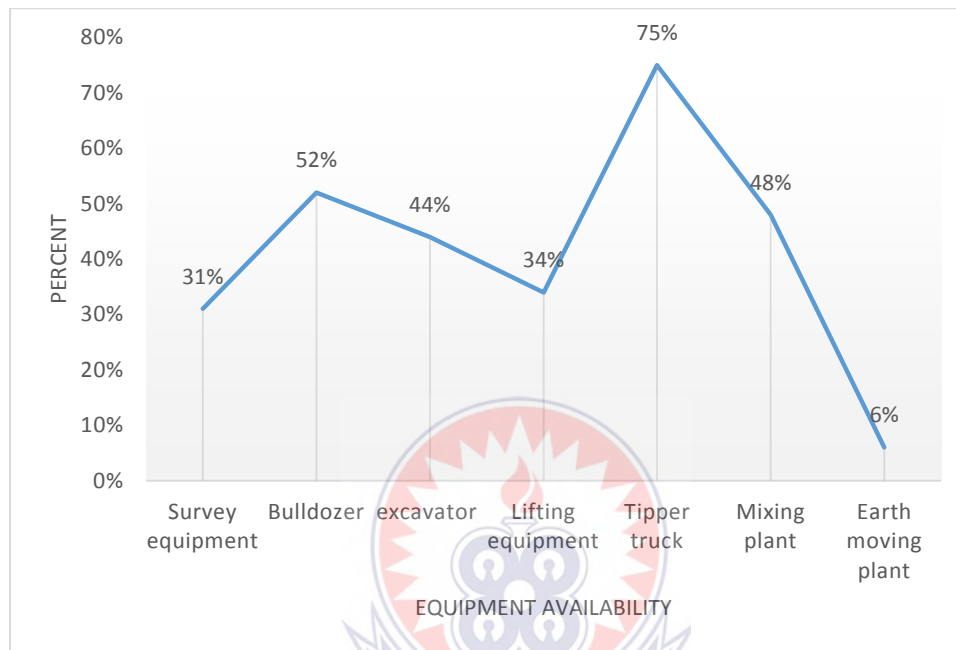


Figure 4.4: Equipment availability in local construction firms

(Source: Field Survey, 2016)

The repercussion in Figure 4.4 revealed that, most of the local construction firms in the Wa Municipality (75%) had tipper trucks for their project business. On issues of survey equipment, about 31% reported to have such machines in their firms. A further investigation proved that more than half (52%) had bulldozers in their firms. The number of firms which reported to have excavators were more than 2 out of 5 (44%). Furthermore, 34% and 48% of the local construction firms reported to have lifting equipment and earth moving equipment respectively in their firms. This suggests that availability of equipment that might speed the level of work were traumatically inadequate. The financial standings of these firms were therefore

awfully insignificant. Firms could not afford to buy the necessary equipment for the enhancement and quality of their work. Perhaps most of these construction firms would have to hire this equipment whenever they were awarded a contract. The cost of hiring these equipment coupled with low technical expertise constitutes to most delays of work as schedule. Again the quality of work is also compromise. Projects been awarded to local construction firms sometimes attracts reworks when indeed it has not even reached anywhere. For instance Wa L/A JHS Block „B“ which was awarded to a local contractor in April 2010 and completed in August 2012 has its roofing ripped off following a down pour in October 2012. The contractor was called to repair the roofing. The firm will probably incur an addition cost which was not budgeted. The above analysis proves that the performance local constructions firms in the Wa Municipal were soothing.

4.2.1 Results and Discussion of Questionnaire from Structural Engineers

Among the construction experts sampled for the survey were Structural Engineers. The researcher therefore sought to find out the views of Structural Engineers the causes of low performance of local construction firms. Table 4.2

Table 4.2: Structural Engineers perceived causes of low performance of local construction firms

Causes of low performance	Percent	Mean	SD	Rank
Non – adherence to measures and specification	60.0	4.40	.572	1 st
Unnecessary pressure from clients	90.0	4.02	.789	2 nd
High cost of construction equipment	80.0	4.00	.605	3 rd
Late payment of payment certificate	80.0	3.94	.770	4 th
Constant equipment breakdown	70.0	3.65	1.332	5 th
Lack of skilled Labour	50.0	3.00	1.112	6 th
Short delivery time in contract document	70.0	2.54	1.010	7 th

N=10 (Source: Field Survey, 2016)

Structural engineers view pertaining to causes of low performance of local construction firms is presented in Table 2. The respondents were particularly concerned about seven severe causes of the low performance of the local construction firms.

Firstly, the respondents (60%) were most concerned about non – adherence to measures and specifications ($M=4.40$, $SD=.572$). they reported that, structural engineers and architects as their responsibilities design and specify all specification from foundation to roofing of a building project for the sustainability of the project. However, for the sake of making extra profit, and improper cost benefit analysis, contractors do not stick to original specifications and measurements. As a result different and unreliable measures are used which eventually compromises the quality of the project in question there by resulting poor performance. In Ahazie (1995), he argues that the sustainability of a construction project depends on the use of correct specifications and measurements. Barrett (1995) further argues that, specifications and measurements of a structural design of a project is the sole pillar of the project hence non- adherence would jeopardize the project there by compromising the quality of work of construction firm in question. Abeysekera (2002) also confirms that, adhering to project specification by structural engineer, was a benchmark of a reliable construction firm

The quality and quantity of labor supply can have major impact on the projects. About 60% of the workers in the local construction industry are unskilled workers. The wages given them were not sufficient as compared to the skilled labors. These workers at times leave construction sites at any time and never come back. As a result, their work quality is relatively low when compared to local laborers. The low quality and productivity of the unskilled laborers have impact on the project progress

and efficiency. Their unannounced departure causes shortage of labor pool in the construction industry. This affects a project in progress subsequently affecting its performance. Furthermore, unnecessary pressure from clients ($M=4.02$, $SD=.759$) was also considered as one of the major cause of local construction firms low performance. Clients sometimes mount unnecessary pressure on the firm contracted to construct a project. Even though, there was a stipulated time of commencement and delivery in the contract document, clients especially real estate's companies and the government for the sake of fulfilling a campaign promise as a daily routine mount pressure on the construction firms. To absorb all these unnecessary pressure, firms sometimes use inferior materials and also decrease the desired quantity of materials for the project for early completion. The result of such decision was compromising the quality of work delivery which eventually affects the performance of the firm since one of the major criteria for winning a bid was evidence of previous work done. Affare (2012) confirms this finding that a six Unit school block which commenced, completed and commissioned within 6 months at Kalungu in the Upper – west region due to pressure from government officials to fulfil their campaign promise, had peeled off paints, screed floor and ripped off roofing sheets. Mehra (2009) however disagree that pressure from clients causes poor performance. They argued that clients lack both technical and theoretical know how on the projects. Therefore it was the contractor and the consultant who were to give technical advice to the client as the implication of the decision he/she was taking. Therefore the client cannot be blame for pressuring, and pressure cannot necessary lead to poor performance but other factors.

More so, Table 2 further disclosed that high cost of construction equipment ($M=4.00$, $SD=.605$) was rated among the major contributors of low performance of local construction firms in the Wa municipality. Due to the small scale nature, most of

the local construction firms could not purchase their own construction equipment. As a result, many of the contractors do not own equipment that are required for the construction work. They rent the equipment when required. During the season when there are many construction projects, the equipment's were in short supply and are poorly maintained. This leads to failure of the equipment's causing the progress to be hampered. Moreover, the prices for hiring those equipment increases when there was high demand. Local firms for the sake of making profit and meeting the time for the hired equipment, hurriedly go about their duties resulting to poor work done and hence poor performance.

Furthermore, delays in payments by clients ($M=3.94$, $SD=.770$) was ranked 4th among the major causes of local construction firm's low performance. Construction works involve colossal sums of money and most of the contractors find it very difficult to bear the heavy daily construction expenses when the payments are delayed. Work progress can be delayed due to the late payments from the clients because there is inadequate cash flow to support construction expenses especially for small scale construction firms who were not financially sound. When this happen it affects the performance of the work as delivery time would not be met which may be call for delivery time expansion? This finding was therefore in support Sholet and Frydman (2003) and Tang (2012) notion that clients should make prompt payment for work done to ensure quality of work and prompt delivery.

Additionally, structural engineers were also concerned about constant equipment breakdown ($M= 3.65$, $SD=1.332$) as a major contributor of low construction performance. Earlier discussion proved that, most of the local construction firms lack adequate availability of construction equipment. However, the few ones they have and what they hire constantly breaks down due the pressure on

them and lack of adequate maintenance. As a result the amount of work to be done on a particular day was not met delaying the entire project progress. Again, when the equipment breaks down, and work was halted, additional funds were needed for maintenance which affects the budgetary allocation of that particular project hence affecting its performance. Even though Maslej (2009), disagrees that equipment breakdown has little impact on performance of a construction firm, Marawar (2013) agrees that unavailability and constant equipment breakdown as well as high cost of equipment spare parts were keen to low construction performance.

4.2.2 Results and Discussion of Questionnaire from Quantity Surveyors

The study also sampled consultants. They were therefore quizzed about the causes of low performance of local construction firms. (Table 4.3)

Table 4.3: Quantity surveyors perceived causes of low performance of local construction firms

Causes of low performance	Percent	Mean	Standard deviation	Rank
Contractors improper planning	80.0	4.00	.087	1 st
Poor tendering process	90.0	3.60	.932	2 nd
Changes in contract document	90.0	3.55	1.001	3 rd
Unreliable suppliers	70.0	3.50	.095	4 th
Lack of adequate supervision	60.0	3.00	1.125	5 th
Unreliable sub – contractors.	80.0	3.00	1.226	6 th

N=10 (Source: Field Survey, 2016)

Presented in Table 3 is the cause of low performance of local construction firms. Contractor's improper planning (M=4.00, SD = .087) was considered the topmost cause of local construction low performance. Local contractors repeatedly fail to come out with a realistic and workable „work program“ at the primary

planning stage. This failure is correlated with lack of systematic site management and inadequate contractor's experience towards the projects. The consultant only checks and reviews the work program submitted by the contractors based on experience and instinctual judgment. Improper planning at the initial stages of a project exhibits throughout the project and causes delays at various stages. Only a project that is well planned can be well executed. Furthermore, exactly 4 out of 5 (80%) of the quantity surveyors reported that, unreliable sub – contractors was among the causes of low performance of the local construction firms. They reported that typically in huge projects, there are many subcontractors working under main contractors. If the subcontractor is capable, the project can be completed on time as planned. The project can be delayed if the sub-contractor under performs because of inadequate experience or incapability. High degree of subcontracting in the Wa municipality leads to high risk of delays and this leads to inefficiencies in the local construction industry. As a result the local construction firms under performs which leads to their low performance.

Again, poor tendering process ($M=3.60$, $SD=.932$) also cause low performance among local construction firms. Sometimes the right process laid down for awarding contracts were not duly followed. As a result, contracts were awarded to incompetent construction firms who in turn construct shoddy projects as a result of their inexperience in the construction industry. Their shoddy work which most at times calls for rework, characterizes their low performance. Moreover, changes in contract documents ($M=3.55$) was reported among the major cause of local construction firm's low performance. Construction firms plan and commence a project based on the measurements and specification in the contract. The purchase of materials, hiring of unavailable equipment as well as unskilled Labour among others

were planned due to contract document. However, when there was a change in the contract document, the material purchase, hiring of equipment and even the commencement date for the project could be changed affecting the necessary arrangement made earlier towards achieving quality performance which subsequently leads poor performance. This finding supports Dainty et al. (2006) who strongly posit that changes in contract document affect an entire project performance. They continued that, in some cases, additional funds were needed and delivery time extension for project delivery. Finally lack of adequate supervision (M=3.30) was yet another major cause of local construction firm's low performance. Local construction Contractor's poor site management is one of the most significant causes in causing the local construction firm's poor performance. The results of this research indicate that local contractors face paucity in site planning, execution and controls. A deprived site management results in delays in responding to the issues that arise at the site and causes negative impact on the overall work progress there by resulting into low performance since quality of work was compromised. This finding supports Carlsson et al., (2001) notion that poor supervision on the part of contractors and other site managers constitutes lackadaisical attitude of workers which leads to shoddy work.

4.2.3 Results and Discussion of Questionnaire from Site Engineers

Site engineers were among the sampled respondents for this study. They were therefore queried about the causes of low performance of local construction firms (Table 4.4)

Table 4.4: Superficial causes of low performance of local construction firms by Site engineers

Superficial causes of low performance	Frequency		M	SD	Rank
	n	%			
Poor quality materials	11	63.6	3.90	.865	1 st
Low management practices	11	73.0	3.86	1.332	2 nd
Lack of adequate skilled Labour	11	91.0	3.40	.815	3 rd
Unreliable suppliers	11	45.0	3.30	1.211	4 th
Design errors and omission	11	82.0	3.00	.945	5 th
Land ownership disputes.	11	73.0	2.00	1.321	6 th

N=11 (Source: Field Survey, 2016)

Comparatively the researcher assessed the causes of low performance of local construction firms from site engineers' point of view. These construction experts attested to about six causes of low performance of local construction firm. The site engineers reported that poor quality materials (M=3.90) was one of the major cause of low performance. Poor quality materials lead to poor quality workmanship, thus an unacceptable product. Most often, the project owners insist that correction be made or that parts of work be completely redone. This automatically affects the firm's reputation and such firms were tagged as been underperformed making it very difficult to win subsequent bids. Furthermore, low management practices were also reported to cause low construction performance. About 73% of the site engineers attested to this issue. They were of the view that, local Construction firm's employees that are not skilled in project management were not able to manage their project site appropriately, thus, climaxing in faulty work, reworks and delay in completion of tasks and finally affecting the performance of the work done. This finding confirms Culp and Smith (2001) affirmation that local construction firms to maximize project employ employees with little or low management skills to manage project sites. The result of the work of such personnel was shoddy works which subsequently affects project performance of the firm. Kenley (1999) argues that unskilled labour had little

effect on local construction firm's poor performance. He argues that these unskilled labour were supervised thoroughly by the management as well as the skilled personnel on sites. However, the outcome from Table 4 shows that lack of adequate skilled labour (M=3.40) was a major cause of poor construction performance. Employment of unskilled personnel at the project sites impedes execution of work to specification and leads to error or mistakes during construction. Time is then spent on alterations and corrections. This therefore refutes Culp and Smith (2001) notion.

Moreover, unreliable suppliers also contribute to the local construction's low performance. Materials such cement, sand, gravels, iron rods among other construction resources were purchased in particular with reference to what the contract document spells out. Construction firms therefore rely on suppliers to supply all the needed materials and resources at the right time and in their right quantity. However, when suppliers were not able to settle their part of the contract due late payment, late order and poor transportation system among others, the project in question might delay which would affect project delivery hence low performance. Lastly on site engineer's point of view on causes of low construction performance, they disagreed that land ownership dispute was cause of low construction performance. They argued that an experienced construction firm would sought to settle all disputes regarding project site and even the project before commencement of the project. This they said was done during the performance measurement. Hence, their disagreement.

4.3 Results and Discussion of Interview

The research also employed interview as data collecting instrument to solicit for data. The researcher sought to solicit for data from Masons, steel benders and

electricians. These professionals were the skilled labors who contribute massively to the commencement of a project to its completion.

4.3.1 Results and Discussion of Interview from Masons

The researcher sampled some masons in the local construction industry and they were interviewed. They were interviewed on causes of poor performance of local construction industry in the Wa municipality. The result is presented in Figure 4.5. The Masons were much concerned about four major contributors of the low performance of local construction firms in the Wa Municipality. The result from Figure 4.5 indicates that the Masons were concerned about the use of improper design, inappropriate coordination of information, shortage of construction materials and interferences from political leaders.

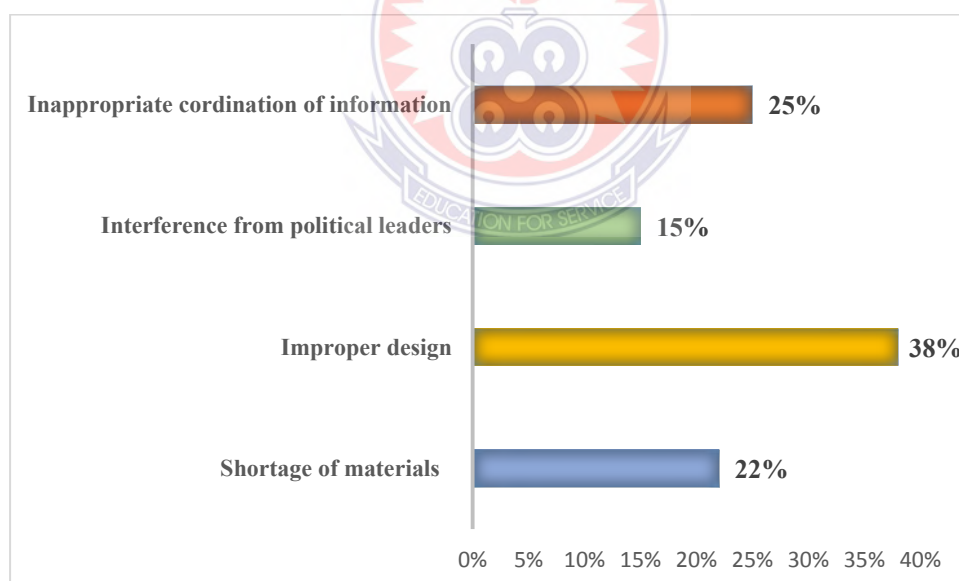


Figure 4.5: Opinion of Masons as causes of low construction performance.

(Source: Field Survey, 2016)

The information in Figure 5 reports that indecorous construction project design by local construction firms causes their low performance. Indecorous project

design constitutes about 38% of construction firm's low performance. They opined that, indecorous design stalls project execution because of the time it takes for such design to be reviewed, amended and accepted for construction works. When errors are observed in the design, works are temporary suspended until such errors are removed. This is predominant in small scale organizations where most of the local construction firms in the Wa Municipality have registered under that category. Additionally, construction firms commence their project without any laid down procedures to follow. As a result materials were misuse, both skilled and unskilled labour were also either under hired or over hired bringing extra cost of the said project. The performance of such project does not meet the quality standard because for the sake profit, the firm would prefer to use the limited resources available to complete the project. When this happen, the firms performance indicator was compromised.

Comparatively, Tang (2012) opined that construction material shortage was a major cause of construction project delay and subsequently project abandonment. He argues that, project progress and to meet its time schedule mostly depends on the availability of materials and resources. The finding of this study confirms Culp and Smith (2001) notion because the masons reported that material shortage contributes about 22% of construction failure. Shortages in basic materials like sand, cement, stones, bricks, and iron can cause major delays in projects. Since there was scarcity of construction raw materials in the Upper – west Region, of which Wa Municipal was not an exception, often times demand exceeds the supply and this causes prices to increase. The contractors postpone the purchase activities until the prices decrease. Postponing purchase activities automatically delays the project and therefore affecting the performance especially its delivery time. (Navon, 2005).investigated material and

equipment procurement delays in highway projects in Nepal and found these delays to cause cost overrun.

Furthermore, it could be deduced from Figure that, about 25% of local construction firm's low performance was attributed to inappropriate coordination of information. If projects issues or contractor's requests are not addressed timeously and information is not effectively managed, project activities can be negatively affected. There must be a good communication management plan in place so that site information is properly channeled and coordinated. Lack of coordination of information fosters misunderstanding, potentially causing conflicts that require resolution time. Resolution of conflict delays time which subsequently affects the project performance. The Masons finally reported that interferences of political leaders also accounts for about 15% of the local construction firm's low performance. This was usually experienced in Public sector projects. Some political leaders have vested interest in particular projects. They interfere by requesting additional capacity requirements not bagged in the original design or by imposing unprofessional contractors/ subcontractors on the client. Moreover, these politicians put more pressure on local construction firms with even threats to breach their contract if additional facility requested, which was not in the original contract document were not instituted. Local firms as matter of fact hurried through their activities to meet the unofficial request of these politicians. The above feat leads to poor project performance specifically in terms of time and quality. This finding was confirmed in Amoah et al. (2011) that local firms would have performed better if politicians leave them to their feat.

4.3.2 Results and Discussion of Interview from Steel Benders

Similarly, steel benders who were also among major construction stake holders were also sampled and interviewed. Their belief on causes of low performance of local construction firms in the Wa Municipality as far as their work in the industry was concerned was presented in Figure 4.6

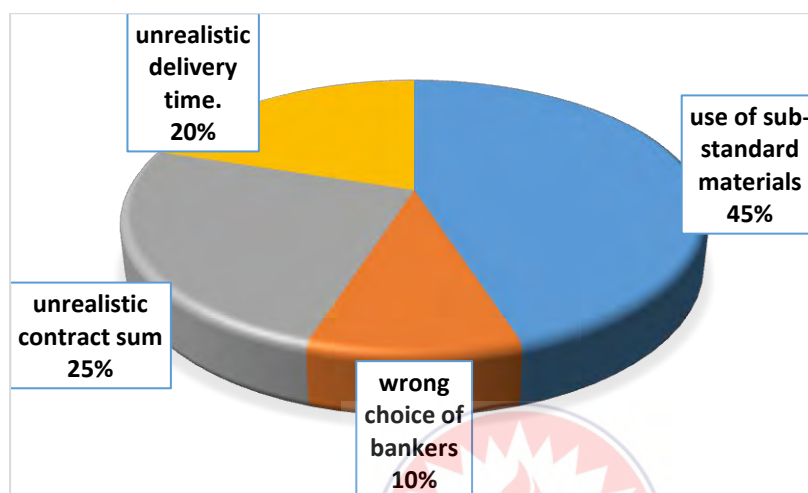


Figure 4.6: Steel Benders views on causes of low construction performance.

(Source: Field Survey, 2016)

The outcome from Figure 6 shows that, the steel benders were particular about four (4) major causes of local construction under performance. More than 2 out of 5 (45%) reported that, local construction firms underperformance was as a result of the use of sub – standard materials. Due to factors such as poor contract management, poor supervision, inappropriate bidding process among others construction firms do not adhered to the proper material standardization necessary for quality of work. For instance a 12mm building iron rod could be used in place of a 20mm rod. A supporting pillar which needs at least a 25mm building iron rod could be replace with a 20mm rod or even smaller. Poor quality materials lead to poor quality workmanship, thus an unacceptable product. Most often, the project owners insist that correction be made or that part of work be completely redone affecting project performance.

Moreover, the steel benders attributed 25% of causes of local construction firm's low performance to unrealistic contract sum. One major criteria for awarding contracts was consideration of the lowest bidder. For such reason, local construction firms compete to win contracts by stating low contract amount to be considered for the contract. Clients also due to insufficient funds to complete a huge project peg any unrealistic amount as a contract sum. This normally happens when construction management or politicians interfere or have influence in awarding the said contract. Local construction firms therefore purchase inferior materials or unstandardized materials in working on the said project which leads to poor quality workmanship.

Additionally, it was reported that unrealistic contract duration accounts for about 20% of local construction firm's poor performance. This could be caused by wrong packaging of contract documents, political interference or unprofessional/inexperienced client's staff where the stated completion duration is impracticable, the onus lies on the stakeholders to review the initial expected completion time and make amends where necessary. This was keen to construction performance because constructions firms sometimes hasten through their work just do meet their delivery deadline to avoid any contractile disputes. Hurriedly through a project means that no proper attention was given to stipulated plans and procedures leading to poor quality workmanship and subsequently affecting the firm's performance.

Decisively, the sampled steel benders reported that, local construction firm's wrong choice of bankers also causes their low performance. This accounted for about 10% of the construction firms' low performance. Banks provide funds for most projects. Their actions and inactions directly impact on a contractor's ability to execute the project as scheduled. Some Banks' internal processes could hinder timely release of funds. This happens especially when a contractor requires facilities such as

loans to finance the project. It is a major challenge in Wa Municipality where the banking industry is in a developing stage. This confirms Verma (2005) who argues that construction firms especially the small scale construction firms find it very difficult to access bank credit to enhance their work. Even if they had access to bank credit facilities the high interest rates coupled with short period of payment makes it practically impossible for the firms execute quality projects.

4.3.3 Results and Discussion of Interview from Electricians

In expedition to assess the causes of low performance of local construction firms in the Wa Municipality, electricians were sampled and interviewed. The outcome is presented the electricians (74%) reported that one of the major contributor of low performance by construction firms was poor contract document. They reported that, there were inefficiencies in awarding contracts to local firms especially government projects. There were so called middle men who interferes in the awarding of the contract. These middle men upon agreement take from 10% to 20% of the contract sum before a construction firm can win a bid. As a result the contractors do not receive all the original contract sum stated in the contract document. These middle men take this huge amount even before the commencement of the project. This affects the quality of the project because, the construction firm in charge would not use the right and needed materials and resources to construct the project. For instance, a bag of cement which was used to lay about thirty (30) pieces of block would be use to lay about fifty (50) pieces of blocks diminishing the quality of the blocks. Again in terms of concrete, the right ratio of sand, gravel and cement were not used which leads to early deterioration of a building project. They continued that even the quality of wires, sockets, switches among others were not bought for such projects due to

insufficient contract sum jeopardizing the electrical system of the project. This has resulted into many fire outbreaks in the Municipality due to ineffective wiring and use of inferior materials.

Furthermore, they raised concerns that lack of supervision also accounts for local construction firms' low academic performance. Majority of the sampled electricians attested that construction projects were supposed to be supervised right from foundation stage to completion. This was to ensure that the construction firms in charge of the project would adhere to the right measurement and specification stated in the contract document and also they could be notified in time if there were errors in terms of drawings and designs. However most building supervisors receive bribes from some contractors and therefore could not exercise their duties as a building inspector. This has resulted to recent fire outbreaks due to wrong wiring and use of sub – standard materials.

Additionally, lack of adequate planning also accounted for low performance of local construction firms. Local contractors sometimes calculate their profit income of the contract sum even before the commencement of the project. They become alluded when anticipate huge amount of profit income. These contractors begin to leave differently than before by leaving a luxury lives. They spent much money on unnecessary things rather than the project which leads to delay of the project or even abandonment of the project because payment of workers and other stuffs could not be met. Again, Contractors appoint Project Managers who are expected to draw up workable project plans and modalities for their implementation. A faulty plan will lead to delay in project completion. Most Local Contractors rarely have practicable work programs at the initial stage of project planning. Lack of appropriate work programs impairs monitoring of project progress against the stipulated time.

4.4 Results and Discussion of Observation

Observation was also employed for soliciting for data for this study. The researcher visited two communities in the Wa Municipality to ascertain the level of performance of construction projects undertaken by local construction firms. Among the communities within Wa municipality the researcher visited were, “Kperisi” and “Charia” These two communities were visited for the fact that, there were either a completed project constructed by a local construction firm or there was a construction project in progress at the time this study was been conducted.

4.4.1 Results and Discussion of Observation at Kperisi

In researching into the causes of low performance of local construction firms in the Wa Municipality, the researcher made a personal visit to Kperisi to observe the performance level of construction projects undertaken by local construction firms. At Kperisi the researcher observed the state of a recently commissioned market with abattoir. The researcher appreciated the physical plan and the architectural design of the market.

However, the researcher observed that, the construction firm in charge of the project performed poorly. Barely 8 months of the commissioning of the project the researcher observed that, there were choked drainage systems not as a result of mishandling but rather poorly constructed. As a result, sand gravels and other solid waste had choked the drainage. It was even difficult for easy passage of water especially when it rains. The researcher realizes that the specification and measurements given were not duly followed by the sub – contractor involved.

Moreover, on the toilet facility, there was a nice structure constructed at the market. However, the water closets were malfunction barely 4 months of completion.

This was because the well dug to supply water for the water closets did not meet the required height to supply water to the water closets. Again the capacity of the pumping machine on the well was of low current and hence could draw the exact water to supply the water closet. As a result customers had to fetch water in containers whenever they visit the toilet. Apart from the difficulties in water supply to the water closets, most water closets pots were spoilt. One may think it was as a result of mishandling. However, further assessment proved that the water closets pots purchased were inferior and therefore the water reservoir and tube got spoilt easily.

Again, the showers constructed in the toilet facility at the market also had a similar failure as the water closet. Users could only enjoy the facility for just 6 months continually. However, the facility ceased to function due to the fact that, the shower pipes and the taps were spoilt not as a result of mismanagement or over usage of the facility but rather the use of substandard materials. This happened because a politician had promised a market during a campaign and to fulfill his promise, the contract was awarded. However, the contract sum was insufficient for the project hence substandard materials were used for the construction resulting to the poor performance.

4.4.2 Results and Discussion of Observation at Charia

In researching into the causes of low performance of local contraction firms in the Wa Municipality, the researcher made personal visit to Charia. At Charia, the researcher observed the performance of two 6 unit block primary school and a Junior high school which was started in 2009. The observation proved that, all those projects were under the construction of local construction firms. However, the junior high school block had been abandoned. A further observation indicated that the

construction firm involved had borrowed from a rural bank in the municipality to finance the first phase of the project. When the work was in progress the Municipal Assembly called for some changes in the contract document which caused a delay in the completion of the first phase as scheduled even though there was extension of the delivery time. As a result, the money due the construction firm for the work done on phase 1 of the project was not paid on time. This also attracted extra interest on the loan purchased at the bank leaving the construction firms no option than to abandon the project for further negotiations. The Junior High school has since be abandoned. This happened because no proper performance analyses were made on the part of the construction firm. Moreover, the primary school had been completed and handled over to Municipal Assembly. However, the researcher observed that, the supporting pillars of the building had defection. This was as a result limited cement and gravels in the concrete used. The researcher also observed a screed floor of the building barely a year after completion. The paints of the wall had also peeled off. This was not due to lack of maintenance but as matter of fact if quality materials had been use for the construction, the project would have lasted longer before all these defections could be seen. The awful state of performance of projects in Charia is presented in pictures of figure 4.7, to 4.9.



Figure 4.8: crack in floors of the Primary School at Charia



Figure 4. 7 faded and peeled off paints at Charia Primary school



Figure 4.9 defected pillar at Charia M/A Block ‘B’ junior High School

Measures that can curtail low performance of local construction firms in Wa Municipality

On the appraisal of the reliefs that can be accrued from better performance of local construction firms, the researcher further scrutinized into strategies which can be put in place to ensure that local construction firms in the Wa Municipality perform as such. The respondents were asked to indicate the extent to which they agree or disagree to the strategies as can improve the performance of local construction firms the Wa Municipality. (Table 4.5)

Table 4.5: Measures to curb local construction firm's low performance

Measures	Frequency (%)	
	Strongly agree or agree	Strongly disagree or disagree
There should be prompt honoring of payment certificate	94.0%	6.0%
Local construction firms should properly plan their work.	90.0%	10.0%
Construction project contracts awarded must have a realistic contract sum	85.0 %	15.0%
Project specifications and delivery time should be specified boldly in the contract document	82.5%	17.5%
There should effective and efficient supervision and monitoring.	65.0%	35.0%
Local construction firms should adopt material purchasing rather than buying.	58.0%	42.0%
Procurement of project materials should satisfy the standard of Ghana Procurement codes.	55.0%	45.0%
Contracts should made simple and accurate.	52.0%	48.0%

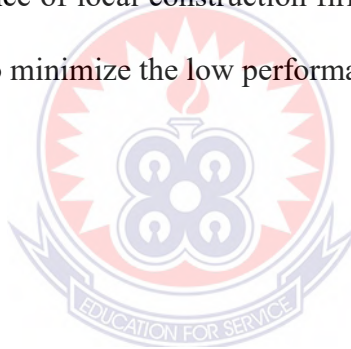
N=71 (Source: Field Survey, 2016)

Presented in Table 4.5 are the measures that would curb the low performance of local construction firm's menace. The respondents agreed to all the perceived measures as measures that would improve performance of local construction firms. However, some of the understudied measures were given priority than others. This suggests that the respondents were most concerned about some of the measures as solution to reducing the poor performance than others. For instance it was evident from Table 5 that Majority (94%) of the respondents either strongly agreed or agrees to the fact that project clients should promptly honor payment certificates in time. Just a few (6%) of the respondents disagree to this notion. This suggests that the performance of local construction firms in the Wa municipality would improve if clients honor their payments in time. This was because once there was a sufficient finance for a project; the project would progress as schedule without delay. Furthermore, exactly 90% of the respondents agreed that the challenges of low performance of local construction firms in the Wa municipality will improve if local contractors plan their work properly. This was because it emerged from earlier

discussion that, most of the construction firms lack proper planning. As a result they were not able to provide their entire schedule of their work to their prospective clients. Clients therefore take advantage of this to mount unnecessary pressure on them which leads to their low performance. Again, more than 4 out of 5 (85%) of the respondents reported realistic contract sum as a measure to improve low performance in the industry. Construction firms compete for the available contract which was announced for tendering. Some clients quote unrealistic sums in the contract document which indeed might not be sufficient for the said project. However, local firms compete for such contracts only to get stuck somewhere after the project has commence. Some even abandon the entire project. Therefore if clients would indeed allocate reasonable amount to a project taking into consideration all the economic hardship and the trend of affairs as the time of awarding the contract, then construction firms would improve their performance. Again, about 82% reported that effective supervision and efficient monitoring will improve low performance. They were of the view that a well-equipped and effective supervision and efficient monitoring team would ensure that proper adherence to guide lines of works were followed appropriately. This would even deter construction firms from using substandard materials therefore leading to an improvement of their work. Finally, the least considered measure to improve local construction low performance was making construction contracts as simple and accurate as ever. Sometimes contract documents were so cumbersome that, one needs to think very deep to understand the terms and specifications spelt out in the contract. Sometimes there were a lot of ambiguities in the contract which all contributes the construction firms under performance. Therefore if the contract is made simple, clear and accurate then local construction firms would understand the terms and condition for executing such project to avoid

any shortfalls. The researcher therefore was of the view that if all these measures were put in place the challenges of underperformance of local construction firms in the Wa Municipality would change for the better.

In conclusion, the response rate for the study was high. Most of the respondents contributed fairly with respect to the various items on the questionnaire. It was proven that most local construction firms in the Wa municipality perform poorly. The respondents positively attested to the various factors that causes low performance of local construction firms in the Wa Municipality. Moreover, the study also discussed some strategies which could minimize low performance of local construction firms in the Wa municipality. This chapter therefore concludes that, the numerous low performance of local construction firms will be minimize if attention is paid to the strategies to minimize the low performance construction firms.



CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the major findings, conclusion and recommendations of the study.

5.2 Summary of the Major Findings

The following are the summary of the findings:

The study revealed that, most of the local construction firms in the Wa Municipality do not do performance analysis on projects awarded to them. For instance few of them carried out cost benefit analysis on every project awarded. However, majority of the firms do not consider quality, safety as well as schedule performance measurements. As a result they perform poorly on most of the contracts awarded to them.

Majority of the local construction firms in the Wa Municipality were small scale construction firms with low financial standing hence they lack adequate technical expertise, adequate construction equipment and adequate skilled labor.

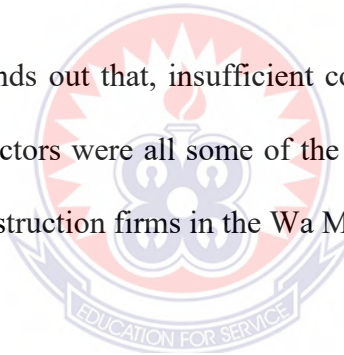
Furthermore, it emerged from the discussions that, most of the local construction firms were only very interested in winning contracts. They will therefore do everything possible to win a bid without necessary taking into consideration the performance measurement of the contract. As a result they perform poorly due to non – performance of performance measurement.

Again, the study found out that, the local construction firms in the Wa municipality were performing poorly due to Non – adherence to measures and specification, Unnecessary pressure from clients and High cost of construction equipment

Moreover, it has emerge from the study that, poor tendering process, changes in contract documents as well as contractors improper planning also contributes to the low performance of the local construction firms in the Wa Municipality.

Again, among the major findings from this study was the use of substandard materials in construction, late honoring of payment certificate, unreliable suppliers as well as unreliable subcontractors contribute much of low performance of local construction firms.

The study also finds out that, insufficient contract sum, political interference and inexperienced contractors were all some of the major factors that causes the low performance of local construction firms in the Wa Municipality.



5.3 Conclusion

From the findings the study made the following conclusion. The researcher assessed the causes of low performance of local construction firms in the Wa municipality and Measures that can put in place to curb this menace. A questionnaire, interview and personal observation were designed and distributed among major groups of participants (quantity surveyors, site engineers, structural engineers, masons, electricians and steel benders). The study identified that, the local construction firms in the Wa municipality were mostly small scale construction firms and most at times their performance on contracts awarded to them was low. The study

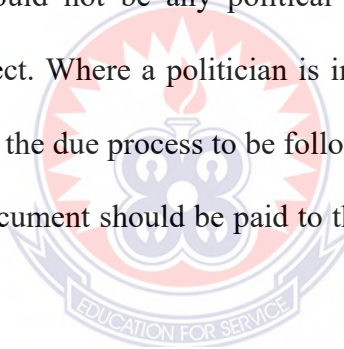
however, pinpointed major causes of their low performance as a result of the following: lack of adequate equipment availability, improper tendering process, unreliable suppliers, unreliable subcontractors, political interference, late honoring of payment certificate, unnecessary pressure from clients and changes in specifications in the contract document as well as insufficient contract sum. They therefore conclude that, local construction firms in the Wa municipality mostly under performed in terms of the construction projects awarded to them.

5.4 Recommendations

The following recommendations are made to address the findings:

- ❖ The study recommends that, while selecting contractors, clients should make sure that contractors are not selected based only on their lowest bid. However, the selected contractor should have sufficient experience, technical capability, financial capability and sufficient manpower to execute the project.
- ❖ The study again recommends that, clients should not interfere frequently during the execution and should not keep making major changes to the necessities. This can cause undue delays in the project.
- ❖ Clients should make sure they have the required finances for a particular project before awarding to contract and prompt payment should be made to contractors for completion of part of work done.
- ❖ Moreover, the study recommends that, local construction firms should do the necessary performance analysis before bidding for a contract. They should not accept any contract if the contract sum is really unrealistic for the project.

- ❖ Furthermore, local construction firms should make sure they have sound financial backing so that they purchase the necessary equipment to carry out a project in time.
- ❖ The study again recommends that, local construction firms should plan their work properly and provide the entire schedule to clients. Where they employ sub-contractors, they should make sure subcontractors are selected based on experience and previous work done.
- ❖ Moreover, the study recommends proper and efficient supervision and monitoring of contracts awarded to local construction firms. This will help identify errors and omissions early and to rectify such mistakes in time.
- ❖ Finally, there should not be any political interference in awarding of any construction project. Where a politician is involved in the contract awarding, they should allow the due process to be followed and the original contract sum in the contract document should be paid to the construction firms and no 10% reduction.



5.6 Suggestion for Further Study

Further studies can be conducted to find out factors affecting the performance of local construction firms in other Metropolitan, Municipal and District Assemblies (MMDAs). The state of performance of local construction firms and some causes of the performance may be unique to other areas.

REFERENCES

- Acs, M. & Audretsch, A. S. (1991). A study of the relationship between quality management practices and performance in small business", *International Journal of Quality and Reliability Management*, 16 (9), 859-877.
- Adam, O. (1997). Contractor development in Nigeria: perceptions of contractor and professionals. *Construction Management and Economics*, 15, 95-108
- Affare, C. (2012). Strategic techniques to add value to construction works. *Journal of American Construction*. 3, (3).
- Agyakwa-Baah A. B. & Fugar, F. D. K (2010). Factors Causing Delay In Building Construction Projects in Ghana. *1st International Postgraduate Research Conference on the Built Environment. KNUST-KUMASI*
- Ahadzie, D. K. (2007). Projects managers' performance measures; a fresh perspective. In 21st ARCOM conference, SOAS, London, 3-5 September, 3-10
- Ahadzie, D. K., Proverbs, D. G & Olomolaiye, P. (2007). Critical success criteria for mass house building projects in developing countries. *International Journal of project management*, 6, (1), 42-47
- Amoah, P., Ahadzie, D. & Danso A. (2011). The Factors affecting construction performance in Ghana. The perspective of small-scale building contractors: Ghana Institution of Surveyors Journal, *The Ghana Surveyor*, 4, (1), 41-48.
- Ankrah, N. A. & Proverbs, D. (2004). A framework for measuring construction project performance: Overcoming key challenges of performance measurement. *Research Institute in Advanced Technologies, University of Wolverhampton, Wolverhampton, WV11SB, UK.*

- Antony, J.; Leung, K., Knowles, G. & Gosh, S. (2002). Critical success factors of TQM implementation in Hong Kong industries”, *International Journal of Quality and Reliability Management*, Vol. 19 No. 5, pp. 551-556
- Anum, E. (2016). Issues of Ghanaian Construction. *Journal of African Contractors*. 2, (3).
- Arditi, D., Koksal, R. & Kale, H. M. (1998). Factors that affect process quality in the lifecycle of building projects. *Journal of Construction Engineering and Management, ASCE*, 124(3), 194-203
- Atkinson, J. (1995a). Over-specified and under used. *Contract Journal*, 13 April, 19-20.
- Atkinson, J. (1995b). Made to measure or off-the-peg? *Contract Journal*, 13 April, 18.
- Banwell (1964), Ministry of Public Building and Works. *The Placing and Management of Contracts for Building and Civil Engineering Work*, HMSO, London
- Barret, P. (1995). *Facilities Management: Towards Best Practice*, Blackwell Science.
- Barret, R. & Sexton, A. (2006). *Research Methods for Construction*, Blackwell Science.
- Boussabaine, A. H. & Elhag, T. (1999). Applying fuzzy techniques to cash flow analysis. *Construction Management and Economics*, 17, 745-755.
- Brown, A. & Adams, J. (2000). Measuring the effect of project management on construction outputs: a new approach. *Int. Journal of Project Mgmt* 18, 327-35.
- Brown, S. A. (2001). *Communication in the design process*, Spon Press.

- Burch, J. (1992). *Absenteeism in the Building Industry*, Ascot: Chartered Institute of Building.
- Carlsson, J. C., Gerloff, E. A. & Cummins, R. C. (2001). *Organizational Communication: The Keystone to Managerial Effectiveness*.
- Chan, D. & Seun, M. M. (2005). Compressing construction durations: lessons learned from Hong Kong building projects, *International Journal of Project Management*, 20, PP. 23.35
- Cresswell, R. K. & Clark, P. (2007). *Case Study Research: Design and Methods*. Thousand Oaks, California, U.S.A.
- Crown Agents (1998). *The World Bank's Procurement Audit in Ghana. Value for Money Audit Report for Ghana*, Crown Agents for Overseas Government and Administration Ltd., UK.
- Culp, G. & Smith, A. (2001). Leadership Effectiveness and Behavior. *ASCE Leadership and Management in Engineering*, 39-47, April, 2005.
- Dainty, P., Taylor, J., & Di Marco, M. (2006). Project Network Interdependency Alignment: New Approach to Assessing Project Effectiveness. *Journal of Management in Engineering*, 27(3), 170-178. [http://dx.doi.org/10.1061/\(ASCE\)ME.1943-5479.0000048](http://dx.doi.org/10.1061/(ASCE)ME.1943-5479.0000048)
- D'Arcy, J. (1995a). Over-specification adds 15% to costs. *Contract Journal*, 11 May, 8.
- D'Arcy, J. (1995b). Making up for lost time. *Contract Journal*, 16 March, 22.
- DETR (1998). *The Report of the Construction Industry Task Force: Rethinking Construction* (The Egan Report), HMSO.
- Drewer, M. Y. (1980). *Issues Associated with Extension of Time (EoT) Claim in Malaysian Construction Industry*.

- Edmonds, G. and Miles, D. (1984) *Foundation of change, aspects of the construction industry in developing countries*, London: Intermediate Technology Publication Ltd.
- Egan, F. (1998). *Rethinking Construction*, Department of Environment, Transport and the Regions, London, accessed from <http://www.dti.gov.uk/construction/rethink/report/>
- Egan, F. (2002). *Accelerating Change*, Strategic Forum for Construction, accessed from www.strategicforum.org.uk/pdf/report_sept02.pdf
- Emmerson, H. (1962). *Survey of Problems before the Construction Industries: A Report prepared for the Minister of Works*, HMSO.
- Emmerson, T. (1962). Ministry of Works, *Survey of the Problems before the Construction Industries*, HMSO, London
- Emmitt, S. & Gorse, C. (2003). *Construction Communication*, Blackwell Publishing Ltd.
- Enshassi, A. (2008). Causes of contractor's business failure in developing countries: The case of Palestine, *Journal of construction in Developing Countries*, 11, (2), 1-14.
- Fellows, R., Langford, D., Newcombe, R, & Urry, S. (1983). *Construction Management Practice*, Longman Scientific and Technical, UK
- Fisher, Desmond and Harms, L. S. (1983). *The Right to Communicate: A new human right*. Dublin: Boole Press.
- Franks, J. (1998). *Building Procurement Systems*, (3rd ed.), Longman
- Fryer, D. (1985). A study of measuring the critical factors of quality management, *International Journal of Quality and Reliability Management*, 12, (2), 36-53.

- Fugar, F. D. K & Agyakwa-Baah A. B. (2010). Factors Causing Delay In Building Construction Projects in Ghana. 1st International Postgraduate Research Conference on the Built Environment. KNUST-KUMASI
- Ganesan, S. (1983). Housing and Construction: Major Constraints and Development Measures, *Habitat International*, Vol. 7 (No.5/6), pp. 173-194.
- Ghana Statistical Service (2014). District analytical Report. Population and Housing Census 2010.
- Gorse, C. A, Emmitt, S. & Lowis, M. (1999). Problem Solving and Appropriate Communication Medium. ARCOM 15th Conference, Liverpool John Moores University, 1: 511-517.
- Gray, C., Hughes, W. & Bennet, J. (1994). *The Successful Management of Design*, the University of Reading Centre for Strategic Studies.
- Hall, E. T. & Hall, E. (1994a). *How cultures collide*, Ginn Press, Needham Heights. Harlow: Pearson Education.
- Higgin, G. & Jessop, N. (1965). *Communication in the Building Industry: The Report of a Pilot Study*, Tavistock.
- Hill, C. J. (1995). Communication on construction sites", *Proceedings of 11th Annual Conference of Association of Researchers in Construction Management*, September 18-20, University of York.
- Hillebrandt, N. (2002). *Cross cultural management: a knowledge management perspective*".
- Hofstede, G. (1991). *Cultures and organisations: software of the mind*, New York: McGraw-Hill,
- Institute of Statistical, Social & Economic Research (2007). *Policies and Options for Ghana's Economic Developmen*, (3rd ed.)

- International Labour Organisation, (1987). *Guide-lines for the development of small scale construction enterprises*, Geneva: International Labor Office.
- Jannadi, O. M. (1997). Reasons for construction business failures in Saudi Arabia. *Project Management Journal*, 28(2) Jun 32-6.
- Jergeas, G. F. and Hartman, F. T. (1994). "Contractors' Construction-Claims Avoidance." *Journal of Construction Engineering and Management*, ASCE, 120(3), pp. 553-561.
- Kagioglou, M., Cooper, R. & Aouad, G. (1998). Performance management in construction: conceptual framework. *International Journal of Construction Management and Economics* (2001) 19, 85-95
- Kenley, R. & Wilson, O.D. (1986). A construction project cash flow model – an idiographic approach. *Construction Management and Economics*, 4, 213-232.
- Kingston, F., (1995). Planting the seeds of saving. *Contract Journal*, 6 April, 20-21. large-scale international science projects. "*International Journal of Project Management*", 23, 55-64.
- Latham, D. (1994). *Constructing the Team*, Final Report of the Joint Government / Industry Review of Procurement and Contractual Arrangements in the UK Construction Industry, HMSO, London, accessed from www.constructingexcellence.org.uk
- Lenard, D. & Eckersley, Y. (1997). *Driving Innovation: the Role of the Client and the Contractor*, Report No. 11, Construction Industry Institute, Adelaide, Australia.
- Lewis, T. M. (1984). A review of the causes of recent problems in the construction industry of Trinidad and Tobago. *Construction Management and Economics*, 2 37-48.

- Lim, E. C. & Alum, J. (1995). Construction productivity: issues encountered by contractors in Singapore. *International Journal of Project Management*, 13(1): 51-58.
- Liu, A. M. M. & Fellows, R. F. (1999). The impact of culture on project goals. In: S.O. Ogunlana, (eds.) "Profitable Partnering in Construction Procurement". London: E. & F. N. Spon, 523-32.
- Loosemore, M. & Al Muslmani, H. S. (1999). Construction project management in the Persian Gulf: intercultural communication. *International Journal of Project Management*, 17, (2), 95-100.
- Lussier, S, Ross, A and Pfeifer, G (2001) Effects of cultural differences in construction projects: an investigation among UK construction professionals. "Proceedings of the International Conference on Multi-National Construction Projects - Securing high Performance through Cultural awareness and Dispute Avoidance", 21-23 November, Shanghai, China.
- Mahalingam, L. M., Cyril, U. & Tieny, R. (2005). *A methodology for evaluating the business performance of UK construction companies*, PhD thesis, University of Wolverhampton, Wolverhampton.
- Marawar, H. A. (2013). Construction delay: a quantitative analysis." *International Journal*
- Maslej, C. (2006). US arguments on the right to communicate and people's right, in *Media Development* 35/4, pp.18–21.
- Mehra, J. (2009). The Right to communicate is a basic human right", in *Media Development* 35/4, pp.15 17.
- Miles, D. (1979). *Financial planning for the small building contractor*, London: Intermediate Technology Publication

- Miles, D. (1980). *The small building contractor and the client*, London: Intermediate Technology Publication
- Ministry of Works and Housing (2015). Annual report on construction works in Ghana. *Journal of Construction Development*. 2, (5).
- Moore, R. M. & Dainty, A.R.J. (2001). Intra-team boundaries as inhibitors of performance improvement in UK design and build projects: a call for change“ in *Construction Management and Economics*, 19, 559 – 562.
- Navon, R. (2005). Automated Project Performance Control (APPC) of Construction Projects, *Automation in Construction*, 14, (4), 467-476.
- Nutt, B. (1988). Strategic Briefing“ in *Long Range Planning*, 21, (4).
- O’Reilly, J. J. N. (1992). *Better Briefing Means Better Buildings*, The Department of the of project Management, 18:51-9. Environment/Building Research Establishment.
- Ofori, G. (1984). Factors Influencing Development of Construction Enterprises in Singapore, *Journal of Construction Management and Economics*, 19, (2), 145-154.
- Ofori, G. (1991). Programmes for the improving the performance of the contracting firms in developing countries: a review of approaches and appropriate options. *Construction Management and Economics*, 9 19-38.
- Owusu, T., (1999). *Factors affecting the performance of Ghanaian owned construction firms*. Unpublished MSc. Thesis, Dept. of Building Technology, KNUST, Kumasi.
- Owusu-Sechere, E. (2008) Factors Affecting the Performance of Construction Projects Execution in Ghana (Case study of Class A4 civil engineering

- contractors. Unpublished BSc Report, Dept. of Building Technology, KNUST, Kumasi.
- Pietroforte, R. (1992). *Communication and Information in the Building Delivery Process*, PhD Thesis, Massachusetts Institute of Technology.
- Preiser, W. (1993). *Professional Practice in Facility Programming*, Van Nostrand Reinhold. CIB (Construction Industry Board Working Group) 1997, *Briefing the Team*, Thomas Telford.
- Richardson, B. (1996). *Marketing for Architects and Engineers*, E & FN Spon. Cuff, D. 1996, *Architecture: The Story of Practice*, MIT Press.
- Ruddock, L. (1992). *Economics for construction and property*. London: Hodder and
- Salisbury, F. (1998). *Briefing Your Architect*, The Architectural Press, 2nd edition, reprinted by Butterworth Heinman Mackinder, M. and Marvin, H. 1982, „Design: Decision Making in Architectural Practice“, in *BRE Information Paper*, Ip 11/82, July.
- Selset, B. (2002). *Technologies of power: information machines and democratic prospects*. Norwood NJ: Ablex.
- Shohet, I., & Frydman, S. (2003). Communication Patterns in Construction at Construction Manager Level. *Journal of Construction Engineering and Management*, 129(5), 570-577. [http://dx.doi.org/10.1061/\(ASCE\)0733-9364\(2003\)129:5\(570\)](http://dx.doi.org/10.1061/(ASCE)0733-9364(2003)129:5(570))
- Shore, B. & Cross, B. J. (2005). Exploring the role of national culture in the management of
- Skitmore, W. F. (1992). Construction product or service and customer satisfaction, *Journal of Construction Engineering and Management*, 522-529.

- Somogyi, A. (1999). *The Role of Project Management*, Report, unpublished. Stoughhton.
- Stretton, A. (1984). *The building industry in Papua New Guinea*, Papua New Guinea: Institute of Applied Social and Economic Research.
- Tang, D. P. (2012). *The balanced scorecard; translating strategy into action*, Harvard Business School Press, Boston, MA.
- Thomas, S. R., Tucker, R. L., Kelly, W. R. (1998). Critical communication variables“ in *Journal of Construction Engineering and Management*. 124, (1).
- Usmani, A. & Winch, G. (1993). *The Management of a Design Process: The Case of Architectural and Urban Projects*, Bartlett Research, Paper No. 1.
- Verma, M. (2007). Cultural factors in international mergers and acquisitions. *"International Journal of Knowledge, Culture and Change Management"*, 6(7)
- Wells, J. (2007). Informality in the Construction Industry in Developing Countries, *Construction Management and Economics*, Vol. 25, pp. 87-93.
- Westring, G. (1997). *Ghana Public Procurement Reform*. An Audit Report prepared for the World Bank, Stockholm: Advokatfirman Cederquist KB.
- World Bank (2003). *The Construction Industry; Issues and Strategies in Developing Countries*. The World Bank Report, USA.
- World Bank. (2004). *Infrastructure Assessment, Finance, Private Sector and Infrastructure Group*, Middle East & North Africa, December 2004