

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

**An assessment of payment delays in Public construction projects and its effect on
project pre-financing in Ghana – Case study, Educational Buildings**

by

Maame Aba Wusuah Affare (CEMBA & BSc. Building Technology)

A Thesis submitted to the Department of Building Technology,
College of Art and Built Environment
in partial fulfilment of the requirements for the degree of

MASTER OF SCIENCE

NOVEMBER, 2016

CERTIFICATION

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

MAAME ABA WUSUAH AFFARE (PG 3552915)

Student Name & ID

.....

Signature

.....

Date

Certified by:

REV. PROF. F. D. K. FUGAR

Supervisor

.....

Signature

.....

Date

Certified by:

DR. T. ADJEI-KUMI Head

of Department

.....

Signature

.....
Date

ABSTRACT

Public building construction projects in Ghana construction industry are experiencing a wide spread of payment delays. The purpose of this study was to assess the factors causing delays and their effects on building construction projects in Ghana. Almost all the effects of delayed payments attributes were identified through detailed literature review. Structured interviews and questionnaire survey were conducted across stakeholders that included, among others, consultants, contractors and financiers to gather their views on the major source of funds for project pre-financing in Ghana; the major causes on delayed payments; how delayed payments affect contractors; how contractors deal with delayed payments and how delayed payment is affecting project pre-financing arrangements in the construction industry. The problem of the contractors and sub-contractors have is cash flow and mainly due to delayed payment which can severely affect the implementation and performance of any project. The objectives of this study are to identify the sources of funds for project pre-financing arrangements in the construction firms and the causes of delayed payment issues in construction projects in Ghana. Consultants, Financiers and D3K3-D4K4 construction firms were the target of the research and also a population of Medium to small categorisation of construction firms were considered within the study area of Accra.

A targeted sample size of fifteen (15) participants: five (5) from the construction firms in building as well as additional five (5) from consultants and (5) project financiers.

In conclusion it was noted that the recipient of the repercussions of payment delays and its associated cost is the society who are the end-users of the projects. However, this research did not capture their views on the subject matter. It would be interesting for

future researchers to find out their perceptions with regard to the subject matter. The findings from this study would be valuable for all construction professionals.

TABLES OF CONTENTS

ABSTRACT	iii
TABLES OF CONTENTS	iv
LIST OF FIGURES	vii
ACKNOWLEDGEMENT.....	viii
DEDICATION.....	ix
CHAPTER ONE	1
GENERAL INTRODUCTION	1
1.1 BACKGROUND OF THE STUDY	1
1.2 PROBLEM STATEMENT	2
1.3 AIM	3
1.4 OBJECTIVES	3
1.5 RESEARCH QUESTIONS	3
1.6 SIGNIFICANCE OF THE STUDY.....	3
1.7 THESIS ORGANIZATION.....	4
CHAPTER TWO: LITERATURE REVIEW	6
2.1 INTRODUCTION	6
2.2 DEFINITION OF PROJECT CONSTRUCTION DELAY	6

2.3 TYPE OF PROJECT CONSTRUCTION DELAYS	7
2.4 PLAYERS IN A TYPICAL CONSTRUCTION PROJECT	7
2.4.1 Client	7
2.4.2 Consultant	8
2.4.3 Contractor.....	8
2.4.4 Supplier	9
2.5 GLOBALLY – CONSTRUCTION PUBLIC PROJECT DELAY CAUSES ...	10
2.6 GHANA – FACTORS INFLUENCING PROJECT DELAYS.....	10
2.7 PROJECT DELAY EFFECT.....	10
2.8 PROJECT FINANCING.....	10
2.9 SOURCES OF FINANCE FOR CONSTRUCTION PROJECTS IN GHANA	11
2.10 CONDITIONS OF CONTRACTS	11
2.11 METHOD OF PAYMENT	11
CHAPTER THREE: RESEARCH METHODOLOGY	13
3.1 INTRODUCTION	13
3.1 TECHNIQUES OF DATA COLLECTION	14
3.2 INTERVIEWING RESPONDENTS USING THE QUALITATIVE METHOD	15
3.3 VARIOUS TYPES OF INTERVIEWS	16
3.4 SAMPLING TECHNIQUES, SAMPLE SIZE AND POPULATION	17
3.5 COLLECTION OF DATA	18
3.6 ANALYSIS OF DATA.....	18

CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS.....	21
4.1 INTRODUCTION	21
4.2 INTERVIEW ENVIRONMENT	21
4.3 RESEARCH PARTICIPANTS	23
4.4 ANALYSIS OF RESEARCH ISSUES	24
4.5 SUMMARY OF RESPONSES THE MAJOR SOURCES OF FUNDS FOR PROJECT PRE-FINANCING IN GHANA	27
4.6 SUMMARY OF RESPONSES ON CAUSES OF DELAYED PAYMENTS ..	30
4.7 SUMMARY OF RESPONSES ON HOW CONTRACTORS DEALT WITH DELAYED INTERIM CERTIFICATE PAYMENTS	34
4.8 SUMMARY OF RESPONSES ON HOW DELAY PAYMENTS HAVE AFFECTED PROJECT PRE-FINANCING ARRANGEMENTS	37
4.9 SUMMARY OF RESPONSES ON HOW CONTRACTORS DELAY PAYMENT AFFECT THEIR FINANCIAL PERFORMANCE AND THEIR ABILITY TO FINISH PROJECT ON TIME.	42
CHAPTER FIVE: FINDINGS, RESEARCH CONCLUSIONS AND RECOMMENDATIONS.....	44
5.1 INTRODUCTION	44
5.2 FINDINGS	44
5.3 CONCLUSION	46
5.4 RECOMMENDATIONS AND IMPLICATIONS FOR FURTHER RESEARCH.....	47
REFERENCES.....	48

APPENDIX 57

LIST OF TABLES

Table 4.1 – A table showing the names of the respondents, work type and the assigned names.	23
Table 4.2 – A table showing the Summary of responses the major sources of funds for project pre-financing in Ghana	27
Table 4.3 – A table showing the causes of delayed payment	30
Table 4.4 – A table showing the Summary of responses on how contractors dealt with delayed interim certificate payments	34
Table 4.5 – A table showing the how delay payments have affected project pre-financing arrangements	37
Table 4.6 – A table showing the summary of responses on how delayed payment affect contractors financial performance and their ability to finish project on time	42

ACKNOWLEDGEMENT

First and foremost, I am grateful to the Almighty God for His direction and fortification. My sincere gratitude goes to my supervisor Rev. Prof. F. D. Fugar for spending ample and quality time supervising, correcting and proof reading my project work.

DEDICATION

I wholeheartedly dedicate this research work to the Lord Almighty through whose guidance and protection I have been able to reach this far in my education. I cannot end this work without mentioning the people who give meaning to my life, my parents Mr. and Mrs. Affare, my sister: Maame , my brothers; Paa and Nana and my mentors; Mrs. Salwa Helen Maccauley, Lawyer P. Mireku, Arch. Carole Nicod Pravicini, Mr. Alberto Rossi, Mr. Kwame Dampare and Mr. Abdul Rahman Nasiru.



CHAPTER ONE

GENERAL INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Construction is significant or important to the Ghanaian economy albeit, Ghana has a huge infrastructure deficit. Construction industry is a very crucial sector to both thriving and developing economies. In Ghana for example, the contribution of the construction subsector to the local economy has been very significant; excess of 5% of GDP (Ghana Statistical Service, 2010, 2011 and 2013). Governments earmark and execute infrastructure projects in order to stimulate economic activity within a country. This also means that, funding for the projects have mostly come from the public taxes. However, these infrastructural projects are considered successful only when they are done on time, within the budgeted cost, fulfill all quality or performance specification and finally approved as satisfactory by all the project stakeholders.

Contractors or vendors are able to finance the initial construction phase of projects in Ghana through the pre-financing arrangements in the contracts (Mobilization Advance) or pre-financing arrangements from private sources (Loans, Overdraft etc.). Subsequently, continuous funding had come from the payments of interim certificates, bonds and guarantees and final balance payments.

The European Commission Communication on Pre-Financing (2008) defines Prefinancing as a payment intended to provide the contractor with a cash advance. Prefinancing is paid, in some procurement contracts and in most grants agreements, before the Goods, Works or Service (GWS) are delivered and before the occurrence of eligible costs by beneficiaries Contractors or Vendors. The payments are sometimes

divided into a number of payments over a period defined in the particular pre-financing agreement.

In every project contract, the vendor's cardinal obligation is to execute and complete the works in accordance with the drawings and specifications while that of the employer is to arrange for funding to honor all submitted claims for payment. This simple transaction often culminates in rampant delays which invariably delay the project. Fugar and Agyakwaah-Baah (2010) indicated that there are consequences on all stakeholders in the construction industry when the construction project is delayed. Time and cost overruns which could lead to financial loss, time loss, premature termination of works conflict and finally litigation Tamakloe (2011).

1.2 PROBLEM STATEMENT

In their quest to encourage private funds into public projects through a pre-financing arrangements, the government has over the years awarded most of the much needed infrastructure projects to contractors who are able to show proof of a sound financial backing either through a letter establishing a line of credit from a lender or a strong liquidity in their audited financial statement of accounts. However, in most cases, the government has failed to meet its financial commitments on projects on time. The question therefore is what have been the effects of government payment delays on project pre-financing arrangement? And does it have any effect on the performance of the construction firm? A lot of literature could be sourced for research on what cause the delay and probably what the effects of the delay is on the project, but there seems to be an academic knowledge gap with regard to the subject under review. This research will therefore seek to provide empirical evidence to fill the lacuna created by the gap.

1.3 AIM

The aim of the study is to assess the effect of payment delays on public construction projects on contracts pre-financing arrangement in Ghana.

1.4 OBJECTIVES

This study is carried out on the follow objectives:

1. To identify the major sources of funds for project pre-financing in Ghana.
2. To identify the causes of delayed payments.
3. To identify how contractors deal with delayed payments.
4. To determine how delayed payment affects the contractor.
5. To find out how delayed payment is affecting project pre-financing arrangements in the construction industry.

1.5 RESEARCH QUESTIONS

The research is carried out to discourse the following questions:

1. What are the major sources of funds for project pre-financing in Ghana?
2. What are the major causes of delayed payments?
3. How have contractors dealt with delayed interim certificate payments?
4. How has delayed payment affected project pre-financing arrangements in the construction industry?
5. How does delayed payment affect the contractor's financial performance?

1.6 SIGNIFICANCE OF THE STUDY

The delay in the completion of any infrastructural project is extremely critical and a challenge which often assume a global dimension. Delays often lead to increased construction costs due to time extension or acceleration as well as loss of productivity, disruption of work, loss of revenue through lawsuits between contractual parties, and

project abandonment (Sambasivan & Soon, 2007; Owolabi et al., 2014). The delays have largely been attributable to the delays in the releases of funds. This view is supported by studies like, Sambasivan and Soon (2007) and Alaghbari et al., (2007) who have all postulated that although delays in the completion of infrastructural projects are global issue, it appears to be more rampant in developing countries especially within Africa. This study therefore, seeks to find out how the delay in governments paying contractors affect the arrangements of pre-financing projects especially government sponsored or funded in Ghana.

1.7 THESIS ORGANIZATION

The thesis is structured under five chapters. Chapter One presents the introduction, the problem statement, the research aims, the research objectives, the research questions and the justification of studies.

This last part of chapter one introduces the next chapter which is Chapter Two - Literature review explaining the causes and effects of delays in the construction firms. The discussion here lays emphasis on Ghanaian Educational Buildings as a case study.

Chapter Two is a literature review of the causes and effects of delays in the construction industry. These causes in relation to Ghana are discussed. The various procurement strategies used by the construction industry are identified. In Chapter Three there is an implementation of the different methodologies.

Chapter Three discusses the methodology adopted for the study. It consists of the research-approach adopted for the study. The sample population, sample size, data collection methods and pilot survey are discussed. This indicates the kinds of data analysis procedures adopted for the study. It further indicates the various methods used for the study.

Furtherance to the project debate, Chapter Four shows the outcome of assembled survey and advance deliberations on them. The outcome are on the specimen of the respondents. The interviewee's answer to the causes and effects of project delays. There is presentation of results on the countless avenues of funds used for public projects and the contractor's encounter with funds accessing challenges. The final results are captured in expressive, tables and charts.

In a nutshell Chapter Five is the summary of the work followed by recommending actions or ways that should be followed to resolve this problematic situation and advance or future studies in related areas must be encouraged.



CHAPTER TWO LITERATURE REVIEW

2.1 INTRODUCTION

Items in this chapter are geared towards finding enough literature to assess how delays in the payments of public construction in education have impacted on the project financing in Ghana.

Chapter Two begins with definitions of project delay and extends the discussion on causes and effects on project delay to the world at large. The chapter further deliberates on the investigation on Ghana's causes and effects of project delays. In addition an identification of the different kinds of procurement and contract systems in Ghana is studied. Finally the various sources of project funds in Ghana is emphasised to complete chapter two.

2.2 DEFINITION OF PROJECT CONSTRUCTION DELAY

The definition given by Fugar and Agyakwaah- Baah (2007) is quoted as the extension of time in completing a whole project or substantially completing a project and they also added that the event may or may not be deliberate and even controlled or uncontrolled. This definition explains the interdependencies of the various stakeholders on a project and to what extent each could act as a check and balance on each other. The Contractor is one player in a construction project team. Like a football team, the construction project team can only work well if everybody plays well together. This means that you should get to know the jobs of the other members of the construction project team, so that you can help them to help you. Aibinu and Jagboro (2002) also defined delay as a situation when the contractor and the project owner jointly or severally contribute to the non-completion of the project within the original or the stipulated or agreed contract period.

2.3 TYPE OF PROJECT CONSTRUCTION DELAYS

According to Trauner (1990), there are four main groups of construction project delays. These are as follows: Critical or Non – Critical, Excusable or Non – Excusable, Compensate or Non – Compensable, Concurrent or Non-Concurrent. Fugar and Agyakwaah-Baah, (2010); Tamakole (2010); Meshi (2006) classified delays of projects into three main types. These are excusable delay, non-excusable delay and concurrent delay.

2.4 PLAYERS IN A TYPICAL CONSTRUCTION PROJECT

2.4.1 Client

The Client is the public individual, organisation, eg. Volta RWSS Project or government department for whom the work is being done and who provides the money to pay for it. The Client is the most important person in the construction project team as far as the contractor is concerned. Without a Client, the contractor would have no business at all. Clients come in all shapes and sizes. The simplest division is between public sector client and private client. providing the money for the work done: paying the contractors on a regular basis as agreed in the contract: and paying all legitimate entitlements (claims) for extra costs the contractor has had in connection with the job once they have been agreed by the consultant. However, the rights of the client are strictly limited by the normal construction contract. e.g. the client should always give instructions through the consultant as professional advisor, and has no right to instruct the contractor directly. Although the site belongs to the client, it is the contractor's factory for the duration of the contract. Just as the owner of a football team cannot run into the field in the middle of a game, the owner should never visit the site unless accompanied by a representative of the consultant. The contractor should keep a careful record of all site visits.

2.4.2 Consultant

The Consultant is the private individual, organization or government, department who can be consulted by the client and the contractor on matters concerning the contract. Usually, the consultant is appointed to design the project, advice on the choice of contractor and then to supervise the work on the site. However, the person representing the client can come from the client's organization. This is more common in contracts for public works. designing the work; communicating regularly between client and contractor; ensuring that the contractor carries out all obligation according to the contract ensuring that the client carries out all obligation according to the contract resolving technical problems as they arise; call regular site meetings to resolve any problem that delay the work; copy and distribute all correspondence to each party; make regular site inspections; revise designs and provide other information quickly when required; and provide impartial advice in dealings with clients and contractors.

2.4.3 Contractor

The Contractor is the private individual organization or government department who enters into a contract to do the work required by the client. Contractors also vary a lot in size and shape. Multinational construction firms often employ several thousand workers and engineers and operate in many different countries on major projects such as dams, motorways and power stations. At the other end of the market, small contracting firms work close to their base and specialise in simple buildings and public works projects such as drainage, feeder roads, sanitation facilities and water supply systems. The contractor is responsible for:- completing the work to the quality standards laid down in the contract; completing the work within the time-limit laid down in the contract; and completing the work with due regard for safety and health. The contractor should always aim to complete projects on or before the completion date, both to save

money and please the client. But sometimes delay cannot be avoided and an extension of time can be negotiated provided a good case is made for it so it pays to keep good records on which negotiation can be based. Site safety is primarily the responsibility of the contractor. However, if the consultant or the client sees dangerous practices on site, they should point these to the contractor. All parties to the contract must make sure that the work is carried out without danger either to construction workers or to general public.

2.4.4 Supplier

The Supplier is also a member of Construction project team. A supplier may provide materials, equipment or subcontract services. Even a small job may require quite a number of separate suppliers which means that the contractor must be a good organiser and a good manager. Suppliers can help contractors by allowing credit and offering discounts. This can make bids more competitive and help gain more contracts.

However, remember that a credit arrangement with a supplier is like a loan from a bank.

It must be paid on time if you are to keep your reputation and your supplier's good-will.

The supplier's responsibility is to ensure that goods or services are supplied at the right standard quality, at the right price, in the right place and at the right time. Here are some ways in which a contractor can help his supplier to provide him with better services; plan your orders well in advance; specify goods and services clearly and double check to make sure they are in accordance with the specifications and drawings; deal regularly with the same supplier so that you can build good working relationship; make sure your site staff check deliveries carefully before they sign for them; and show you deserve credit by making payments promptly. Remember to regularly get quotations from a number of suppliers to make sure that "your" supplier is offering you a good deal.

2.5 GLOBALLY – CONSTRUCTION PUBLIC PROJECT DELAY CAUSES

Materials, labour, equipment and financial factors are the four main the categories which Hensey (1993) assembled as the causes of project delays.

2.6 GHANA – FACTORS INFLUENCING PROJECT DELAYS

Ghana has a different feature altogether in terms of trading, tourism, transportation and the entire economy. The construction industry differs by its nature that funds spent on projects are not recouped immediately even if it is a commercial building. Project delays can be influenced by unavailability of funds, scope changes and increased cost of materials.

2.7 PROJECT DELAY EFFECT

Project delay contractors go through brings in its wake prolonged construction period and project cost overruns. A research carried out by Odeh and Battaineh (2002) in which a search was made on the impact of construction delays on construction projects reviewed that the end product is unnecessary time lost leading to cost overruns and unsettled disputes which may end up in litigation and arbitration.

2.8 PROJECT FINANCING

Funding or allocation of funds for a project is fundamental to the successful completion of that particular project. Every project needs to be fueled or backed with the need and necessary resources.

2.9 SOURCES OF FINANCE FOR CONSTRUCTION PROJECTS IN GHANA

Badu and Owusu Manu (2010) conducted a survey improving builders or developers access of finance in Ghana geared towards construction works. The contract documents set out the rules and regulations that govern a particular contract. Once they have been signed by both the contractor and the client, they govern the rights and responsibilities

of each party. A contractor is effectively an individual or a company that agrees to do certain job or provide a certain product or service. The rules of contract law thus apply equally to building and public works contractors and to manufacturers and suppliers of building materials. Both have to be fully aware of the meanings of the terms used in contract documents if they wish to survive and prosper in the highly competitive construction industry. The contract is a legally binding agreement between the contractor and the client.

2.10 CONDITIONS OF CONTRACTS

In most countries, a standard form of conditions of contract is used. Such as standard form for building contracts can be published with the sanction of the contractors association, in conjunction with various Architects' and Structural Engineers' institutes and associations.

2.11 METHOD OF PAYMENT

In the standard conditions, a contractor is normally entitled to interim payments for work done. These can be made at monthly intervals, provided enough work has been done in the month to make it worthwhile to calculate and process a certificate. The procedure for preparing interim and final certificates is explained above, but in principle it is the responsibility of the contractor to prepare a claim for the cost of work done.

The architect or engineer will check this, and within a reasonable time a certificate stating the amount should be issued. The client should pay the certified amount within the agreed period. It is important to be paid on time. Entrepreneurs can go out of business if their clients do not pay on time. If the client delays too long in paying these certificates, you could in theory cancel the contract, and recover all costs and losses from the client. But if your client is the government, such action might be suicidal.

Would they give you another contract if you made trouble? The best thing to do is to get your contractors' association to plead your case.

KNUST



CHAPTER THREE RESEARCH METHODOLOGY

3.1 INTRODUCTION

Classification of research methodologies can be done in two broad categories namely, qualitative and quantitative methods by (Hakim 2000; Jackson 1995). A comparison of the relative strengths of both the qualitative and quantitative data was made by Patton (1987). It was noted that qualitative data produced a detailed data about a lesser number of respondents, unlike quantitative data that had the benefit of producing a generally extensive results of a large populace.

Researchers have settled on either one or the other and a lot of debates has gone on over the superiority of the methodology appropriate. The incompatible nature of thesis which postulate both the qualitative and quantitative research models was stated by Johnson and Onwuegbuzie (2004) that should not be mixed.

Lincoln (1990) strengthened the above theory and also cautioned that accommodation between paradigms are not possible and that we are directed to vastly dissimilar, incongruent and totally opposing ends. Other researchers had converse views and were unconvinced of the significance of polarizing the two research methodologies. By emphasizing on the difference between quantitative and qualitative research methodologies, Gummesson (2003) points out that a red herring is introduced and a diversion of our attention is the results which also sways us from the real issues that is the choice of research methodology and techniques that support rationality and admittance. Using qualitative – words or quantitative – numbers is insignificant. (Creswell 2003; Hanson et al. 2005; Johnson and Onwuegbuzie 2004; Rank 2004) added that using both qualitative and quantitative research methodologies with

reference to mixed research methods has a comparative advantage over the individual methods.

For the reason that this research was carried out in the real world within the constructivism exemplar, that is qualitative in nature, the research methodology adopted was the qualitative type and the most suitable too for the data collection method. The qualitative research method is appropriate for the research type that encompasses collection of data in the form of comprehensive descriptions connecting complex business activities (contracting and tendering, in the circumstance of this particular research). Considering the relative smaller number of the interview respondents involved in the research, qualitative method was deemed proper.

Also the reason why quantitative research was not considered or used is because in the constructivist model the quantitative research is not the right fit and in addition the situation where there is a great amount of elaborately detailed data to be gathered from a sizable number of respondents, the quantitative method is a misfit. The use of both methods of research by mixing qualitative and quantitative methods was not of preference because in using the mixed method would require a lot of time and resources obligated in the combination of the qualitative and quantitative approach. Secondly it has been established that the quantitative method is unsuitable for this type of research.

3.1 TECHNIQUES OF DATA COLLECTION

This method of research used the interview data collection procedure in the qualitative research methodology.

3.2 INTERVIEWING RESPONDENTS USING THE QUALITATIVE METHOD

The researcher gains the advantage of collecting data on important issues that cannot be witnessed when interviewing the respondents. Also empirical data can be generated

through interviewing respondents in the public sector by inquiring they talk about themselves. (Holstein and Gubrium 2003). The best method of making inquiry on intricate and complex issues is by using interviews and likewise getting sophisticated responses (Shuy 2003).

By Marshall and Rossman (1999) the interview format or type adopted was expedient to get large amounts of data in a short time.

One of the four data collection methods in the qualitative research methodology is interviewing. An argument could be made, is the most natural way of all research data collection methods. As we exist as human beings and seeking every day accomplishments, we continually make analytical inquiry about others and vice versa and also about ourselves. Mostly orderly social inquiry is mainly carried out by using interviews. (Holstein and Gubrium 2002)

Our everyday life entails a lot including questions and answers as mentioned by Lazarsfeld (1935)

Historically, the nature of interviewing as a form of discourse between speakers has been hidden from view by a dense screen of technical procedures. Qualitative and quantitative research method is basically the asking and answering of questions which has been made formal and was remarked by Mishler (1986) in the mainstream tradition, the nature of interviewing as a form of discourse between speakers has been hidden from view by a dense screen of technical procedures.

As explained by the definition below, qualitative interviewing is mostly used in the social research framework, than merely sending questionnaires to respondents to answer them.

Particular pattern of oral communication – introduced for a definite purpose and focused on some specific content area, with consequent elimination of extraneous material. Besides, the interview is a pattern of interaction in which the role relationship of interviewer and respondent is highly specialized, its specific characteristics depending somewhat on the purpose and character of the interview (Kahn and Cannell 1957).

3.3 VARIOUS TYPES OF INTERVIEWS

Harmony was created in the literature as to the composition of the primary qualitative interview kinds, these are structured, unstructured and semi-structured interviews (Leeddy and Ormrod 2001; Patton 2002). Farr and Timm (1994) only explained the main two structured and unstructured types of interviews. Structured interviews entailed organized questionnaire, read by the interviewer and generally administered in quantitative research. On the other hand unstructured interviews were categorized by having no limitations on the way the questions are worded and they are flexible in nature. Lastly semi-structured interviews had the fundamental features of mixed structured and un-structured interviews. To be able to collect additional observational data for the qualitative research, unstructured interviews were used and the Main source of of the data collection was basically structured and partly semi-structured interviews. (Adams et al. 2002).

As a check the semi-structured interview format applied to the open-ended questions was used for this research to certify that the trend of the interview was not accidentally directed by a predetermined and firmly structured approach. Using Creswell (1998) as an ideal model an audio taped was made of the semi-structured interviews and transcribed precisely as recorded.

3.4 SAMPLING TECHNIQUES, SAMPLE SIZE AND POPULATION

An inquiry was made in the literature as to how many interviews are needed to guarantee a credible research representation.

Perry and Carson et al. expressed by Patton (2002) emphasizing on the fact that there are no hard rules for sample size in qualitative research and also emphasised that the researcher's sample size would depend on the reason of the investigation, and what the researcher is looking for and wants to know, what will be beneficial, what will be reliable above all the resources available.

A range of 15 to 40 interview participants was proposed by De Ruyter and Scholl (1998). To provide a credible picture Carson et al. (2001) explained that with their experience and unreliability of evidence they recommend 30 interviews. This number they say will give a credible outcome. Noted by Perry (2001) a number of almost 35 interviews is worth planning. Sampling to a point of redundancy was a suggestion by Lincon and Guba (1985). This means that when there is no new information from the new sampled units expected, the sampling is discontinued

There is a limitation to this method which was by Patton (2002), Basic research embraced sampling to redundancy, unrestricted and limitless time schedule.

Consultants, Financiers and D3K3-D4K4 construction firms were the target of the research and also a population of Medium to small categorisation of construction firms were considered within the study area of Accra.

A targeted sample size of fifteen (15) participants: five (5) from the construction firms in building as well as additional five (5) from consultants and (5) project financiers. In

order to preserve privacy, the individual participants are referred to by the codes for instance BCP1, CP1, FP1 etc.

Provision was not made available for individual profile of each participant, in that a small population was considered and the features or characteristics and superiority of the respondents were different in nature. This type of profile could provide several points of reference for the identification of individuals.

3.5 COLLECTION OF DATA

The responses of the interview were recorded and transliterated word for word.

Evaluation of the each of the responses was carried out before the transcription was done, for the assurance of the total quality of the interview valuation or assessment of surprises, concealed intentions and potential falsehood (Miller & Crabtree 2004). The validation process was not left out transcripts of the interview were sent back to the interview participants to authenticate. There was no observation of misgivings about the interview transcripts forwarded to the interview participants for their confirmation. This response gave no reason for changes to be made at all to the transcripts. After the justification or validation of the transcripts the data was analysed, followed by destruction of the original electronic recordings.

3.6 ANALYSIS OF DATA

Qualitative data analysis was very challenging in that the data collected comprises words and not figures, also arrangement and organisation of numerous fresh observational records into meaningful and workable design pattern (Dooley 1990).

The most widely accepted fact in the literature is that the data analyses of the qualitative method of research should proceed as soon as the interview is observed. (Dooley 1990;

Marshall and Rossman 1999; Miles and Huberman 1994), and as with most aspects of social research, there were many perspectives on the appropriate process for qualitative data analyses. Miles and Huberman (1994) believed there were three separate phases of qualitative data analysis: i) data reduction; ii) data display; and iii) conclusion drawing and verification. Reducing data entails converting the raw data, first hand notes into a more modified form. After which the data is compressed and arranged in the data display phase.

The most widely used data display for qualitative data was extended text, noted by Miles and Huberman (1994). As at that time the data is presented in a form that aids confirmation and authentication so that conclusions could be drawn from it. Marshall and Rossman expatiated on this method or approach by outlining the six step qualitative data analysis model namely, 1) data organisation, 2) generating categories, themes and patterns, 3) data coding, 4) testing the emergent understandings, 5) searching for alternate explanations, 6) report writing.

Miles and Huberman as well as Marshall and Rossman's theories were adopted by Sarantkos (1998) in his proposed five step qualitative data analysis consistent approach and was designed precisely for analysis of qualitative interview data. Transcription, checking and editing, analysis and interpretation, generalisation and verification are the basic five step approach for analyzing qualitative data suggested by Sarantakos.

Sanrantakos' five step method of analyzing qualitative data was used in analyzing the interview transcripts, whilst analysis and interpretation step was aided by the cross case analysis. This refers a saying from (Patton 2002) which explains that examine divergent views on central issues or to merging responses from different respondents but similar interview questions.

Correspondingly in chapter four also, data reduction and data display phases of Miles and Huberman's theory was adopted for participants presentation, annotation in prolonged text form and a summary in a tabulated form.

KNUST



CHAPTER FOUR DATA PRESENTATION AND ANALYSIS

4.1 INTRODUCTION

This chapter presents experimental data findings. This is the chapter that make available to the reader a discussion or debate and analysis of findings.

4.2 INTERVIEW ENVIRONMENT

Jackson (1995) concluded that because the environment in which an interview takes place could have an impact on the type of responses, it is imperative that the context within which observations are made ought to be reported if findings are to have any chance of being replicated. The following narrative therefore seeks to report the environmental context of the interviews.

The interviews were conducted in a formal environment. And in most cases at the venue of the participant's choosing which were mainly at the interviewee's workplace or office. This was necessary because it gave the participants comfort and familiarity as suggested by Sarantakos (1998). Again, in all the cases, the researcher was well and politely received at the front office of the participants' outfits. After which the researcher was subsequently ushered to the office of the respondents. After brief pleasantries exchanges, participants were thanked for agreeing to take part in the interview, and their uninterrupted availability for the time of the interviews. The participants were then asked if they were comfortable with continuing with the interview. However, none of the participants expressed exceptions or desire to exempt themselves from the interview. The only condition was that their names and that of their firms were not included as part of the documented report. The next was to find out if the participants had any reservations with being recorded for the purposes of accurate transcription. Once again, none of the interviewed contributors had misgivings about

the reason why the interview was recorded, the participants were assured that it was for strict academic purpose.

Comfortability of the interviewee on the project topic and interview guide or questionnaire administered was of paramount importance to the interviewer. So an inquiry was made and the response was positive but the participants contributed to the amendment and review of the questionnaire also known as the interview guide found in Appendix one. As suggested by (Charmaz 2003; De Vaus 2002; Ryen 2003) that the comfort of the respondent is significant therefore every effort was made to keep the right atmosphere which depicted trustworthiness on the part of the interviewer throughout the whole process. When the interviewee seemed a bit disrupted the voice recorder was put on mute until the he was ready to contribute.



4.3 RESEARCH PARTICIPANTS

All the Fifteen (15) research respondents are presented in this chapter in the table below:

Table 4.1 – A table showing the names of the respondents, work type and the assigned names.

Name of Organisation	Type	Code of participants
Building Contractor 1	Contractor	<i>BCP1</i>
Building Contractor 2	Contractor	<i>BCP2</i>
Building Contractor 3	Contractor	<i>BCP3</i>
Building Contractor 4	Contractor	<i>BCP4</i>
Building Contractor 5	Contractor	<i>BCP5</i>
Construction Consultants 1	Consultant	<i>CCP1</i>
Construction Consultants 2	Consultant	<i>CCP2</i>
Construction Consultants 3	Consultant	<i>CCP3</i>
Construction Consultants 4	Consultant	<i>CCP4</i>
Construction Consultants 5	Consultant	<i>CCP5</i>
Construction Financier 1	Financial Institution (Bank/Non-Bank)	<i>CFP1</i>
Construction Financier 2	Financial Institution (Bank/Non-Bank)	<i>CFP2</i>
Construction Financier 3	Financial Institution (Bank/Non-Bank)	<i>CFP3</i>
Construction Financier 4	Financial Institution (Bank/Non-Bank)	<i>CFP4</i>
Construction Financier 5	Financial Institution (Bank/Non-Bank)	<i>CFP5</i>

4.4 ANALYSIS OF RESEARCH ISSUES

I. **Research question one:** What are the major sources of funds for project prefinancing in Ghana?

From the responses as given, there were not much significant difference between the responses that were reported from the Building Contractors and that of the Consultants as well as the Financiers of Construction Contracts. While some reported that all the money used for the projects do come from the clients and that, they do apply for mobilization grants and when it is approved and disbursed, they organized their team and move to site. Others also reported that most projects have stopped issuing mobilization grants to contractors to start-up a project. Hence they resorted to relying on the banks for financial support to begin a project. The responses are quoted below:

It depends; some very good and well-paying jobs come with an advance mobilization grant. So we fall on such interest free advances to mobilize to site. But in most cases we resort to the banks to finance most of the projects we do, since the clients usually do not give mobilization grants. *(BCP1)*

Well, we used to get mobilization grants from the client (in this case government) in the past. But now they have stopped paying grants. So anytime we get Government of Ghana (GOG) contracts, we always rush to our bankers for loans so that we could go to site, work and raise some certificates. *(BCP2)*

Now it is difficult to start projects in Ghana. Our bankers have always helped us to mobilize to go to the site and start the work. What happens is that, anytime we get the project, we contact them and then they work out some small money to start. Some years ago, the government used to give us grants so that we could start the project; that is not the case now. *(BCP3)*

The good projects give us mobilization grants. The bad ones don't. So, the projects we don't get mobilization grants from we look elsewhere. Like any good interest rate loan from anywhere. Sometimes it is difficult but at least we are always successful so we can't complain. Again, we get it from our bankers. Sometimes we get lucky with big sum other time far lesser than expected *(BCP4)*

Ok, our Bankers have always advanced an appreciable overdraft facility to most of the jobs we had started. It's because we don't get the mobilization grants even though we are supposed to be given under the conditions of contract. Again sometimes we only start the work when the mobilization grant is approved and disbursed. Because of that we apply early, that's if the contract stipulates that we could apply for the mobilization grant. If it doesn't, we usually stay away from such project unless we could be assured of early certificate payment. Then in such case we will rely on a commercial bank to help pre-finance such project. *(BCP5)*

I would say that there are fundamentally two sources available to local contractors; they are either from the project sponsor through an advance mobilization grant or through a private arrangement i.e. through a bank or a non-bank financial institution. We usually recommend the former because it is the cheapest since no interest is paid. However, in recent times, government jobs usually do not come with advance mobilization grants. *(CCP1)*

The contract caters for initial capital through the advance mobilization grants. Most projects give that mobilization grants. If the project is unable to advance that interest free grant to the contractor then other financing arrangements usually by the banks is recommended. *(CCP2)*

Well, now it is a prerequisite to show proof of your ability as a contractor to raise the needed funds to start a project should you get the job. Therefore, the assumption is that, contractors now have to search for funds to begin a project from a third party either by a bank or by non-bank institutions. *(CCP3)*

“Well, the contractors are forced to raise the needed capital to start an awarded project from the financial institutions albeit it is an expensive endeavor. *(CCP4)*

Some of the projects have allocated enough start-up funds to the contractor. The contractors only have to apply for it. Some projects also do not have, hence the contractors only option is to raise the needed capital through the banks. *(CCP5)*“We give financial support to the contractor during all the stages of the project life cycle.

Most contractors had come to us for funding at the early stages of the project.” *(CFP1)*

“A lot of contractors come for financial assistance when they win the bid and are expected to move to site, then they come to us for assistance.” *(CFP2)*

“Contractors come to us at the startup phase of the project.” *(CFP3)*

“We get application for project financing at almost every stage of the project implementation. From the beginning to the finish point, contractors have come to us for financial support.” *(CFP4)*

“Usually we are part of the contractor’s bidding process. When he/she is awarded the contract and he indeed initiate any move for support, when we are able we do help him right from the beginning.” *(CFP5)*

4.5 SUMMARY OF RESPONSES THE MAJOR SOURCES OF FUNDS FOR

PROJECT PRE-FINANCING IN GHANA

Table 4.2 – A table showing the Summary of responses the major sources of funds for project pre-financing in Ghana

Constructs	Sources of Funds for Project Pre-Financing in Ghana
<i>BCP1</i>	Project Clients/ Sponsors through the advance mobilization grant and from contractors banks
<i>BCP2</i>	Advance mobilization Grant and Contractors' Private Financiers
<i>BCP3</i>	Commercial Banks
<i>BCP4</i>	Mobilization Grants and Banks
<i>BCP5</i>	Mobilization Grants and Banks
<i>CCP1</i>	Mobilization Grants and Banks
<i>CCP2</i>	Mobilization Grants and Banks
<i>CCP3</i>	Mobilization Grants and Banks
<i>CCP4</i>	Mobilization Grants and Banks
<i>CCP5</i>	Mobilization Grants and Banks
<i>CFP1</i>	Commercial Banks
<i>CFP2</i>	Banks and other Financial Institutions
<i>CFP3</i>	Banks and other Financial Institutions
<i>CFP4</i>	Banks and other Financial Institutions
<i>CFP5</i>	

Almost all the respondents suggested that mobilization advance is the fall-on capital for the contractor to start a project and that, they only look elsewhere when that option is not tenable. Under the terms and conditions of the contract, the mobilization advance or grant is paid to the contractor so that he or she could shore –up his/her own capital in respect to the impending project. Usually, mobilization advance ranges from 5 to

10% depending on the size of the project. Unfortunately almost all the participants alluded to the fact the mobilization grants are no longer available to them in recent times. This situation has compelled local contractors to look for private finance to execute a project up-till the time the clients approve and pay an interim certificate. This has resulted from an abuse of the mobilization system by unscrupulous contractors who use their various networks within the system to collect mobilization advances and abscond at the detriment of the intended projects. Because they collude with the necessary actors and players, all the necessary legal requirements for the release of the funds to the contractors are therefore circumvented (Aniekwu, 1995).

II. Research question two: What are the causes of delayed payments?

With reference to the underlisted responses there were not any concrete answers as what exactly causes delayed payments. While the clients explained that sometimes there is lack of funds in the government coffers. The contractors also described the causes to be inadequate government budget allocation: Replies are as follows:

“Due governments numerous projects, and all must be attended to financially, so usually there is a drain on the limited resource of the government. Hence some of the projects suffer delayed payments. *(BCP1)*

“Lack of proper planning before the commencement of government projects. Allocation of funds becomes very difficult when the entire project is not well analysed and implemented well. *(BCP2)*

“Mass embesslement in the public sector. *(BCP3)*

Relaxed nature and lazy attitudes of some consultants in vetting valuation and preparing Payment Certificates for the Client also cause delayed payments. Sometimes the consultants take too long, even longer time than what is stated in the contract to advise the Client on the contractors payment situation. **(BPC4)**

Improper payment communication channels across the public service department. Employees are not aware of their roles and responsibilities of what do with an IPC or who to sign an IPC when they receive one. So days after days it remains on the table, until the contractor follows up. **(BCP5)**

“Sometimes government seek loans and grants from world bank and they are not granted or they are delayed. These unfortunate situations can cause delayed payments of public projects. **(CCP1)**

Design changes and scope creep, numerous variations and additions to previous design and size of projects also leads to payment delays, especially if there are drawings and specifications to cover the details of those changes. Hope in future projects the whole team will pay attention to this particular problem. **(CCP2)**

“Change of government causes delayed payments. In that when a new government is elected, some of the projects of the previous government are abandoned and may affect honoring of public project payments. **(CCP3)**

Contractors can also cause delayed payments in their own way when they delay on the take off And are not able to prove that they are capable of performing. On some public projects the contractor is sometimes tested to start work to prove his ability before advance payment are being issued and it is only at that time that it can noticed that they do not even have the financial strength to push the project. **(CCP4)**

4.6 SUMMARY OF RESPONSES ON CAUSES OF DELAYED PAYMENTS

Table 4.3 – A table showing the causes of delayed payment

Constructs	Causes of delayed Payments
<i>BCP1</i>	Public projects are too many and government is not able to fund all.
<i>BCP2</i>	Insufficient planning before project commencement
<i>BCP3</i>	Mass embesslement in the public sector
<i>BCP4</i>	Consultant do not submit IPC's on time
<i>BCP5</i>	Improper payment communication channels in the public sector
<i>CFP1</i>	Delay of government loans
<i>CFP2</i>	Design changes, variations and additions
<i>CFP3</i>	Change of government
<i>CFP4</i>	Contractor's inability to prove capable of performing
<i>CFP5</i>	Reluctant to answer

From the response it is clear the respondents have divergent views as to what causes delayed payments.

III. Research question three: How have contractors dealt with delayed payments?

Amongst the participants there was a consensus that delays in payments of claims exist and it's indeed forces the contractors to look for a private expensive capital so they could continue working on the project. The views expressed are hereby stated below:

Interim Certificates raised are not paid timely. Sometimes it takes up to two years before payments are made. Unfortunately, no communication comes to us (Contractor), so all we do is to wait. Just wait for the money to hit the accounts before we go back to site.

In situations like that no much is done with regards to the work on site. This is because the needed funds to pay our supplies are all locked up. In some extreme cases, we take the interim payment certificate (IPC) to a discount clearing houses or to a bank who then allow us to redraw a percentage of the total value of the certificate. **(BCP1)**

Payment on work done have always delayed; in some cases up to a year. Usually, the money information we get is that, it is still being processed for payment. When it happens like that, you can't do anything. Except to sit down and wait for the day the money will come. **(BCP2)**

Delays in paying the IPCs are very prevalent in the industry. Sometimes, we could raise all our certificates and none of the IPCs would be paid. It's very frustrating because we are unable to go back to site if the banks are not willing to discount the IPCs for us to go back to site. The most unfortunate thing is that, there seems to be no end in sight because, nobody tells you anything. **(BCP3)**

Well, we take our certificates to the financial institutions for them to discount it for us. What that means is basically, we are just piling our indebtedness to the banks. It could take several years before the money is paid. **(BCP4)**

Sometimes they are paid on time, sometimes also they are delayed. In such situations, we take the certificate to any financial institution that is willing to discount the IPCs at a good rate. When we get the money, then we go back to site to continue the work. **(BCP5)**

For most government projects, the projects funds are usually made available from statutory funds like the GET Fund etc. The accruals from these sorts of funds are "pay as you go". Therefore, as and when there is sufficient money for disbursements, IPCs

are honored on first-come first-serve basis. Payment has been a challenge in Ghana's recent history. What I know is that some contractors take their certificates to some financial institutions and use it as collateral to solicit additional loans. **(CCP1)**

Yes I am sure some contractors might have told you that the certificates indeed delay. Sometimes the contractors cause the delays unnecessarily. But in most cases it is as a result of lack of funds. Because of the delays in paying the IPCs some contractors take their certificates to some financial institutions and discount it so that they could raise some money to continue the projects. **(CCP2)**

Certificate payments delays depend on the financing source of the clients or the sponsor. Usually, projects that have a PPP arrange come with private financing hence the funds are not tied to any of the governments revenue streams. Therefore, payments are prompt and quicker. On the other hand, all other payment that comes through the government's consolidated accounts usually gets delayed. **(CCP3)**

Contractors' certificates have always been delaying. In fact, even the consultants are not spared on the delays. We all do have are payment delayed. It's indeed a problem within the construction industry. I know some of the contractors do discount their IPCs in order to raise money and go back to site. As a consultant on a project I don't advise against it but I do not encourage it since it is an added cost to the contractors' cost overruns. **(CCP4)**

Payments are delayed. Sometimes some IPCs get lost in transit and the contractors are then asked to resubmit their copies. A delay payment is a big issue within this sector. The big contractors somehow are able to withstand the delays. But the small ones usually fold-up and wait for the money to be paid. **(CCP5)**

We as financiers have provided various forms of financial product to contractors to ensure smooth flow of their projects. These include advancing loan as a working capital, Receivable discounting; IPC discounting and Construction Finance. The challenge for us has been the delays in payment to the contractors. Their certificates could delay sometimes up to 18 months. *(CFP1)*

We are aware of the delays in the payments of the IPCs to the contractors. So they usually turn to us so that we help them improve their construction working capital. A typical contractor may qualify for IPC discounting for an ongoing project financing. *(CFP2)*

“Contractors have used private finance to raise the needed capital for ongoing projects. Sometime at higher cost to them and the projects. This is largely as a result of delay in payment of their claims of work done” *(CFP3)*

“We provide contractors’ in distress for funds with some advances by discounting their IPCs. Sometimes it costly but that’s the only option available to them under the circumstances” *(CFP4)*

“We pre-finance projects for the contractors’ right from the beginning. That means the contractor doesn’t have to wait to be in distress before he could come to us” *(CFP5)*

4.7 SUMMARY OF RESPONSES ON HOW CONTRACTORS DEALT WITH DELAYED INTERIM CERTIFICATE PAYMENTS

Table 4.4 – A table showing the Summary of responses on how contractors dealt with delayed interim certificate payments

Constructs	Sources of Funds for Project Pre-Financing in Ghana
-------------------	--

BCP1	Wait for the money to be paid
BCP2	Discount IPCs to raise needed working capital
BCP3	Wait for the money to be paid
BCP4	Discount IPCs to raise needed working capital
BCP5	Discount IPCs to raise needed working capital
CCP1	Discount IPCs to raise needed working capital
CCP2	Discount IPCs to raise needed working capital
CCP3	IPCs are paid timely
CCP4	Discount IPCs to raise needed working capital
CCP5	Wait for the money to be paid
CFP1	Discount IPCs, Apply for loans
CFP2	Discount IPCs, Apply for loans
CFP3	Discount IPCs, Apply for loans
CFP4	Discount IPCs, Apply for loans
CFP5	Discount IPCs, Apply for loans

The responses above demonstrate a clear signs of payment delays. These delays average 12 months and seems to exert some pressure on the various stakeholders in the construction industry. While some contractors risk taking on debt portfolios so that they could get enough capital to go back to site, others fold-up and wait for the money to reflect in their accounts before they resume work. Typical examples of how bank and non-bank financiers had advance funds to contractors on an ongoing project includes; discounting an interim payment certificate (IPC), advancing loan as a working capital, Receivable discounting; IPC discounting and Construction Finance.

IV. Research question four: How has delayed payment affected project prefinancing arrangements in the construction industry?

Again amongst the participants there was a consensus that delays in payments have a negative effect on the ability of the contractor to raise future funds. The views expressed are hereby stated below:

The delayed payments affect everything we do. Now my firm is in debt to the banks. The banks don't want to finance anything we take to them. And the sad thing is also that, by the time the money is paid, the interest on the overdraft facility would have balloon to an unmanageable debt portfolio. At the moment we are all working for the banks. Again initially, banks were not demanding any collateral for IPCs discounting, but now they do. That's if they will even approve your request for IPC discounting. It a bit serious for this firm (*BCP1*)

Nobody is interested in pre-financing our project again. Because they fear their capital would be locked up for so long. At the moment, it is difficult to get a loan approved for you to go back to site and work. Every financier wants their money at the agreed duration. Unfortunately, it is not the case in this situation; sometimes it could take up to two years before the lender gets his money. So honestly, it is really affecting our ability to borrow money to do a project now in Ghana. (*BCP2*)

For us, looking at our debt portfolios, we think if a bank agrees to advance further loans, we will greatly reject the offer. It is unlikely outcome but the reality is that, no financier would want to stockpile our debt so it's sad situation. Its not pleasant but we are forced to wait for the client's money to hit the account before we could start any serious work. Delays in paying the IPCs are very prevalent in the industry. Sometimes, we could raise all our certificates and none of the IPCs would be paid. (*BCP3*)

We recently took our certificates to a commercial bank to discount it at an unimaginable rate, they still refused it because it's a GOG certificates. What is worse is sometimes you get paid eventually but the client's check could be returned for lack of funds in the accounts hmm. *(BCP4)*

Delays have affected our cash flows for the project big time. We are now afraid to go to any lender and request for loans because we are in debt to all the construction friendly commercial banks. Sometimes they are paid on time, but there would be no money in the account. That is also another problem. *(BCP5)*

We as financiers have provided various forms of financial product to contractors to ensure smooth flow of their projects. But their payment is a big problem to every lender. If you look at our debt portfolios, construction financing would be the biggest because of problems of delay in payment within the industry. Sometimes we do get the checks for clearing eventually, but the check is returned because there wouldn't be any money in the account. At the moment, we have put a freeze on the IPC discounting unless the project is a donor funded project. *(CFPI)*

Of course every lender within the industry is scared to give loans to contractors because of huge delays in payments by their clients. Indeed everyone is fully aware of the delays in the payments of the IPCs to the contractors. So as much as we wish we could help them, our hands are tight to advancing additional loan to them. *(CFP2)*

Unless a contractor is able to show reliable collateral, it will be difficult for him to get a project financing arrangement. Contractors have used private finance to raise the needed capital for ongoing projects. Sometime at higher cost to them and the projects. It really unfair how long their payment delays. *(CFP3)*

We have always tried to provide contractors' in distress some funds so that they could go back to site and work. However, delays in payment by the contractors mean higher risk factor on the interest rate. Therefore, they pay expensive interest rates which hitherto used to not be the case. (*CFP4*)

After committing very high capital to a project it is very disappointing to have waited for months before you could get your money back. It's sad but this is our predicaments as lenders. This has indeed affected the way we arrange for pre-finance; now the best deal on constructional finance one can get is on limited recourse loan. That has a high interest rate as well. (*CFP5*)

4.8 SUMMARY OF RESPONSES ON HOW DELAY PAYMENTS HAVE AFFECTED PROJECT PRE-FINANCING ARRANGEMENTS

Table 4.5 – A table showing the how delay payments have affected project prefinancing arrangements

Constructs	Delayed Payments Effects on Pre-financing arrangements
<i>BCP1</i>	Negative effect; lenders reluctant
<i>BCP2</i>	Negative effect; lenders reluctant
<i>BCP3</i>	Negative effect; lenders reluctant
<i>BCP4</i>	Negative effect; lenders reluctant
<i>BCP5</i>	Negative effect; lenders reluctant
<i>CFP1</i>	Negative effect; lenders reluctant
<i>CFP2</i>	Negative effect; lenders reluctant
<i>CFP3</i>	Negative effect; lenders reluctant
<i>CFP4</i>	Negative effect; lenders reluctant
<i>CFP5</i>	Negative effect; lenders reluctant

Project financing involves rising of funds to finance an economically separable capital investment in which the providers of funds look primarily to the cash flow from the

project as source of funds to service their loans and provide the return on their equity invested (Unver, 2015). Attractiveness of construction project finance to a lender lies in the lenders ability to fund projects off its balance sheet. This would mean that it will come as a limited or non-recourse to the potential equity investors.

However, because of the delays in payments of claims of work done, most such financing arrangement are done under the limited recourse terms; where the lender can require the borrower to repay only in special conditions that are spelled out in the loan agreement itself, and otherwise must look to the collateral as a source of repayment. This is a bad sign for the construction sector since it would means higher interest rates and higher cost to the borrower.

V. Research question five: How does delay payment affect the contractors' financial performance and their ability to finish project on time?

All the respondents agreed that the payment delays have significant effects on the contractor's financial performance and also on the technical performance. In other words, the project suffers from the bad financial situation of the contractor. Below are the views from all the respondents:

Delayed payments are affecting our cash flow seriously and our ability to go back to site and work. Now we are in serious distress, we owe the banks so much. Now my firm is in debt to the banks. The banks don't want to finance anything we take to them. As I said before, banks are now demanding collateral for IPCs discounting; my sister, where do you think we will get these collateral from? So now we don't have do anything. We just wait for the money to be paid. As and when it is paid, we go back to site. **(BCP1)**

Nobody is interested in construction again. Lenders are always chasing us for their money. All the projects we are engaged in at the moment have stalled. Some of the assets of the firm have already been auctioned; so it is difficult as a contractor now.

(BCP2)

It's not pleasant but we are forced to wait for the client's money to hit the account before we could start any serious work. We owe everybody; suppliers, banks etc. For us, looking at our debt portfolios, we think if a bank agrees to advance further loans, we will greatly reject the offer. It is unlikely outcome but the reality is that, no financier would want to stockpile our debt so it's sad situation. Our finance performance is very precarious. **(BCP3)**

“We are in a big debt situation. We try very hard so that we could raise some money here and there so that we could get the work flowing but unfortunately, it is difficult.”

(BCP4)

Sometimes they pay the certificate on time but the checks are returned. That has really affected our credit worthiness and our ability to borrow from the banks. Delays have affected our cash flows for the project big time. We are now afraid to go to any lender and request for loans because we are in debt to all the construction friendly commercial banks. **(BCP5)**

Delay payment has really affected both the contractors' financial and technical performance. There are increasing situations of shoddy jobs on site because they don't have the capital to purchase the specified materials and equipment needed for the project. Again, most of the projects we have far exceeded the project duration because our clients failed to pay claims on time. **(CCP1)**

Delay payment has affected everything we do as consultants. All the project milestones are missed, every scheduled activity is not strictly adhere to and a whole lot. The common response from the contractors has been that they don't have the money to work. What can we do? We can't do much because genuinely the guy has not been paid; this makes our jobs very difficult. (CCP2)

Delay payments affect everyone; the contractor can't get the money to work, consultant can't bite because he has not been paid. The ultimate loser is the project and the people who would be depending on the product of the project. (CCP3)

"Delay payment affects everybody; the contractors get worse off, the lender get over exposed, clients are dissatisfied because of poor work done". (CCP4)

Contractors' performance is deeply affected by payments delays. It really demotivate them to give off their best and by extension affecting the consultants. In fact, everyone seems to be in a very bad situation because there is no money to work. (CCP5)

As I mentioned earlier, debt repayment is a big problem to every lender because of the delays with regards to construction industry. Any serious Bank will tell you that, they are increasingly becoming agitated and hence they are staying away from financing a construction projects especially those the money comes from the GOG. (CFPI)

Sometimes we do get the checks for clearing eventually, but the check is returned because there wouldn't be any money in the account. At the moment, we have put a freeze on the IPC discounting unless the project is a donor funded project. Of course every lender within the industry is scared to give loans to contractors because of huge delays in payments by their clients. Indeed everyone is fully aware of the delays in the

payments of the IPCs to the contractors. So as much as we wish we could help them, our hands are tight to advancing additional loan to them. (CFP2)

Contractors have used private finance to raise the needed capital for ongoing projects. Sometime at higher cost to them and the projects. Unless a contractor is able to show reliable collateral, it will be difficult for him to get a project financing arrangement. (CFP3)

Payments delays by a contractor who owe a bank means higher risk factor on a future interest rate. Therefore, they pay expensive interest rates which hitherto used to not be the case. This has made a lot of them in very bad shape and in serious debt. Obviously that should also have a certain level of effect on their technical performance. (CFP4)

Our predicaments as lenders is very pitiful and sad. After committing very high capital to a project it is very disappointing to have waited for months before you could get your money back. This has indeed affected the way we arrange for pre-finance; now the best deal on constructional finance one can get is on limited recourse loan. That has a high interest rate as well. (CFP5)

4.9 SUMMARY OF RESPONSES ON HOW CONTRACTORS DELAY PAYMENT AFFECT THEIR FINANCIAL PERFORMANCE AND THEIR ABILITY TO FINISH PROJECT ON TIME.

Table 4.6 – A table showing the Summary of responses on how delayed payment affect contractors financial performance and their ability to finish project on time

Constructs	Delay payment effects on FP and TP
<i>BCP1</i>	Indebtedness to Banks; Delay Projects
<i>BCP2</i>	Abandon projects; Indebtedness

BCP3	Indebtedness to Banks; Delay Projects
BCP4	Delay Projects and Indebtedness
BCP5	Indebtedness to Banks; Delay Projects
CCP1	Shoddy work and Delay projects
CCP2	Delay Projects and cost overruns
CCP3	Scheduling is a problem and shoddy work
CCP4	Delay Project; Indebtedness
CCP5	Lack of Motivation to finish because of indebtedness
CFP1	Banks over exposure
CFP2	Construction Project Financing is restricted; Indebtedness
CFP3	Construction Project Financing is restricted; Indebtedness
CFP4	Construction Project Financing is restricted; Indebtedness
CFP5	Construction Project Financing is restricted; Indebtedness

Payments delays by a contractor who owe a bank have caused a lot of banks to cut back the line of credit they give to their client because of huge non-performing loans. This has also caused the banks to slashed higher interest rates on all the types of loans they advance to their customers rendering borrowing in Ghana very expensive. Most instructively, the performance of site is what is worrying. Most projects have either been abandon or performed poorly because the contractors had not been paid on time or never got the money because the banks withheld the payments. The contractors themselves have also been rendered financial incapable because of their perpetual indebtedness to the banks.

CHAPTER FIVE: FINDINGS, RESEARCH CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter discusses the summary of the findings from the analysis, the conclusions of the study and suggest appropriate recommendations which seek to direct future research. The objectives of this research were to determine or identify the major sources of funds for project pre-financing in Ghana and also identify how contractors deal with delayed payments while on a project. To determine how delayed payment affects the contractors and by extension the construction industry. And finally, to find out how delayed payment is affecting project pre-financing arrangements in the construction industry.

5.2 FINDINGS

Not many option are available to a contractor when starting a project. The first option for any contractor is usually the mobilization advance or grant which is the interest free in most cases. And that, they source for external money when that option is not available either because it was not included in the special condition of the contract or the money is not available even though the process has been approved. These private arrangements are largely through banks in the form of loans which becomes expensive because of the interests. Either way, consistent abuses of the grant by contractors have caused most client to exclude that from the contract. Under the terms and conditions of the contract, the mobilization advance or grant is paid to the contractor so that he or she could shore-up his/her own capital in respect to the impending project. Usually, mobilization advance ranges from 5 to 10% depending on the size of the project. Unfortunately, the grant are no longer available to them in recent times. This has resulted from an abuse of the mobilization system by some contractors who use their various networks within

the system to collect mobilization advances and abscond at the detriment of the intended projects.

From the findings, there were clear signs of payment delays. These delays average 12 months and seems to exert some pressure on the various stakeholders in the construction industry. While some contractors risk taking on debts so that they could get enough capital to go back to site, others fold-up and wait for the money to reflect in their accounts before they resume work. Typical examples of how bank and non-bank financiers had advance funds to contractors on an ongoing basis includes; discounting an interim payment certificate (IPC), advancing loan as a working capital, Receivable discounting; IPC discounting and Construction Finance.

Project financing involves rising of funds to finance an economically separable capital investment in which the providers of funds look primarily to the cash flow from the project as source of funds to service their loans and provide the return on their equity invested. Attractiveness of construction project finance to a lender lies in the lenders ability to fund projects off its balance sheet. This would mean that it will come as a limited or non-recourse to the potential equity investors. However, because of the delays in payments of claims of work done, most such financing arrangement are done under the limited recourse terms; where the lender can require the borrower to repay only in special conditions that are spelled out in the loan agreement itself, and otherwise must look to the collateral as a source of repayment. This is a bad sign for the construction sector since it would means higher interest rates and higher cost to the borrower.

A lot of construction friendly banks or lenders have cut back the line of credit they give to their client because of huge non-performing loans. This has also caused the banks to

raise the already higher interest rates on all the types of loans they advance to their customers rendering borrowing in Ghana very expensive. Most instructively, most projects have either been abandon or performed poorly because the contractors had not been paid on time or never got the money because the banks withheld the payments. The contractors themselves have also been rendered financial incapable because of their perpetual indebtedness to the banks.

5.3 CONCLUSION

In conclusion, delays in payment within the construction industry have affected all stakeholders within the industry and everything including the contractors' ability to deliver successful projects. In the standard conditions, a contractor is normally entitled to interim payments for work done. These can be made at monthly intervals, provided enough work has been done in the month to make it worthwhile to calculate and process a certificate. The procedure for preparing interim and final certificates is explained above, but in principle it is the responsibility of the contractor to prepare a claim for the cost of work done. The architect or engineer will check this, and within a reasonable time a certificate stating the amount should be issued. The client should pay the certified amount within the agreed period. It is important to be paid on time. Entrepreneurs can go out of business if their clients do not pay on time. If the client delays too long in paying these certificates, you could in theory cancel the contract, and recover all costs and losses from the client. But if your client is the government, such action might be suicidal. Would they give you another contract if you made trouble? The best thing to do is to get your contractors' association to plead your case.

5.4 RECOMMENDATIONS AND IMPLICATIONS FOR FURTHER RESEARCH

The study concludes by recommending further studies. The ultimate beneficiary of payment delays and its associated cost is the society who are the end-users of the projects. However, this research did not capture their views on the subject matter. It would be interesting for future researchers to find out their perceptions with regards to the subject matter. Again, a comparative study on the subject matter juxtaposing government of Ghana projects and Donor funded projects would be also recommended.



REFERENCES

- Abd El-Razek and Bassioni.h.and A. M. Mobarak (2008) Causes of Delay in Building Construction Projects in Egypt Journal of Construction Engineering and Management (23) 834 -869
- AduS.P (2011) Assessing the Effects of the Procurement Act (663) On Public Financial Management in Ashanti Region. Msc. dissertations (online) retrieved on 20 December 2013 from dspace.knust.edu.gh:8080/jspui/bitstream
- Agyakwa-Baah, A., Chileshe, N. and Stephenson, P (2010) A risk assessment and management framework to support project delivery Held 29–31 May at Crete, Greece, Athens: Centre for Construction Innovation, National Technical University of Athens, 52–59.
- Ahadzi M. and Bowls G (2004) Public -Private Participation in Infrastructure and Contracts negotiations: An empirical study, Construction Management and Economics (22) 967-978.
- Aibinu A A. and Jagboro G. (2002) The effects of construction delays on project delivery in Nigerian construction industry. International Journal of Project Management 2, 593-599.8–12.
- Aiyetan A. O. (2010) Influences on Construction Project Delivery Time PhD dissertation Nelson Mandela Metropolitan University
- Ajanlekoko J. (1987) Controlling Cost in the Construction Industry. Lagos QS Digest1,
- Amer,W.H(1994) Analysis and evaluations of delays in construction Projects in Egypt. Msc. dissertation, Zigzag University Egypt.
- Ampadu-Asiamah A D and Ampadu-Asiamah O. K. (2013) Management of Government Funded Construction Projects in Ghana: Stakeholders Perspective of Causes of Delays in Construction of Public Buildings (online) retrieved on 5 January 2014 from <http://www.iiste.org/conference>
- Aniekwu, A. (1995). The business environment of the construction industry in Nigeria. *Construction Management and Economics*, 13(6), 445-455.
- Arthur, D. (1999) “The Corporate Decision Making Process of Sport Sponsorship in Australia”, PhD thesis, Southern Cross University.
- Asare, K. K (2011) Procurement Systems and Project Success in the Ghanaian Construction Industry(online) Msc dissertation Kwame Nkrumah University of Science and Technology retrieved on 17 March, 2014 from <http://dspace.knust.edu.gh:8080/jspui/bitstream/123456789/2089>.

- Assaf, S.A and Al Hejji S. (2006) Causes of delay in large construction projects. *International Journal of Project Management* 24, 349-357.
- Aulich, C. Halligan, J. & Nutley, S. (2001) *Australian Handbook of Public Sector Management*, Allen & Unwin, Sydney. Bibliography 254
- Australian Industry Commission (1996) *Competitive Tendering and Contracting By Public Sector Agencies, Report No. 48*, Australian Government Publishing Service, Melbourne.
- Ayman, H. (2000) Construction delay: a quantitative analysis, *International Journal of Project Management*, 18 (1), 51-59.
- Badu, E and Manu, D (2009) Improving Access to Construction Finance in Ghana: Empirical descriptions of Constraints and Antidotes. *Journal of Business and Enterprise Development* 2 111-128.
- Baldwin, J. R., Mathei, J. M., Rothbart, H., and Harris, R. B. (1971). Causes of Delay in the Construction Industry *Journal of Construction Division, ASCE*, 97(2), 177-187.
- Banyin, D.N. (2011) Factors Affecting Delayed Payments on Donor Funded Road Projects in Ghana (online) Msc dissertation Kwame Nkrumah University of Science and Technology retrieved on 23 February, 2014 from <http://dspace.knust.edu.gh:3050/jspui/bitstream>.
- Barimah, N (2008) An Investigation into the Use of Construction Delay and Disruption Analysis Methodologies (online) Phd. Dissertations retrieved on 23 March, 2014 from http://wlv.openrepository.com/wlv/bitstream/2436/38824/3/Braimah_PhD%2520thesis.pdf?ev=pub_ext_btn_xdl.
- Bester, H (1984) Screening versus Rationing in Credit Markets with Imperfect Information (online) *The American Economic Review* (75) 4, 850-855 retrieved on 12 March, 2014 from <http://www.ase.ro/upcpr/profesor/167/bester.pdf>.
- Boateng A. K(2011) The Effect of Delayed Payment on Cash Flow Forecasting of Ghanaian Road Contractors(online) Msc dissertation Kwame Nkrumah University of Science and Technology retrieved on 20 April, 2014 from <http://dspace.knust.edu.gh:2050/jspui/bitstream>.
- Cant, M & Jeynes, L. (1998) What does outsourcing bring you that innovation cannot? How outsourcing is seen - and currently marketed - as a universal panacea", *Total Quality Management*., vol. 9, nos. 2&3, pp. 193-201.
- Carson, D, Gilmore, A, Perry, C & Gronhaug, K (2001) *Qualitative Marketing Research*, Sage Publications, London.

- Chan, D. W. M., and Kumaraswamy, M. M. (1996) Reasons for Delay in Civil Engineering Projects-The case of Hong Kong.Hong Kong Institution of Engineers Transactions, 2(3), 1-8.
- Chileshe, N. and Berko, P. D. (2010) Causes of project cost overrun within Ghanaian road construction sector. In the proceeding of ASOCSA 5th Built Environment Conference, Durban South Africa.
- Cohen, L.,Manion, L., & Morrison K. (2007) Research Methods in Education (5th Edition).London: RoutledgeFalmer.
- Creswell, JW (1994) *Research Design: Qualitative & Quantitative Approaches*, Sage Publications, Thousand Oaks.
- Creswell, JW (1998) *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*, Sage Publications, Thousand Oaks.
- Creswell, JW (2003) *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, Sage Publications, Thousand Oaks.
- Creswell, JW & Miller, DL (2000) Determining Validity in Qualitative Inquiry“, *Theory into Practice*, vol. 39, no. 3, Summer, pp. 124-130.
- Creswell, JW, Plano Clark, VL, Gutmann, ML & Hanson WE (2003) Advanced mixed methods research designs“, in *Handbook of Mixed Methods in Social and Behavioural Research*, eds A Tashakkori & C Teddie, Sage Publications, Thousand Oaks.
- Cresswell, J. W. (2011). Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research Upper Saddle River, NJ: Pearson Prentice Hall.
- De Ruyter, K & Scholl, N (1998) Positioning qualitative market research: reflections from theory and practice, *Qualitative Market Research: An International Journal*, vol. 1, no. 1, pp. 7-14.
- DiCicco-Bloom, B & Crabtree, BF (2006) The qualitative research interview, *Medical Education*, vol. 40, pp. 314-321.
- Donalek, JG (2005) The Interview in Qualitative Research, *Urologic Nursing*, vol. 25, no. 2, April, pp. 124-125.
- Dooley, D (1990) *Social Research Methods*, Prentice Hall, Englewood Cliffs.
- Faradi, A.S. and El-Sayegh, S.M. (2006) Significant factors causing delay in the UAEconstruction industry, *Construction Management and Economics*, 24 (11), 1167-1176
- FIDIC (1999) Conditions of Contract for Construction for Building and Engineering.

- Frimpong, Y. (2000). Project management in developing countries: causes of delay and cost overruns in construction of groundwater projects. Unpublished Masters Research Project, University of Technology, Sydney, Australia.
- Frimpong, Y. and Oluwoye, J. (2003) Significant factors causing delay and cost overruns in construction of groundwater projects in Ghana (online) *Journal of Construction Research* 1, 175-8 retrieved on 14 March 2014 from <http://dx.doi.org/10.1016/S0263>.
- Fugar, F D K and Agyakwah Baah, A B (2010) Delays in building construction projects in Ghana, *Australasian Journal of Construction Economics and Building*, 10 (1/2)103-116 retrieved on 13 December 2014 from <http://epress.lib.uts.edu.au/journals/index.php/AJCEB>.
- Gardner D and Wright J (2005) Project Financing (online) retrieved on 3rd March, 2014 from <http://www.hsbcnet.com/gbm/attachments/productsservices/financing/project-finance.pdf>.
- Ghana Statistical Service (2012) Ghana Domestic Product for 2012 retrieved on 20 December, 2012 from www.statsghana.gov.g.
- Grout P, (2003) Public and Private Sector Discount rates in Public –Private Partnership, *The Economic Journal* 116 62-68.
- Guba, EG & Lincoln, YS (1994) Competing paradigms in qualitative research“, in *Handbook of Qualitative Research*, eds NK Denzin & YS Lincoln, Sage Publications, Thousand Oaks, pp. 105-117.
- Gummesson, E. (2003) All research is interpretive!“, *The Journal of Business and Industrial Marketing*, vol. 18, nos. 6/7, pp. 482-492.
- Hakim, C (2000) *Research Design - Successful designs for social and economic research*, Routledge, London and New York.
- Harris, C (2003) Private and Public Partnership in Infrastructure in Developing Countries; Trends, Impacts and Policy lessons IBRD/WB.
- Haseeb, M., Xinhai-Lu, Aneesa B, Maloof-ud-D, and Rabbani, W. (2011) Problems of projects and effects of delays in the construction industry of Pakistan *Australian Journal of Business and Management Research*, 1 (5) pp 41-50 retrieved on 15 February, 2014 www.qspace.qu.edu.qa/handle/10576/7921.
- Hensey, M. (1993) Essential tools of total quality Management. *Journal of Construction Engineering and Management*, ASCE, 9(4), 329–39.
- Holstein, JA & Gubrium JF (2002) Active Interviewing“, in *Qualitative Research Methods*, ed. D Weinberg, Blackwell Publishers, Oxford, pp.112-125.

- Holstein, JA & Gubrium JF (2003), *Inside Interviewing - New Lenses, New Concerns*, Sage Publications, Thousand Oaks, pp. 3-32.
- Jackson, W (1995) *Methods: doing social research*, Prentice-Hall Canada Inc., Scarborough Ontario.
- Johnson, RB & Onwuegbuzie, AJ (2004) Mixed Methods Research: A Research Paradigm Whose Time Has Come", *Educational Researcher*, vol. 33, no. 7, October, pp. 14-26.
- Jones, C (1991) Qualitative Interviewing", in *Handbook for Research Students in the Social Sciences*, eds G Allan & C Skinner, The Falmer Press, London, pp. 203-213.
- Judd, CM, Smith, ER & Kidder LH (1991) *Research Methods in Social Relations*, Sage Publications, Thousand Oaks.
- Kahn, RL & Cannell, CF (1957) *The Dynamics of Interviewing: Theory, Technique and Cases*, Wiley, New York.
- Lincoln, YS (1990) The Making of a Constructivist: a Remembrance of Transformations Past", in *The Paradigm Dialog*, ed. EG Guba, Sage, Newbury Park, pp. 67-87.
- Marshall, C & Rossman, GB (1999) *Designing Qualitative Research - 3rd Edition*, Sage Publications, Thousand Oaks.
- Menesi, W. (2007) Construction Delay Analysis under Multiple Baseline Update. Msc dissertation (online) University of Waterloo retrieved on 19 November, 2013 from <http://www.uwspace.uwaterloo.ca/bitstream/10012/2737/1>.
- Miles, MB & Huberman AM (1994) *Qualitative Data Analysis: an Expanded Sourcebook*, Sage Publications, Thousand Oaks.
- Miller, WL & Crabtree, BF (2004) Depth Interviewing", in *Approaches to Qualitative Research: a Reader on Theory and Practice*, SN Nagy Hesse-Biber & P Leavy, Oxford University Press, New York, pp. 185-202.
- Ministry of Finance (1999) Budgetary Report for 1999.
- Mishler, EG (1986) *Research Interviewing - Context and Narrative*, Harvard University Press, Cambridge Massachusetts.
- Mohammadjavad M. and Masoom M. (2011) The Result of Delayed Projects on Publics Satisfaction in Tehran' 2011 2nd International Conference on Construction and Project Management IPEDR vol.15.
- Mohd R. (2010) The factors and effect of delay in Government Construction (online) Bsc. thesis. University Malaysia Pahang retrieved on 20 February, 2014 from <http://elib.uum.edu>

- Morichi, S., Hasegawa, A, Acharya S.R., and Hata, K. (2005), Introduction of Time Management Concept for Public Work Projects. Journal of Construction Engineering and Management.
- Morris, S., (1990) Cost and time overruns in public sector projects. Economic and Political weekly, Vol. 25, No.47, PP. M 154 to M 168.
- Motaleb, O and Kishk, M (2010) An investigation into causes and effects of construction delays in UAE. In: Egbu, C. (Ed) Procs 26th Annual ARCOM Conference, 6-8 September 2010, Leeds, UK, Association of Researchers in Construction Management.
- Mulcahy and Partners (2014) Project Management in Construction's role in accommodating future population growth (online) retrieved on 4 November, 2013 from www.mmp.ie/project-management-in-constructions-role-inaccommodation
- Murali, S. and Yau, W. S. (2007) Causes and effects of delays in Malaysian Construction Industry. Graduate School of Management University Putra Malaysia 43400 UPM, Serdang Selangor Malaysia.
- Murdoch, J. and Hughes, W. (1992) Construction Contracts: Law and Management, E & FNSPON, London.
- National Commission (2011) Construction Industry in Ghana, Report.
- Nagy Hesse-Biber, SN & Leavy, P (2004) Distinguishing Qualitative Research", in *Approaches to Qualitative Research: a Reader on Theory and Practice*, eds SN Nagy Hesse-Biber & P Leavy, Oxford University Press, New York, pp. 1-15.
- Ndandiko, C. (2006) Public Private Partnerships as Modes of Procuring Public Infrastructure and Service Delivery in Developing Countries: Lessons from Uganda. Conference paper International Public Procurement Conference Proceedings.
- Nwachuku, C.C and Emoh, F.I (2010) A system approach in analyzing material constraining factors to Factors to construction project management success in Nigeria. IJCRB (2) 5, 90-104.
- Ochs, E & Capps, L (2002) Narrative Authenticity", in *Qualitative Research Methods*, ed. D Weinberg, Blackwell Publishers, Oxford, pp.129-132.
- Odeh, A.M. and Battaineh H (2002) Causes of construction delay: traditional contracts International Journal of project Management, 20, 67-73.

- Odeyinka, HA and Yusif, A(1997). The causes and effects of construction delays on completion cost of housing project in Nigeria. *Financial Manage Property Construction* 2(3):31–44.
- Oglesby, C, Parker, H and Howel, G (1989) *Productivity Improvement in Construction*, McGraw-Hill, New York.
- Ogunlana, S.O., Promkuntong, K., and Jearkijrm, V. (1996) Construction delays in a fast-growing economy: comparing Thailand with other economies *International Journal of Project Management*, 14, 37-45.
- Owusu, A. G (2010) Looking at the Public Private Partnerships and the Traditional way of construction of Project Msc. The University of Agder, Kristiansand.
- Patton, MQ (1987) *How to Use Qualitative Methods in Evaluation*, Sage Publications, Newbury Park.
- Patton, MQ (2002) *Qualitative Research and Evaluation and Methods*, Sage Publications, Newbury Park.
- Kassab, M., Hipel, K., and Hegazy, T. (2006) Conflict Resolution In Construction Disputes Using The Graph Model. *Journal of Construction Engineering and Management*, ASCE, 132(10), 1043-1052
- Khoshnaghazi.M, (2006) Delay reasons in constructing projects, M.S thesis in project management, Tarbiat Modares University.
- Kikwasi, G.J. (2012) Causes and effects of delays and disruptions in construction projects in Tanzania *Australasian Journal of Construction Economics and Building*, Conference Series 1 52-59.
- KoushkiP.A, Al-Rashid K. and N. Kartam (2004) Delays and cost increases in the construction of private residential projects in Kuwait (online) *Journal Construction Management and Economics* retrieved on 8 November 2013 from <http://www.tandf.co.uk/journals>.
- Kuei-Mei H., Jyh-Bin Y., Chang-Hung L., and Ruei-Yu K. (2012) Case Study of Delay Impact Analysis of Lost Productivity In Construction Projects. *Journal of Construction Engineering and Management*, 131(11), 1147-1154.
- Kvale,S.(1996) *Interviews: An introduction to Qualitative Research Interviewing*, London: SAGE, Chapter 7:The Interview Situation 124-135.
- Lo, T. Y., Fung, I. W. H., and Tung, K. C. F. (2006) Construction Delays in Hong Kong Civil Engineering Projects. *Journal of Construction Engineering and Management*, ASCE, 132(6), 636-649.

- Lowsley, S. and Linnett, C. (2006) *About Time: Delay Analysis in Construction*. Rics Business Services Limited.
- Lyer, K.C. and Jha, K. N. (2006) Critical Factors Affecting Schedule Performance: Evidence from Indian Construction Projects *Journal of Construction Engineering and Management*, ASCE, 132(8), 871-881.
- Ramabodu, M.S., and Verster, J.J.P. (2010) Factors Contributing to Cost Overruns of Construction Projects. In the proceeding of ASOCSA 5th Built Environment Conference, Durban South Africa.
- Rowlinson, S. (1987) Comparison of Contracting Systems for Industrial Buildings. In *Managing Construction Worldwide: Volume One: Systems for Managing Construction*. Edited by Peter R. Lansley and Peter A. Harlow. London and New York: E and F.N. Spon.
- Rubin, R.A., Guy, S. D. Maevis, A. C. and Fairweather, V. (1983) *Construction Claims: Analysis, Presentation, Defence*, Van Nostrand Reinhold, New York.
- Saleh, H. T., Abdelnaser, O., and Abdul H. P. (2009) Causes of delay in construction industry in Libya (online) *The International Conference on Administration and Business* retrieved on 1 March, 2014 from http://ijret.org/volumes/v03/i01/ijret_110301091.pdf
- Sambasivan, M. and Soon, Y.W. (2007) Causes and effects of delays in Malaysian construction industry, *International Journal of Project Management*, 25, 517-526.
- Sarantakos, S (1998) *Social Research*, 2nd edn, Macmillan Education, South Yarra.
- Sebastian, M. (1992) Cost and Time Overruns In Public Sector Projects In *Economic And Political Weekly* N25, 47, 154
- Shuy RW (2003) In-person versus telephone interviewing", in *Inside Interviewing - New Lenses, New Concerns*, eds JA Holstein & JF Gubrium, Sage Publications, Thousand Oaks, pp. 179-180.
- Tamakloe, Y.A. (2011) Assessment of Cost And Time Impacts of Public Sector Construction Projects in Ghana. Msc. Dissertation. Kwame Nkrumah University of Science and Technology.
- Trauner, J. T. (1990) *Construction delays-Documenting Causes; Wining Claims; Recovering Costs* R. S. Means Company Inc. USA.
- Unver, G. D. (2015). *Turkish Contractors In The Project Finance Of Power Projects In Sub-Saharan Africa (Ssa)* (Doctoral Dissertation, Middle East Technical University).

World Bank (1990) Annual Review of Project Performance Results. World Bank
Zack, Jr. J. (2001) But-for Schedule- Analysis and Defense. Cost Engineering Journal,
AACE International.

KNUST



APPENDIX

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

COLLEGE OF ART AND BUILT ENVIRONMENT

DEPARTMENT OF BUILDING TECHNOLOGY

INTERVIEW GUIDE

AN ASSESSMENT OF PAYMENT DELAYS IN PUBLIC CONSTRUCTION PROJECTS AND IT'S EFFECT ON PROJECT PRE-FINANCING IN GHANA – CASE STUDY, EDUCATIONAL BUILDINGS

Dear Sir/ Madam,

POSTGRADUATE RESEARCH PROJECT

This thesis is assessing the payment delays in public construction projects and its effects on pre-financing of projects in Ghana – Case Study, Educational Buildings. You are assured of your utmost confidentiality as its only purpose is to help improve and enhance construction of projects in Ghana.

Thank you for your participation.

Project Student

Project Supervisor

Miss Maame Aba Wusuah Affare

Rev. Prof. K. D.

Fugar

Mobile Phone No: 0244-961946

E-mail: trustmarmie@yahoo.com

OJECTIVES:

This study is undertaken on the follow objectives:

- I. To identify the major sources of funds for project pre-financing in Ghana.

QUESTIONNAIRE/ INTERVIEW GUIDE:

Respondents

- a. Consultants
- b. Contractors
- c. Financiers

1. How many years of experience have you gained in building construction industry?
2. Where do you usually get the funds/money to start an awarded contract?

II. To identify the causes of delayed payments.

- a. Consultants
- b. Contractors

1. Are there always sufficient funds available for the project start-up?
2. What are the causes of delayed payments?
3. Do you always have sufficient funds available for your clients for their project start-up?

III. To identify how contractors deal with delayed payments.

- a. Consultants

1. How do contractors deal with delayed payments?

- b. Contractors

1. How do you deal with delayed payments?

IV. To determine how delayed payment affects the contractor.

- a. Contractors
- b. Financiers

1. How does delayed payment affect the progress of contracts?
2. How have contractors dealt with delayed interim certificate payments?

V. To find out how delayed payment is affecting project pre-financing

arrangements in the building construction industry.

a. Contractors

b. Consultants

c. Financiers

1. How does delayed payment affect project pre-financing arrangement?
2. How has delayed payment affected the contractor's ability to borrow?
3. Under what conditions do the lenders advance the funds to you to start the project?
4. After raising the needed initial capital to start a project, how do you sustain the cash flow?
5. How does delayed payment affect the contractor's financial performance?
6. Are Valuation & Certificates raised honored timely and promptly? If No - Why so?
7. How long does it take?
8. When there are delays in honouring certificates are you communicated to?

