

THE EFFECT OF DELAYED PAYMENT ON CASH FLOW FORECASTING OF
GHANAIAN ROAD CONTRACTORS

BY

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DECLARATION

I hereby declare that, except for references to other people's works, opinions and observations which have been duly acknowledged, this work is the result of my research. I hereby declare that, this work has not been presented for a degree elsewhere.

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Head of Department Name

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Date

DEDICATION

This work is dedicated to God Almighty and for His support through this study.

I also dedicate it to my dearest wife, Rita Amoako Boateng, my children and my family.

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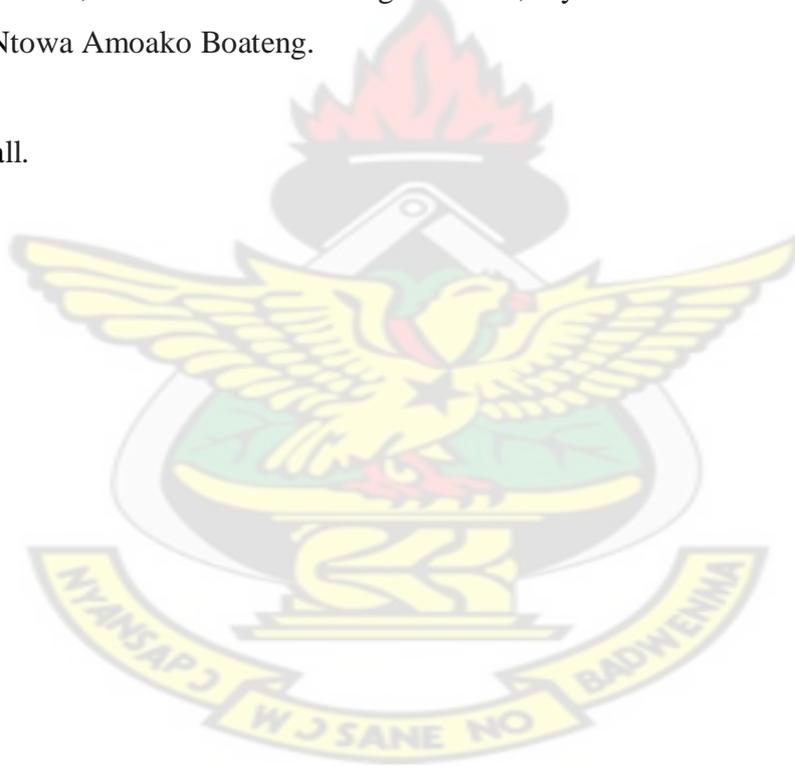
My sincere thanks go to Almighty God who kept me throughout the course and gave me success.

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God bless you all.



ABSTRACT

Delayed payment to contractors has a serious effect on early completion of projects in the construction industry in the world. Although there has been an effort to improve payments by Government of Ghana in the recent years, problems arising from payment issues are getting more severe. The study sought to unravel the effects of delayed payments problems facing Ghanaian road contractors. A deductive methodological approach was adopted for the study using literature search and surveys. The preliminary survey and literature search revealed a number of subjects that played a crucial role in this work. Among these were; the implication of delayed payment by the various stakeholders, its accompanying effects, strategic measures employed by contractors, suggestions or options necessary to mitigate delayed payments and finally, means contractors use to recover default payment. This study was restricted to Ghanaian road contractors. The survey was therefore carried out on fifty-two (52) A1B1 and A2B2 construction firms selected using Purposive and Snowball sampling. SPSS analysis was used to analyze the data collected. The survey revealed that, the rippling effects of delay in paying contractors were enormous. This includes; creation of cash flow problems, difficulty in procuring materials and services and creation of enormous stress on contractors, as the top three. In spite of all these draw backs, contractors put in some strategic ways or avenues to improve their cash flow. Respondents indicated that, there should be regular periodic payment, also payment of interest on default payment, and finally a defined time frame for payment. Delay of payment to contractors has numerous impasses which creates conflicts between the parties in the contract. Deductions from the survey revealed that, if pragmatic measures are not taken, delay of payment can hamper the growth of the Ghanaian road construction industry. As such the following recommendations can help improve the current situations if not totally eliminate the menace. They include the following: Enforcing clauses of late payment in contracts. This could be done by applying charges to overdue payments in the same way as liquidated damages have been applied; The government, which is the main employer, should introduce payment bonds and “Construction Guarantee Fund” schemes to enable road contractors to obtain bonds and guarantees at concessionary terms; Establishment of Construction Industry Payment and Adjudication Act which will help in the reduction of Payment Default and Dispute Resolution; and Finally, it is also true that needed investment cannot alone be generated through public financing and therefore private funding needs to be geared up. In conclusion, it is hoped that these findings would help in improving the payments problems of the Ghana road construction industry, and would be useful to draft a better way in seeking right for the contractors in attainment of payment on the predetermined time.

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CHAPTER ONE

1. INTRODUCTION

1.1 Background to the Study

In Ghana, one of the cardinal problems facing construction and engineering contractors in the current economic conditions is payment default. The practice of well-organized and timely payments in construction projects is one of the main issues leading to a good project's success. The importance of payment is further amplified by the fact that the construction industry relatively involves long durations to complete projects, large amounts of money to spend and the wide use of credit payment term rather than payment on delivery in purchasing of materials (Ameer, 2005b).

It is generally accepted that delayed payment would cause severe cash flow problems especially to the contractor and this would have a devastating knock-on effect down the contractual payment chain. According to Gading (1998) stated that cash flow is cedi important to a contractor. Any delay of payment will affect their cash flow and cause them difficulty in financing. Delayed payment issues or contractors' payment afflictions are considered to affect many players in the Ghanaian road construction industry, especially, on government funded projects. As such, there is the urgency to find alternative remedies which could effectively put an end to the cash flow problems in our road construction industry in Ghana.

1.2 Problem statement

Though the employer and other stakeholders in the road construction industry continue to complain about the industry's inability to deliver projects within the scheduled project duration, budgeted project cost and acceptable project quality, there remains a constant problem of delayed payment in the Ghanaian road construction industry. An important factor which impedes the capabilities of contractors is irregular and delays in payment. This has resulted in high cost of capital from banks, inadequate equipment holding, late completion of projects, poor quality works, unemployment, increase of total project cost, disputes, liquidation of construction firms and loss of productivity . There is, therefore the need to identify ways to improve the contractors' cash flow in the Ghanaian road construction industry.

1.3 Objectives of the study

The principal objective of this research is to investigate the effects of delayed payment and cash flow forecasting of road contractors in the Ghanaian road construction industry.

The specific objectives are:

- i. To establish the implications of delayed payment problems and its effect on Ghanaian road contractors and other stakeholders;
- ii. To identify effective options available and strategic methods developed by contractors to improve their cash flow forecasting; and
- iii. To identify means of recovering payment-default in construction Industry.

1.4 Research Questions

The study poses the following research questions:

- i. What are the implications of delayed payment problems and its effect on Ghanaian road contractors and other stakeholders?
- ii. What are the effective options available and strategic methods developed by contractors to improve their cash flow forecasting?
- iii. What are the means of recovering payment-default in construction Industry?

1.5 Significance of the research

This study is relevant because it will assist the government and relevant parties in addressing problems associated with the effects of delayed payments and effectively improve Ghanaian road construction industry. It is hoped that the government and relevant parties would adopt and implement the necessary plan of action in order to reduce disputes on payment in any construction project, so as to create a friendly and enjoyable working environment for all parties and to improve the payment flows in the Ghanaian road construction industry. The result of this research may be of significance to policy makers, developers, consultants and contractors. It will also help in reducing delayed payment issues and increase contractors' cash flow forecasting. It will also be a source of knowledge.

1.6 Scope of the Study

The study focused on road construction contractors with classification of A1B1 and A2B2 because such companies usually undertake large volumes of works and, hence, engage large number of workers. According to the classification guideline of Ministry of Roads and Transport, A1B1 and A2B2 contractors are companies that have demonstrated experience in road works.

1.7 Organisation of study

The study is structured into five chapters. Chapter one is the introductory chapter. It provided an overview of the context in which the research was conducted. Chapter two is the literature review and was based on other researchers' viewpoint on the topic. Research Methodology chapter, which is chapter three, described the procedure of data collection and the techniques used in the survey with reference to the objectives of the study. Chapter four is the Data Collection and Analysis. Chapter five is about Conclusions and Recommendations.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1 Introduction

As stated in Chapter One, the objectives of this study include the establishment of implications of delayed payment problems on Ghanaian road contractor and other stakeholders; investigation of effective options available and strategic methods developed by contractor to improve their cash flow forecasting and identification of means of recovering payment-default in construction Industry. Payment is a sum of money paid to someone. In the construction industry, payment is the sum of money paid to contractors after their works or certain projects have been successfully realized. Contract period refers to the duration for completing the construction project. When the contract period is delayed, it means the contract cannot be completed within the stipulated time. Delays in payment will lead to: extension of time; non-completion; termination of contract.

2.2 What is Payment?

According to Johnston (1999), survey of the Payment Performance in Britain has shown that the construction industry, in particular, was prone to late-payment culture, with payment of debts due to subcontractors and suppliers being made, on average, 53 days after invoices or applications for payment had been rendered. As stated by Kennedy (2005), 'Payment, not unexpectedly, has always been the main subject of disputes.' It is anticipated that conflict if unsettled will escalate into disputes which can also cause late and non-payment. Several relevant studies have been conducted in the United Kingdom which addressed the problems related to payment issues in the construction industry. For

example the so-called Latham Report (Latham, 1994) has introduced some radical measures to resolve problems related to payment issues in the construction industry by introducing the Construction Contracts Act, establishing mandatory trust funds for payments and suggesting that adjudication should be the normal method of dispute resolution. Some of the recommendations have been incorporated in the Part II of the Housing Grants, Construction and Regeneration Act 1996.

2.2.1 Types of Payment

According to Chen, et al., (2005), a regular disbursement of interim payment is a critical point for a contractor to keep them alive. Whether it's late payment or not being paid in the amounts certified, it all literally means big problems to the contractors as cash flow will be effected. Some small construction companies would close business due to late payments. The schemes for reimbursing the contractor for works done under a typical construction contract as varied as the types of such contract encountered in practice. In Malaysia however, the schemes have been reduced into the following principal categories:

2.2.2 Periodic Schedule during Contract Period

During contract period, the most common method used is interim payments or the so called progress payments. In Standard Forms, the interim or progress payments are effected by the issuance of 'interim certificates'. Interim certificate is actually the periodic certification for the payment due to contractor. The failure of the certifier to issue the relevant 'interim' certificates in line with the stipulation of the contract can expose his employer to a possible claim of breach of contract by the contractor (Singh,

2003). The frequency of periodic payment could be varied from fortnightly to monthly. The actual duration is normally the period as agreed in the contract conditions signed.

2.2.3 Phase Payment

The term phase payment is used when the payments are made at specific phases of work. This mode of payment is often used in small lump sum contract without quantities where a proportion of the total sum is agreed to be paid over a number of phases. These proportions are fixed and do not depend upon any re-measurement of work. Nevertheless, the application, this mode of payments is also applied in Turnkey, Design & Build as well as contracts involving repetitive works.

2.2.4 Advance Payment

This is the sum of money paid to the contractor by the employer well before the work involved is executed. This practice is usually done in public work contracts. The main purpose of implementing this scheme is to help the contractor to start up and finance the contract without resorting to unnecessary external borrowings.

2.2.5 Payment after Completion

This is the method of payment to contractor triggered by the achievement of the contract milestone of practical or substantial completion and/or the so called handing over of the works to the employer. Hence, unless such stage is reached and certified by the contract administrator, the contractor is not entitled to any payment whatsoever. In using this method, the contractor is basically financing the works to a large degree, which costs would eventually build into the contract sum. The employer must also be prepared to

shoulder this burden as well as be in a position to source and effect payment ultimately of a sizeable lump sum amount upon the taking over of the works.

2.2.6 Impacts of Delayed Payment

Lip (2003) concluded that during the years, with the diminished volume of construction work, contractors are reeling under relentless pressure to tender with little or non-existent margins or as most aptly called 'suicide' bids just to sustain the flow of work orders. Payment to contractors or lack of it is a common cause of disputes in the construction industry. Timeliness of payments affects many contractors, for whom receiving delayed payments from their employers is a cause of friction between the two parties.

Meng (2005) in his works stated that all problems in construction begin when payment is not received at the exact amount or date. Disagreements then leads to arguments as relationships sour, and the stage becomes a setting for conflict, blame, finger pointing, buck-passing and lawyers. Projects exceed initial time and cost estimates and experience extensive delays. But contractors are the ones who suffer the most when things like this occur. This is the case especially when Design and Built construction contracts are practised more and more nowadays.

Delayed payments never bring justice to contractors. Sub-contractors are very much the same, if not worse condition, because of late payment (Artidi and Chotibongs, 2005). Its effects sometimes are so harsh that some companies had to close due to payments issues. One of the biggest consequences would be the interest. Interest is a fact of life in the world of business, and the construction industry of Malaysia is no exception. Contractors

often borrow working capital from banks in order to finance their construction operations and invariably have to pay interest on these borrowings.

Contractors are therefore highly dependent upon regular interim payments from employers during the course of construction to help discharge the debt so accrued. Therefore, when a contractor does not receive interim payments on time or in accordance with the terms agreed or for the proper amount, the interest he or she needs to pay in the form of finance charges to the bank will invariably increase. But then, the legal presumption is that in the ordinary course of things, a person does not suffer any loss by reason of the late payment of money; a presumption which is clearly fallacious in modern times.

The basic common law is that interest is not considered to flow naturally from a breach, and therefore cannot be claimed as general damages where the only breach is late or non payment was affirmed in *London v Chatham and Dover Railway Company v South Eastern Railway Company* (Rae, 2002). If this is the case, it does not only burden the contractor physically but mentally as well as he can't do anything about it.

Sub-contractors are also affected by late payments. Subcontractors are often paid late by main contractors because of pay-when-paid and pay-if-paid clauses included in most contract forms. The consequences of the subcontractors being paid late are grave.

In such situations, some subcontractors tend to increase their quotations, which in turn increases total project cost, an undesirable condition for owners. It should be possible to improve subcontractor payment practice if developers pay main contractors on time, and

in turn main contractors pay their sub-contractors right after completion of sub-contract work. Other than that, late payment will also affect the contractor's performance. He can lose his workers. He wouldn't have sufficient funds for the construction. The construction process will delay and the list goes on. But one thing for sure, it all brings negative influence to the overall construction process. Effective cash flow forecasting can be "profitable" in and of its self. Cash shortages result in increased costs, such as interest charges on loans, late-payment penalties, and loss of vendor discounts for paying bills promptly. Cash flow improvements can eliminate these costs and create the opportunity for more favourable payment terms on some types of purchases. Ultimately, organizations that improve the manner in which they receive and expend cash will be more successful. They will also be able to increase their income.

Statistics from South Africa (2005) shows that from 1995 to 2005, about 5,907 construction companies were formally liquidated. The CIDB (2004) states that much more than 90% of the emerging black contractors survived the first five years. The CIDB further highlights that 1,400 construction companies were liquidated over the past three years. Emerging contractors feel that the banks are reluctant to deal with them unless exorbitant interest rates and through compulsory business management services. Complexity, risks involved in the construction industry have led to enormous failures especially in small contractors and those small emerging contractors harbouring the wrong impression that there is quick money to be made are the mostly affected (Ngala, et al., 2005).

The drive to maximise positive cash flow will continue to lead to disputes about payment. The disputes predominantly about payment issues are becoming larger and more

complex. There are various methods of dispute resolution, which range from the less structured form of mediation to the rigid procedures found in court litigation. The prolonged and complicated procedures in arbitration is said to be the cause for the need for introducing statutory adjudication (Cheng, 2006).

As most government agencies experience financial problems, there are delays of payments to contractors – with a consequent adverse effect on the contractor’s cash flow (Ofori, 1991). According to Murdoch and Hughes (1996), ‘it is not uncommon to find that a contractor or sub-contractor who has not been paid what his due threatens to suspend work under the contract until payment is made’. It must however be noted that without a clear contractual right to suspend the works, the contractor is not entitled to do so even though the employer has failed to pay him within the time stipulated in the contract. In this respect, if the contractor suspends the work the courts may find him guilty of repudiating the contract.

Late payments are often associated with other issues in Malaysia’s construction industry such as productivity, non-conformance, safety, delay and abandonment issues (Oon, 2002). The common mechanisms for dispute resolution in Malaysian construction industry are presently by way of arbitration and litigation. These mechanisms have always involved the judicial system and a complex body of rules as to procedure. It is no secret that these mechanisms of dispute resolution leave much to be desired. Criticisms are frequently made as to its many inadequacies and shortfalls. Litigation is affordable but it takes too long. It may be heard after a long delay by a judge with little or no experience in the field of construction (Rajoo, 2003). On the other hand, arbitration is faster but it is expensive. In any case, both modes will still take a considerable length of time as the

disputes will have to be determined and disposed in accordance with the law, which must amongst others, require affording the disputant natural justice in the presentation of their respective case (Lim, 2002). Critics have also lambasted the construction industry for its outdated and inefficient payment practices resulting from an undesirable culmination of disputed and late payments and the uncertainty on when payment is due (Lip, 2006).

Wiguna and Scott (2005) studied the risks affecting construction delays and cost overruns in building projects in Surabaya and Denpasar, Indonesia. They identified the most critical factors as: high inflation/increased material price; design change by client; defective design; weather conditions; delayed payment on contracts and defective construction work. Shi, et al. (2001), delays can occur in any and all activities, and these delays can concurrently or simultaneously cause delays in the project completion. In other words, a project delay is the accumulated effect of the delays in individual activities. Delays can give rise to disruption of work and loss of productivity, late completion of project, increased time related costs and third party claims and abandonment or termination of contract. Methods of minimizing construction delays can be established when causes of delays are identified. Knowing the cause of any particular delay in a construction project would help avoiding the same.

2.3 What is Cash?

According to the Pocket Oxford Dictionary, Cash means money in coins or notes. Cash includes: coins and notes, money in current accounts and short-term deposits, any unused bank overdraft facility and foreign currency and deposits that can be quickly converted to your currency.

2.3.1 What is Cash Flow?

Cash flow refers to the movement of cash into or out of a business, a project, or a financial product. It is usually measured during a specified, finite period of time. For a business to be successful, good cash flow is crucial. Cash flow is the primary indicator of a business' financial health. It's the measure of your ability to pay your overheads such as rent, insurance and wages. Ultimately, effective cash flow is a key business skill and will help protect the financial security of your business. Good cash flow forecasting is a balancing act, juggling your cash inputs and outputs. One of the reasons why many businesses fail is poor cash flow management.

2.3.2 Problems of Poor Cash Flow

As stated by Lip (2003), the construction payment blues have domino effects. A delayed payment by one party may affect the whole supply chain of payment of a construction project. For instance, if an employer delays in making payment to the contractor, this in turn will result in contractor's delay in making payment to the sub-contractor. The further consequences of the negative chain effect will create cash flow problems. Lack of access to finance, both during pre-construction which disqualifies emerging contractors from meeting guarantee and performance bond requirements and during construction, which

leads to cash-flow problems, incomplete work and even liquidation are financial constraints facing emerging contractors. Gading (1998) stated that cash flow is very important to a contractor. Any delay of the payment will affect their cash flow and cause them difficulty in financing.

Small contractors have very low financial reserves and use the profit from ongoing projects to finance their next project; hence a loss in one project ultimately leads to a cash flow problem and liquidation (Stretton, 1984).

This is exacerbated by the tendency for small contractors in developing countries to take money out of the business for spending on personal items such as cars or a new house (ILO, 1987). This practice not only affects profitability of those parties but it also causes serious cash flow problems particularly to smaller firms (Brand and Uher, 2004).

In addition, delays in contractor payment caused by the cumbersome process of making contractor payments in the public sector create financial problems for the contractor. Unless well managed, this delay is very damaging to contractors who are operating in a location remote from the client (Edmonds and Miles, 1984). Many small contractors also experience difficulties in obtaining money from financial institutions to finance their business due to the high levels of bankruptcy in the industry; hence the initial capital for the business must come from the contractor (Miles, 1979).

2.3.3 Possible Solutions to Cash Flow

Sir Harold Banwell commented that: *“The operation of the payment system is not always smooth. Payment to the main contractor by the clients is often slow and uneven, with consequential delays in payments to suppliers and subcontractors. This has an adverse*

effect on the efficiency and stability of the whole industry.... What is needed is an agreed procedure to ensure that payments are made regularly and promptly.” (Banwell, 1964).

Once a payment dispute arises, it is in everyone’s interest to settle it as quickly as possible. It has been suggested that adjudication has become the dispute resolution method of choice for which, in time past would have gone to arbitration. Statutory adjudication tries to deal with payment problems by rapid adjudication processes that will quickly deal with obvious unreasonable failure to pay, while reserving more detailed processes for complex disputes (Gow, 2006). In view of this, there is a necessity for such rights to be conferred statutorily. The right of suspension is an important remedy. The contractor has the right to stop work until the payment is made. It can be an effective means of securing overdue payment without the need to instigate other formal procedure such as arbitration and litigation. It is a ‘self-help’ remedy and can sometimes be used in parallel with these procedures (Pettigrew, 2005).

2.3.4 Who should be involved in Cash Flow Forecasting?

Ideally, all staff, management, and board members of construction industry should develop “cash flow awareness.” Everyone in your organization can help improve cash flow by understanding the relevant issues. For example, line staff may often be involved in making purchases for the organization. If a staff member fails to follow proper procurement policies and procedures, it will affect cash flow negatively.

The payment predicament of the construction industry cannot be singly explained. All parties including the owners, consultants, contractors, subcontractors, suppliers and even public sector employers have an important role and must act in concert to take ownership of the problems and challenges. To this end, the industry as a whole must collaborate and

focus on their synergies to eliminate as much as possible, poor, inefficient and outdated payment practices and smoothen cash flow supplies down the payment supply chain (Lip, 2006).

2.3.5 The Importance of Proper Cash Flow Forecasting

The Importance of Proper Cash Flow Forecasting seeks to: identifying and understanding an organization's cash flow characteristics, strengths, and weaknesses, creating cash flow forecasts and using other tools for more effective cash flow planning and management, improving cash flow through implementing relevant strategies, and using cash flow information to improve overall operations.

Staff and board members must understand their roles in effective cash flow management. Staff and management at every level can become more involved in improving cash flow if cash flow issues are regularly addressed during staff meetings. Creating an ongoing forum for awareness, questions, and feedback can help ensure that everyone is working toward the common goal of cash flow improvement. All staff members in non-profit organizations should have an awareness of basic cash flow issues. Personnel who are more directly involved in planning and managing cash flow must allocate time specifically for cash flow planning and management.

The industry also provides works for many ranging from professionals such as architects, engineers and surveyors to main contractors, subcontractors, suppliers and ultimately manual labourers who are employed by these contractors. The construction industry is an important cog in the wheel propelling the Malaysia economy (Consultation Forum on Construction Industry Payment & Adjudication Act, 2006). The construction industry

plays an important role in any country's development process; it is both growth-initiating and growth-dependent. The industry establishes buildings and infrastructure works required for social economic development which contribute to the overall economic growth. The success of economic development will further lead to an increase in disposal incomes, generating demand for additional construction activities (Fadhlin-Abdullah, 2004). The practice of efficient and timely payment in construction projects is a major factor that can contribute to a project's success. A smooth cash flow brings an effective delivery, on time and within budget so that projects can be completed within the planned time and with acceptance of quality (CIOB, 2004).

2.4 Effects of Delayed Payment in the Ghanaian Construction Industry

The cascade system of payment starts from the financial institution to main contractor, main contractor to sub-contractor and so on down the chain (Latham, 1994). The insolvency of one party in the payment chain could cause severe impacts to parties below him. The difficulties are further compounded with the fact that it is a normal practice to include "pay when paid" clauses provision in the sub-contracts. The burden of the main contractor's non-payment due to his own faults will be shifted to the subcontractor as well and this in turn will affect the sub-contractor's cash flow. This is worsened if the reason of the non-payment by the employer to the main contractor is solely due to his own defaults and not caused by the sub-contractor. What follows here is the discussion of the effects of late and non-payment to the nation and to payees down the contractual payment chain.

2.4.1 Creates Financial Hardship

It is anticipated that late payment can create financial hardships on the contractor. For instance, the main contractor is obliged to pay the sub-contractor/supplier for their work done. Therefore, unless the contract expressly required the contractor to self-finance the project or it is a Build Operate and Transfer project, the contractors must not be expected to self-finance the job for their clients. The financial hardship will not only affect the main contractor but other parties as well as indicated in the following sub-section.

2.4.2 Creates Negative Chain Effect on other Parties

As stated by Lip (2003), the construction payment blues have domino effects. A delayed payment by one party may affect the whole supply chain of payment of a construction project. For instance, if an employer delays in making payment to the contractor, this in turn will result in contractor's delay in making payment to the sub-contractor. The further consequences of the negative chain effect will create cash flow problems.

2.4.3 Create Cash Flow Problems

Many small contractors also experience difficulties in obtaining money from financial institutions to finance their business due to the high levels of bankruptcy in the industry; hence the initial capital for the business must come from the contractor (Miles, 1979:86). We still find contractors who come and go, not because of work quality or management, but because of the lack of cash on hand to pay their bills. If the contractor's cash flow is severely affected, this could lead to the delay in completion of projects as discussed hereunder.

2.4.4 Results in Delay in Completion of Projects

As explained previously, delayed payment on the part of the employer would cause cash flow problems for the contractor which could affect the overall progress of works. According to Abdul-Rahman and Berawi (2002), financial problem is confirmed by the top management view in the survey as the main causes of delay in addition to manpower shortage. This effect if not seriously attended, to could result in more devastating effect i.e. contractor's bankruptcy.

2.4.5 Leads to Bankruptcy or Liquidation

A failure on the part of the employer to pay the contractor in an efficient and timely manner may affect the contractor's original financial plan. This could affect contractor's cash flow which in turn, might lead to contractor's insolvency due to unplanned cash flow problems. In the UK, during the early nineties, thousands of businesses and companies became insolvent with enormous numbers of job lost (Ameer, 2005). That was one of the reasons that prompted the Department of Environment to produce Latham Report – Constructing the Team which reviewed the procurement and contractual arrangements in the UK construction industry and provided recommendations to improve its performance. Some of the recommendations were adopted which resulted in the drafting of the UK Construction Contracts Act, known as the Housing Grants, Construction and Regeneration Act 1996.

In New Zealand, insolvencies specifically in the construction industry were spread throughout the country and some involved major companies (Ameer, 2005). Again, the introduction of Construction Contracts Act was seen as the remedy to address the insolvency problem that resulted in the drafting of the New Zealand Construction

Contracts Act 2002. Contractor's liquidation will severely affect the contractor's performance in completing the work which will result in the abandonment of projects.

2.4.6 Leads to Abandonment of Projects

Delayed payment and especially, non-payment may cause abandonment of projects. This is due to no sources of money to pay for the labours, materials, plants and equipments involved in the project. Until certain stage, the main contractor will not be able to cope with the problems and will normally take action to stop work until the employer paid them the monies due. Worse still, the contractor may go into liquidation due to the failure on his part to meet the claims substantiated by his bankers, subcontractors and suppliers. This will surely lead to the abandonment of projects. Inevitably, disputes will crystallise and both parties will resort to dispute resolution process.

2.4.7 Results in Formal Dispute Resolution e.g. Litigation/Arbitration

A failure on timely payment could possibly lead to formal dispute resolution. According to Bob (2005), in the past, to recover payment, the claimant was forced to commence arbitration or litigation; those processes are very costly and take a long time. The effects of late and non-payment do not end here; it may in certain circumstances create negative social impacts as discussed in the following sub-section.

2.4.8 Creates Negative Social Impacts

According to the researcher's observation, if construction delays are caused by the late payment or non-payment, buildings such as the car park of a medical centre, students' residential flats and so on could not be put into use on time. These will cause problems such as patients could not be healed in time, new students have troubles in finding a

house, and so on. If delay caused by this reason happens in the road and bridge projects, traffic problems may arise.

2.5 Alternative Remedies for Securing Payment Debt

2.5.1 Introduction

There are various causes which give rise to payment problems and the effects associated with such phenomena are disastrous. Thus, remedies to resolve or alleviate these problems are urgently sought. Some of the remedies for securing payment debt are already embedded in the construction contracts acts found in the developed countries.

2.5.2 Remedies for Securing Payment Debt

Lim (2005), has indicated that there are various avenues available to improve the payment problem in the industry and some of these options have been incorporated in the construction contracts or statutes in the other developed countries such as payment of stipulated interest, suspension of work, eradication of “pay when paid” clause, adjudication, liens, trust and payment bonds.

2.5.3 Payment of Stipulated Interest

The issue of whether the contractor is entitled to claim for loss of interest due to delay and default of the employer in making payment is still unclear. In *FG Minter Ltd vs. Welsh Health Technical Services Organization*, a claim for interest due to late payment was upheld by the Court of Appeal. The reason for this is because claim on interest for delayed payment is considered as direct loss and/or expense equivalent to a claim for damages as decided by the case in *Hadley vs. Baxendale* and which has been codified under section 74 of the Contracts Act 1950. However, the test in *Hadley v Baxendale* as to whether damages in the forms of interest can be paid for, is dependent on the question

of whether the likelihood of the occurrence of damages was anticipated by both parties at the time when the contract was made, having regard to the knowledge of the parties at the time. Therefore, if the employer is aware that the contractor is forced to borrow the capital, the contractor may be able to claim interest or financing charges for delayed or unpaid payment. Therefore, a clear wording in the contract is required to provide contractual mechanism for the contractor to claim for interest or financing charges. In Malaysia, only Sub-clauses 42.9(b) and 42.12 of CIDB 2000 form comprehensively provides entitlement to claim for interest due to employer's delayed and unpaid payment as well as for any failure or delay by the Superintendent Officer in certifying any payment due. Such an express provision is essentially required in order to avoid disputes on this issue especially, if it goes to unnecessary expensive arbitration or litigation proceedings. In addition to payment of stipulated interest, other remedy includes suspension of work as explored below.

2.5.4 Suspension of Work

It is universally known that there is no common law right of suspension of work due to non-payment. The contractor is obliged to proceed with the work in a regular and diligent manner notwithstanding the fact that he is not being paid for the works he has executed previously. The Court of Appeal of New Zealand in the case of *British Pipe Lines vs. Christchurch Drainage* has held that a contractor has no implied right of temporary suspension following non-payment on the part of the employer. The decision was subsequently followed in the English case of *Lubenham vs. South Pembrokeshire* which affirmed the position of contractor's right of suspension.

According to Murdoch and Hughes (1996), ‘it is not uncommon to find that a contractor or sub-contractor who has not been paid what is due threatens to suspend work under the contract until payment is made’. It must be noted that without a clear contractual right to suspend the works, the contractor is not entitled to do so even though the employer has failed to pay him within the time stipulated in the contract. In this respect, if the contractor suspends the work, the courts may find him guilty of repudiating the contract. This will in turn open for the other party to accept the repudiation and rescind the contract and sue for damages.

Hypothetically, a contractor is only entitled to suspend the works following non-payment if such a stipulation is expressly spelled out in the contract. However, the right to suspend the works can only be found in CIDB 2000 only. For example, Clause 42.10 states that if the employer fails or neglects to pay the contractor the amount on any certificate within the Period of Honouring Certificate, and continues such default for fourteen (14) days, the contractor can give a notice specifying his intention to suspend the execution of the works. If the employer still continues such default for another fourteen (14) days after the receipt of the notice, the contractor can suspend wholly or partly the execution of works or reduce the rate of execution of the works. The duration of the suspension of work by the contractor is deemed as a period of extension of time that will be added to the original completion period and loss suffered is compensable. Having discussed the importance of such right, it is appropriate to include this provision in all the standard forms available in Ghana. Perhaps by including this provision in the Ghanaian Construction Contracts Act in the future, it would force the incorporation of the right to suspend the work in all the standard forms of contract, because once the Act is in force it will provide certain mandatory requirements that must be followed by any construction contract that falls within the ambit of the Act, failing which a default scheme will kick in and both parties in

the contract must comply with it. In the UK, Section 112 of the HGCRA provides that when the sum is not paid on the final day of payment and no withholding notice has been issued by the employer, in this circumstances, the contractor is entitled to suspend his performance until the full payment is paid but strictly subject to the issuance of 7 days' notice stating his intention in suspending the work and grounds of suspension. If the contractor feels that it is inappropriate or impractical to suspend the work, the alternative available at the contractor's disposal is to slow down the work.

2.5.5 Right to Slow Down Work

According to Lim (2005), right to slow down the execution of the work is also not recognized under the common law apart from the right to suspend the work. Currently, in any Construction Contracts Act around the globe, such a right is excluded. It is a sensible approach to include that provision in the Ghanaian Construction Contracts Act as sometimes it is not worthwhile for the contractor to suspend the work altogether because there is a situation whereby the machinery and equipments left idling on site and the fact that the contractor is obliged to pay for the hiring cost.

2.5.6 Eradication of "Pay When Paid" Clause

According to Ameer (2005a), many sub-contracts or sub-sub contracts contain "pay when paid" or "pay if paid" clauses. Pay when paid clauses are provisions in a contract where payment is made conditional upon payment being received by the paymaster, e.g. a subcontractor will only be paid when the main contractor, is paid by the client. This clause may have a devastating effect on the sub-contractors due to events which are beyond their control. If the client exercises his right to withhold payment for whatever reasons stipulated in the building contract to the contractor, the sub-contractor who may

have done his work properly will not get paid if such a clause is place. It would be unfair for the sub-contractor for not being paid due to the fault of others.

2.5.7 Right to Refer Dispute to Adjudication

Adjudication has proved to be a huge success in the UK in resolving construction disputes and it is appropriate to say that adjudication has taken over from arbitration as the most preferable method of resolving dispute in the UK. Basically the right to adjudicate is expressly given by the statutory provisions of the Housing, Grants, Construction and Regeneration Act 1996 which provides mandatory requirement for the incorporation of adjudication as the dispute resolution mechanism in resolving construction disputes. The adjudication provision is basically covered under clause 108 of the HGCRA.

Adjudication is defined as a process where upon request by one of the parties, an independent adjudicator steps in (even when work is ongoing or services are being provided) and makes a binding decision on disputes within days or weeks. For example in the UK, the adjudicator is required to make a binding decision within 28 days. The interesting feature of the adjudication is that the dispute in question can be referred to an independent third party at any time provided that both parties are in contract. It is worth underlying that in arbitration, normally as a matter of practice, a dispute is being referred to the arbitration when the project reaches completion stage. This is not acceptable practice as in a claim involving a large sum of money a contractor would struggle for cash flow before he can commence the arbitration proceeding. Even worse, sometimes it is already too late to take this matter to court as the contractor may have suffered severe cash flow problem which could result in liquidation (contractor's bankruptcy).

It should be noted that the adjudicator is acting in a judicial manner same like the judge and arbitrator and as such, he enjoys immunity from being sued if he makes a negligent decision (error) unless he has acted not according to the rules of principle of natural justice (shall be fair and just in all circumstances) i.e. No bias and Fair hearing (both parties have reasonable opportunities of presenting their cases)

The policy of adjudication has been characterized as “pay now argue later” due to the nature of the decision which is binding and immediate enforceability until the dispute is finally determined by legal proceedings (or by arbitration if the contract so provides or the parties otherwise agree) or by agreement. It means that the decisions are enforceable and the parties need to comply with the decisions whether they like it or not until the dispute is finally decided by court or arbitration. Due to this matter, some regarded adjudication as providing a “rough justice”. Nonetheless, adjudication provides a speedy and cost effective mechanism in resolving dispute. It must be noted that the parties in dispute are likely to have commercial considerations in mind rather than a concern for extensive legal analysis.

Adjudication process can also provide the opportunity for improvements in cash flow. Historically, adjudication provisions were originally introduced in standard form subcontracts to prevent interim payments to sub-contractors being reduced or eliminated altogether by the main contractor by arguments of set-off (Stevenson et. al., 2000). An action in court or arbitration involving set-off issues are normally time consuming and expensive and in the meantime, the sub-contractor would be struggling with his cash flow. A survey conducted by the Adjudication Reporting Centre in their Report reveals that main contractors and their sub-contractors are the main protagonists in adjudication,

constituting just fewer than 50% of the proceedings, followed by main contractors and their clients who contribute just over 30%. The Centre also reveals that failure to comply with payment provisions is the main subject of disputes, amounting to 26% of the total subjects. Although there was a shift of the subjects of disputes in other Reports, where valuation of variations and valuation of final account have taken over from failure to comply with payment provisions, it is, however, important to note that the subjects of the disputes are still concerned with the cash flow of the contractors and the sub-contractors. Construction adjudication as introduced by the HGCRRA provides a quick and interim but enforceable award which allows opportunity for improvements in cash flow.

2.5.8 The Creation of a Right to a Lien

The problem of the security of payment by the contractor to the client is extensively dealt with by way of mechanic lien statutes in USA and Canada, which is currently absent in Ghana. In defined term, Lien is a right to take and hold or sell a property of a debtor as security for a debt until payment is made. Theoretically, any unpaid contractor who has provided labour or materials in constructing the building has the right to exercise lien and then sells the building and utilizes the amount of payment received to his benefit and the remainder will be returned to the debtor. This provision is currently absent in any Construction Contracts Act in the world and would be a very good remedy for the recovery of delayed payment or non-payment. This right has proved to be successfully implemented in the USA and Canada in securing payment debt. Apart from mechanic lien, payment bond is another remedy worth underlying. This remedy is dealt with in the following sub-section.

2.5.9 Payment Bond

The payment bond is a straight forward device basically requiring a third party such as bank or an insurance company to guarantee payment in the event of default on the part of the paying party (Lim, 2005). Basically, it requires the party awarding a construction contract in excess of certain amount to provide a payment bond to the contractor. The concept is similar to performance bond that is widely used in government projects but the onus lies on the employer to obtain the payment bond. It should also be noted that the contractor is not entitled to commence the work unless the payment bond is received. This requirement is not widely used in Malaysia except in bullet payment contracts i.e. turnkey. The mandatory inclusion of this provision in all the standard forms available in Malaysia could provide a safety net to the contractor in the event of non-payment. The mandatory creation of a trust account or retention sums which is discussed in the following sub-section, is another remedy worth looking at.

2.5.10 Mandatory Creation of a Trust Account or Retention Sums

The concept of trust account had not been practised in Ghana but it has been practised in countries like Malaysia since they adopted the JCT63 of the UK standard form of contract into the PAM 69 standard form of contract even though it is similar to the concept of retention monies which is also provided under PAM 98 and CIDB 2000. The trust operates on the premise that any party receiving money holds the whole or part of it on trust for others who have expended labour and material to carry out the work (Lim, 2005). In the event of late or non-payment, the contractor may use the amount of trust to improve his cash flow and can proceed with the carrying out of the work.

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1 Introduction

This study adopted a quantitative approach. The views from Ghanaian road contractors were collected via a questionnaire survey. The questionnaire was designed according to the objectives of research by reviewing literature dealing with delayed payments and other relevant topics. It was designed to be brief, concise and straightforward to encourage a high response rate from the potential contractors. The contractors just have to express their views and opinions by selecting the appropriate answer or giving short answers to the questions. The sources of literature review included relevant books, case law, journals, magazines, dissertations and seminar proceedings. The review of literature provided useful information on the implications of delayed payment, effects of payment default, options available and strategic methods to improve cash flow of road contractors in relation to the issues of delayed payment in the global construction industries.

3.2 Research Approach

A quantitative strategy was adopted in this research due to the fact that quantitative research follows a deductive approach in relation to theory and is concerned with the design measurement and sampling (Naoum, 2002). The strategy employs the use of statistical techniques to identify facts and casual relationships. Quantitative research is also objective in nature (Naoum, 2002). Hard and reliable data are often collected in quantitative research and, therefore, emphasises on quantification. The samples collected

are often representative. This means that quantitative research results can be generalised to a larger population within acceptable error limits.

3.3 Research Design and Justification

Researchers collect evidence when they ask for someone's opinion. Further attempts are then made to determine the prevailing opinion within a particular group.

A survey study was deemed appropriate for this research for three reasons:

- Survey research involved data collection from contractors, generalizing the result of study to predict the attitude of the population of interest;
- The survey questionnaire was structured to elicit information from the population of interest in a systematic and unbiased manner; and
- They permitted statistical analysis of data and generalisation to a larger population, which made them suitable to construction management research.

3.4 Target Respondents

A questionnaire survey was conducted on the contractors. The targeted group was contractors with classification A1B1 and A2B2. This class of companies was chosen for the study because of the large projects they undertake. Also, non empirical evidence shows that companies under these classifications are well organised in terms of planning of their projects and the large projects undertaken (in terms of size and quantity) which makes them highly affected when it comes to delayed payment. This was therefore achieved by acquiring initial list of contractors within the classification from the Ministry

of Roads and Transport in Ghana. The data helped in locating the offices of the companies thereafter.

3.4.1 Population Definition

The selection of the respondents was limited to only the A2B2 and A1B1 Road contractors in the country. These contractors were selected from Ministry of Roads and Transport (MRT) Classification of contractors. The choice of this class of road contractors was made on the basis that they are easy to locate and are exposed to delayed payment, methods and strategies to improve payment default by virtue of the type and size of projects they handle. The total population is 84.

3.4.2 Sampling technique and Sample sizing

A purposive sampling method was used to select the class of construction companies for the questionnaire administration. Purposive sampling was used because we were dealing with A1B1 and A2B2 contractors whose data were selected from the Ministry of Roads and Transport.

The names and addresses of the contractors were contained in the data selected, making it easier to locate sample population. In some cases, snowball sampling method was employed in order to obtain the sample size of the classes as some were difficult to reach. This strategy is viewed as a response to overcome the problems associated with concealed or hard-to-reach populations. It was also observed that contractors in that classification had a cordial relationship among themselves as they knew the exact home addresses of their competitors.

In total, the number of companies on which the study was undertaken summed up to fifty-two (52) by using the Kish formula (1965) to determine the sample size:

$$n = \frac{n^1}{1 + n^1/N}$$

Where n=sample size

N = Total population size (the number of A1B1 and A2B2 road contractors in the country)

$$N = 84$$

$$n^1 = \frac{s^2}{v^2}$$

s= maximum standard deviation in the population of elements.

(Total error of 0.1 at a confidence interval of 95%)

v= standard error of the distribution assumed to be 0.05

$s^2 = p(1-p)$ where p is the proportion of population elements that belong to the defined class.

$$s^2 = 0.5(1-0.5)$$

$$s^2 = 0.25$$

$$n^1 = \frac{0.25}{0.05^2}$$

$$n^1 = 100$$

$$n = \frac{100}{1 + \frac{100}{84}} = 45.66 = 46$$

Then you add a percentage of non-responsive rate = 5 to 15 percent depending on the particular topic meaning the higher the interest the lower the rate.

Using a non-responsive rate of 12 (Ameer, 2005)

$$12/100 * 46 = 5.52 = 6$$

$$6 \text{ plus } 46 = 52$$

Total contractors = 52

3.5 Data Collection

In order to achieve the objectives, the study focused on contractors in the industry. This was because they were those who are directly confronted with these issues as they occur in the industry. Based on the objectives and the research questions, a questionnaire was developed to obtain as extensive, a collection of data as practicable, from these contractors. A structured questionnaire was therefore prepared and self administered to the various respondents. The questionnaire consisted of closed and opened ended questions. For the purpose of the study, the questions were grouped under five categories. The first series of questions related to respondent's profile. This was intended to find out the background and experience of respondents. The second, third, fourth and fifth group of questions related to Establishment of Various Implications of Delayed Payment Problems, Effects of Delayed Payment on Road Contractors, Options Available and Strategic Methods to Improve Cash Flow Forecasting and Means to Recovering of Payment-Default respectively.

The questionnaire was mainly based on Linkert's scale of five ordinal measures from one (1) to five (5) according to level of agreement.

3.6 Response Rate

All the fifty-two (52) questionnaires issued to the contractors were answered.

3.7 Responses to Questions

The questions were answered as clearly as possible. The respondents were not under any pressure to rush through the questions as they had enough time to answer (one to two weeks). Discussions were also held with some of the respondents to obtain further information and reasons for their answers.

3.8 Method of Analyses

The statistical method which was used in analyzing the data obtained from the respondents is as follow:

Relative Importance Index helps in the identification of tactical options and strategic measures employed by contractors to improve their cash flow forecasting. The nearer the value of importance index of the identified factor is to unit or one (1), the more suitable the option or factor is used to improve the cash flow forecasting of contractors hence the more suitable that option. The importance indices obtained were ranked to ascertain the most frequent factors. The relative importance index (R.I.I) was calculated using the following formula (Fagbenle et. al., 2004):

$$\text{Relative Important Index (R.I.I)} = \frac{\sum P_i U_i}{N(n)}$$

Where, R.I.I = Relative importance index

P_i = respondent's rating of options and strategic measures employed by contractors

U_i = number of respondents placing identical weighting/rating on options and strategic measures

N = sample size

n = the highest attainable score (i.e. 5)

3.9 Definitions

For the purpose of this study, the following definitions were included in the questionnaire to provide a better understanding to the potential respondents on the subject of the research:

- **Trust account** is a separate bank account where retention sums are kept and released upon discharge of all obligations.
- **Adjudication** is a process where upon request by one of the parties, an independent adjudicator steps in (even when work is ongoing or services are being provided) and makes a binding decision on disputes within days or weeks.
- **Litigation** is the process of taking a case to a law court so that an official decision can be made.
- **Lien** is a right to take and hold or sell a property of a debtor as security for a debt until payment is made.

CHAPTER FOUR

4. DATA COLLECTION AND DATA ANALYSIS

4.1 Introduction

In this chapter the data collected from the questionnaire surveys were analyzed and interpreted. The data were analysed using the Statistical Package for the Social Sciences (SPSS) to indicate the level of agreement or significance of each structured question. The findings were also discussed to give better reflections on the proposed study.

4.2 Respondents' Background and Experience with Delayed Payment

An analysis of the respondents indicated that contractors classified under A2B2 made up to 63.5% (33) of the total respondents whilst contractors classified under A1B1 consisted of 36.5% (19) of the total respondents as shown in Figure 4.1.

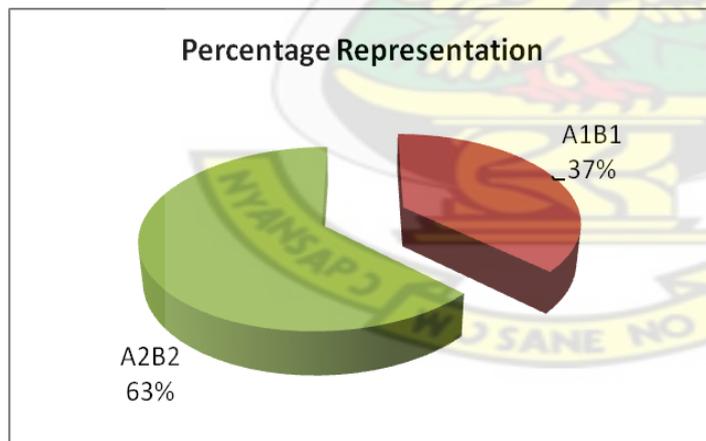


Figure 4.1: Classification of respondent company

Source: author's field data (2010)

77 percent of the respondents were from top level management (see Figure 4.2). This provided a reliable data as these respondents were involved in day to day running and had access to all the necessary data for effective answering of the questionnaires.

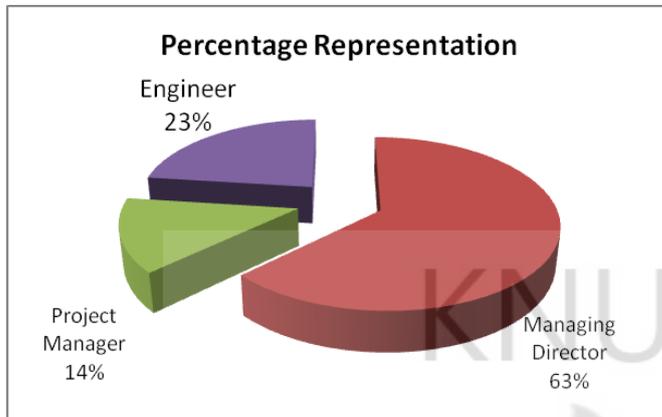


Figure 4.2: Position of the respondents in the company

Source: author's field data (2010)

The survey revealed that most of the respondents had had an experience of delayed payment which they expressed tremendous displeasure. Fifty-one (51) of the respondents, representing 98.1%, reported they had been paid in an untimely manner with the exception of only one (1) representing 1.9% had not experienced delayed payment since January, 2006 from the employer (see Figure 4.3).

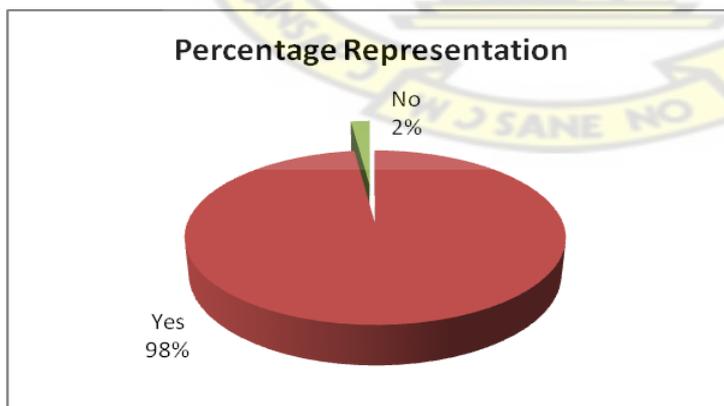


Figure 4.3: Company experience with delayed payment

Source: author's field data (2010)

4.3 Implications of Default Payment on the Various Stakeholders

Due to the role payments have on construction, respondents were able to categorise various inferences or deductions stakeholders have in mind when faced with delayed payments as tabulated in Table 4.1 below.

Table 4.1: Implications of delayed payment on Employer

Category	Implications	RII	Rank
Employer	Payment of interest on late or default payment	0.819	1 st
	Delay in contract completion by contractor	0.735	2 nd
	Stakeholders not satisfied	0.735	2 nd
	Delay in having the expected benefit of property	0.723	3 rd
	Strong political influence	0.723	3 rd
	Most projects were unplanned	0.677	4 th
	Delay in issuing orders by the project manger to start or suspend or terminate works	0.627	5 th

Source: author's field data (2010)

Respondents expressed their views on default payments as indicated in Table 4.2.

Table 4.2: Implications of delayed payment on Consultants

Category	Implications	RII	Rank
Consultants	Consultant activities are drastically reduced	0.815	1 st
	Morally insisting on contractual requirements weakened	0.800	2 nd
	Consultants spend longer time on projects than planned	0.789	3 rd
	Cost of consultancy services increases due to stoppages	0.789	3 rd
	Slow down of works	0.735	4 th

Source: author's field data (2010)

Below in Table 4.3 Contractors, who were the prime victims, express their views on the issue.

Table 4.3: Implications of delayed payment on Contractors

Category	Implications	RII	Rank
Contractors	Contractor's cash flow forecast affected	0.915	1 st
	Increase in construction cost	0.904	2 nd
	Extension of intended completion date	0.827	3 rd
	Payment of interest on late or default payment does not offset contractors liabilities	0.812	4 th
	Scheduling of programme distracted	0.789	5 th
	Leads to bankruptcy or liquidation	0.773	6 th
	Payment of liquidated damages	0.696	7 th
	Termination of contractor's contract	0.673	8 th
	Non-adherence to site instruction	0.635	9 th

Source: author's field data (2010)

4.4 Effects of Delayed Payment on Road Contractors

Table 4.4: The effects of Delayed payment on contractors

Category	Effects	RII	Rank
Contractor	Force to borrow from financial institutions	0.877	1 st
	Cost overrun of project	0.869	2 nd
	Create cash flow problems	0.858	3 rd
	Tarnishes the image of contractor	0.839	4 th
	Leads to suspension of works	0.835	5 th
	Difficult to procure material and services	0.811	6 th
	Leads to abandonment of projects	0.792	7 th
	Difficult to tender for new projects	0.765	8 th
	Non-payment of salaries of employees	0.762	9 th
	Interruption of programme of works	0.758	10 th
	Difficult to maintain equipment	0.746	11 th
	May result in disputes e.g. litigation/ arbitration	0.739	12 th
	Idleness of equipment	0.727	13 th

Source: author's field data (2010)

From Table 4.4 numerous effects of delayed payment were identified from the survey undertaken. Respondents were then asked to rate the effects of late payment based on the list provided. The five (5) persistent effects identified were: contractors are forced to

borrow from financial institutions, creation of cash flow problems leads to cost overrun tarnishes contractors' image and leads to temporary suspension of work.

4.4.1 Borrowing from financial institutions

Condition of contract for most construction works prohibits contractors from withholding their services whenever there is a delayed or irregular payment. Contractors are supposed to complete their works or projects before sorting out any differences. Contractors from the survey indicated that, they resort to borrowing from financial institutions and banks in order not to suspend the works. This is done even though these financial institutions impose very high cost of capital thus creating tremendous burden on the contractor.

4.4.2 Cash flow problems

The construction industry is such that it can run without profit but it cannot survive without cash. Therefore cash flow has been regarded as the lifeblood of this industry and as such, late delayed payments by the employer have a devastating knock-on effect down the contractual payment chain as the cascade system of payment starts from the financial institution to main contractor, main contractor to sub-contractor and so on, down the chain to the labourer. The importance of cash flow is further exaggerated by the fact that the construction industry relatively involves long durations to complete, large amounts of money to spend and the widely use of credit payment terms rather than payment on delivery in purchasing of materials. Thus, it is anticipated the direct effect of delayed payment would be cash flow problems which is a disastrous effect.

4.4.3 Cost overrun

The survey revealed that delayed payment leads to cost overrun on the project thus, final capital invested in order to realise the project is far higher than the initial cost by the contractors. This is because most contractors either temporarily terminate the project or suspend it, therefore incurring extra cost on non-working days of the workers and the cost incurred as a result of idle equipment. Furthermore, the employer is deprived of the benefits which could be derived from using the facility or project.

4.4.4 Contractors' image

In an industry which is still glooming, the credentials of individual contractors are of prime interest and therefore protected. With delayed payment originating from misunderstanding between employer and contractor, it would be hard for the same employer to work with that contractor again. As such most contractors do their best to refrain from such inconveniences thereby protecting their hard earned reputation.

4.4.5 Temporary suspension of work

Even though this is a breach of contract, one of the most disastrous effects of delayed payment is temporary suspension of work by contractors. Most contractors take their plant and equipment off-site or idle and relieve their workers so as not to accumulate excessive cost. Contractors also do so to prevent capital melt-down or bankruptcy. It was also noted that it serves as a warning to the employer.

4.5 Options Available to Contractors for Improving their Cash Flow

Table 4.5: Options available to improve contractors' cash flow

Category	Improving Cash Flow	RII	Rank
1. Options available	Right to regular periodic payment	0.919	1 st
	Payment of interest on delayed payment	0.846	2 nd
	Defined time frame for payment	0.839	3 rd
	Employer work within stipulated budget	0.831	4 th
	The mandatory creation of a <i>trust account</i> * for payment of retention monies	0.804	5 th
	Suspension of work	0.746	6 th
	Debt finance	0.742	7 th
	Increase the percentage of Advance Mobilisation loan	0.654	8 th
	Government or consortium to supply contractor with chippings, iron rods, bitumen and cement on credit	0.615	9 th

Source: author's field data (2010)

Since construction firms can work without profit but cannot be without cash, contractors propose measures to improve their cash flow so as to stay in business (see Table 5). The survey revealed six (6) pre-dominant options proposed by contractors to improve their cash flow. That is, contractors having noticed delayed payment as the order of the day in the construction business have proposed to the following options as these measures can help improve their cash flow. For this question, five (5) was the largest scale whilst one (1) is the least. Interestingly, the nine (9) alternative remedies in the questionnaire were all given a high score of importance as the least score was even as high as 0.615 as shown in Table 5. These include; "*right to regular periodic payment*", "*payment of interest on default payment*", "*defined time frame for payment*", "*employer working within stipulated budget*", "*creation of a trust account for payment of retention monies*" and "*the right to temporarily suspend work*" with their importance index as 0.919, 0.846, 0.839, 0.831, 0.804 and 0.746.

4.5.1 Regular Periodic Payment

A right to regular periodic payment” has been perceived as the most favourable option or remedy among the respondents. Many standard forms of contracts include such a right to facilitate contractors’ cash flow. The right however does not resolve or mitigate the contractors’ payment woes as the occurrence of delayed or non payment in construction contracts is quite common in the industry notwithstanding the availability of such a right under various standard forms of contracts. This may be partly due to the laborious process in claiming for work done provided under standard forms of contracts and partly owing to the unprofessional attitude of the employers’ representatives who tends to delay matters. Starting with the contractor’s claim until payment made by the employer during the period of honouring certificate the whole process could take more than two (2) months on the average. The delay in making payment to the contractor is further escalated if there is a dispute or disagreement about the value of work done or variation order. It may be necessary to amend the standard form of contract so as to expedite the whole payment process to lessen the enormous burden contractors go through with their cash flow while waiting for certification. Employer and its representatives must be sensitive towards promptness of submitting, processing, issuing interim payment certificates and honouring the certificates as these processes can generate negative impacts if not seriously attended to.

4.5.2 Interest on default payment

Payment of interest on default payment was ranked by the respondents as the second most favourable option available to contractors as it had an index of 0.846. Respondents were of the opinion that any interest placed on the default payment or payment in arrears could help improve their cash flow as they often borrow money from financial institutions and

banks, who charge them at exorbitant rate. This would massively enhance their cash flow as the interest charged on their borrowed money is high.

4.5.3 Time frame for payment

Respondents were of the opinion that, knowing the payment schedule of the employer or the time frame for payment was important for their cash flow. This was ranked third with an importance index of 0.839. Even though the standard conditions of contract cover that, the time frame for payment is hardly adhered to. This inevitably creates problem for the contractor. These payment schedules would help the contractor for effective planning and thereby greatly improve his role in the project.

4.5.4 Working within stipulated budget

In Ghana, the main employer of roads projects is the government and as such greatly manipulates the industry. Respondents were of the view that, employers most often than not do not work within her budget. That is, they issue out a number of projects to contractors without looking at the financial commitment resulting in numerous construction firms not being paid. This according to the respondents happen often but especially during election period as they used projects to entice the inhabitants for their votes.

4.5.5 Trust Account or Retention Sums

The concept of trust account from the survey was new to the respondents even though it has been practised since the adoption of the UK standard form of contract which is similar to the concept of retention monies which is also provided under conditions of contract. The trust operates on the premise that any party receiving money holds the whole or part of it on trust for others who have expended labour and material to carry out

the work. In the event of delayed payment, the contractor may use the amount of trust to improve his cash flow and can proceed with the carrying out of the work.

4.5.6 Suspension of Work

A right to suspend work” was ranked as one of the most preferable alternative options for improving the cash flow of contractors. Most of the respondents believed that such a right should be included as a contractual right in any standard form of contract to enable the contractor to suspend the execution of the work as a remedy following delayed payment when determination of contract or termination under common law seem impractical. The duration of the suspension of work by the contractor is deemed as a period of extension of time that will be added to the original completion period and loss suffered is compensable. Without express provision under the contract, in the event of non-payment by the employer the contractor is not entitled to suspend wholly or partly the execution of work. Consequently, there is a need to include a right to suspend the work to safeguard the contractor’s interest in the event of delayed payment.

4.6 Strategic Methods to Improve their Cash Flow

Table 4.6: Strategic methods suggested by contractors to improve the cash flow

Category	Improving Cash Flow	RII	Rank
2. Strategic methods	Issuance of a promissory note by employer	0.842	1 st
	Introduction to Construction Contract Act	0.804	2 nd
	Discounting facility	0.800	3 rd
	Leasing of equipment	0.639	4 th
	Entering into partnership agreement	0.596	5 th
	Funds from the contractor’s businesses	0.585	6 th
	Contractor seeking a loan to pay off debt	0.573	7 th
	Turn-key contract	0.546	8 th
	Support from friends or relatives	0.531	9 th

Source: author’s field data (2010)

Since construction firms can work without profit but cannot be without cash, contractors suggest strategic methods to improve their cash flow so as to stay in business as the condition of contract does not favour the temporary suspension of works (provided in Table 6). The contractors in the country are therefore recommending these strategic methods not to go bankrupt as most of these payments could be in arrears for years. Based on Table 6, these methods were outlined and the five most dominant methods or strategies were "Employer issuing a promissory note", "Introduction to construction contract act", "Discounting facilities", "Leasing of equipment" and "Contractor seeking for loan" with their overall RII of 0.842, 0.804, 0.800, 0.639 and 0.596.

4.6.1 Promissory note

Promissory note is a promise to pay a specific amount of money upon request or at a certain times. This was ticked as the most dominant strategy used by contractors to improve their cash flow having an index of 0.842. The respondents were of the opinion that the issuance of a promissory note by the employer could help them obtain capital to finance the project, obtain materials from their suppliers etc. It thereby provides a respite for contractors who would now be able to execute the project.

4.6.2 The Construction Contract Act

Highly favoured method employed to improve contractors cash flow is the implementation of the construction contract act with an index of 0.804. The *Construction Contracts Act* only applies to a payment dispute arising out of a contract for construction work. Construction contracts are defined to mean a contract or other agreement whether in writing or not under which a person has an obligation to carry out construction work, to supply goods that are related to this construction work or to provide the professional

services related to the construction work. The Act would improve construction industry activities.

4.6.3 Discounting facilities

Even though, this option is quiet old in the road construction industry, respondents used this method to improve their cash flow. It was ranked third with an index of 0.800 out of 1.00. Construction firms often look out for suppliers and manufacturers who provide discount facilities to trade with. This serves as an incentive for firms as they could purchase large volume of materials. Sometimes, suppliers give discount to contractors who make purchase above a certain quantities of materials whilst long term relationship with suppliers can help give discount facilities to contracts.

4.6.4 Leasing of equipment

When contractors' are faced with late payments they sometimes lease their equipment so that they could obtain funds which could be use to ensure work completion. This option from the survey was often used by firms having substantial number of equipment. Other construction firms also hire equipment from other firms for some duration and for specific cost with specific terms of payment. In whatever form it may be the most important thing is that some capital or money is available for the successful completion of work.

4.6.5 Loans

Relatively the last of the top five (5) strategic methods employed by contractors, contractors borrow money from various sources so that they could successfully complete of the project as suspension or termination of work contractually is not an option. Funds

could be borrowed from banks, financial institutions, friends and other which often include interests.

4.7 Recovery to Default Payment

Table 4.7: Avenues used to recoup default payment

Recovering Method	RII	Rank
Speedy dispute resolution mechanism e.g.: <i>Adjudication*</i>	0.858	1 st
<i>Litigation*</i>	0.689	2 nd
The creation of a right to a <i>lien*</i>	0.535	3 rd

Source: author's field data (2010)

In the Ghanaian construction, payment default is not uncommon. Some of the respondents were owed by their employers for more than a year with the government being the prime culprit. Most of these contractors are currently are in financial difficulties and are banging on the doors of the road fund to be paid. The survey enlisted three ways which could be used by contractors to recover long outstanding debts and it includes; "*Adjudication*", "*Litigation*" and "*Creation of a right to a lien*" with their RII of 0.858, 0.689 and 0.535 (see Table 7).

4.7.1 Adjudication

Adjudication has been rated as the most preferable alternative remedy for securing payment debt from defaulting employer with RII of 0.858. This shows that majority of the respondents strongly in favour of speedier method of resolving disputes i.e. adjudication. The key feature of the adjudication process is that an adjudicator will reach a decision within days or weeks of the date upon which the dispute is referred to him. Construction adjudication as serves as a quick and interim but enforceable award which allows opportunity for improvements in cash flow. It was designed to enable the contractor to

obtain payment of interim payments. One thing worth underlying is that adjudication is a method to recover amount due in the contract when a claim made by the claimant party being ignored by the respondent. Adjudication will only operate when one party initiates that process to recover certain amount of money from the defaulting party. Meaning, adjudication by itself is not a remedy to resolve or mitigate the contractors' payment woes. It is merely a tool to recover amount due in the contract when another party persistently denies the claim. Thus, it is implied that the respondents felt that it is difficult to resolve or mitigate the culture of late and defaulted payment in construction industry. The only thing seems viable is to have a speedy and effective method of recovering the amount due. Adjudication is what the construction industry needs. Its mechanism helps construction disputes to be resolved in speedy manner which results in early completion of a project and early return of investment to the employer.

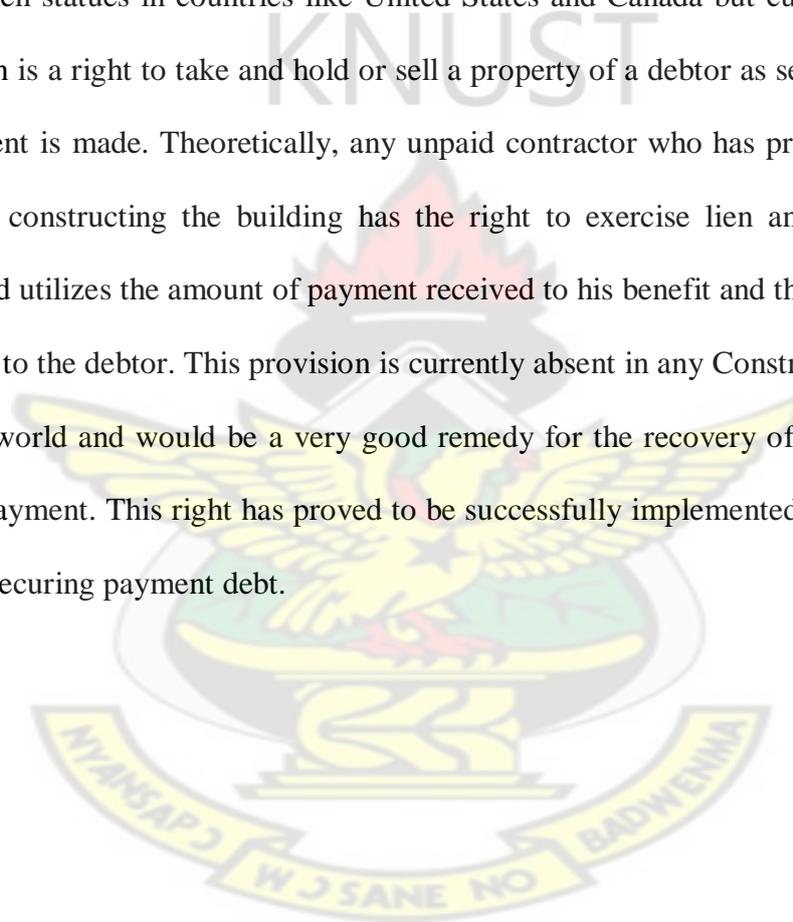
4.7.2 Litigation

Litigation is the process of taking a case to a law court so that an official decision can be made. It was also selected as the second most preferred alternative contractors can used to obtain long outstanding debt from the employer. Litigation processes in most case can elapse for years. The process is slower and by comparison expensive, particularly in comparison to adjudication and more time consuming. An action in court or arbitration involving recovery of payment issues is normally time-consuming and expensive and in the meantime, the contractor would be struggling with his cash flow. It has a number of demerits even though contractors do not have very few choices with the duration as a prime factor. It also opens the contract to individuals who sometimes have minimal in-depth in construction contracts and as a result comes out with insatiable judgement. Apart

from litigation, lien is another remedy worth underlying. This remedy is dealt in the following sub-section.

4.7.3 Creation of a right to a lien

The last option worth noting is the right to lien which had RII of 0.535. The problem of the security of payment by the contractor to the employer is extensively dealt by way of mechanic lien statutes in countries like United States and Canada but currently absent in Ghana. Lien is a right to take and hold or sell a property of a debtor as security for a debt until payment is made. Theoretically, any unpaid contractor who has provided labour or material in constructing the building has the right to exercise lien and then sells the building and utilizes the amount of payment received to his benefit and the remainder will be returned to the debtor. This provision is currently absent in any Construction Contracts Act in the world and would be a very good remedy for the recovery of late-payment or defaulted payment. This right has proved to be successfully implemented in the USA and Canada in securing payment debt.



CHAPTER 5

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings from the previous chapter and draws the conclusions for this study. It illustrates the conformance to the objectives and aim of the study.

5.2 Summary of Findings

From the result of analysis, it was observed that, fifty-one (51) of the road contractors representing 98.1% have experienced delayed payment since 2006. Also, the result showed that delayed payment creates cash flow problems, stress and financial hardship on the contractors and that some reactions to delayed payment adopted by the contractors may have adverse effects on their own businesses. Amongst the most appropriate solutions to overcome the problem of delayed payment faced by local contractors include: a right to regular periodic payment, a right to a defined time frame for payment and a right to a speedy dispute resolution mechanism. Other findings from the questionnaire survey are presented under appropriate headings as follow.

5.2.1 Establishing the various implications of delayed payment problems

The implications of delayed payment were grouped into that of the employer, consultants and contractors. From the questionnaire survey, majority of the contractors reported of the following as the major implications of payment default from the contractors' perspective: most road projects were unplanned, delay in completion of contract by the contractors, stakeholders not being satisfied, strong political influence, delay in having the expected

benefit of property, delays order by the project manager to start or suspend or termination works and others.

The implications of payment default on the consultants from the contractors identified were: slow pace of the works, reduction of consultants' activities, increased cost of consultancy services, morals requirement of consultants' weaken and also consultants spending longer time than planned.

Finally, the major implications of payment default from the contractors' perspective identified were: contractor's cash flow forecast affected, increase in construction cost, extension of Intended completion date, payment of interest on delayed payment does not off-set contractors liabilities, scheduling of works or programme distracted and leads to bankruptcy or liquidation.

5.2.2 Effects of late payment

The survey results indicated that the five (5) effects of late payment were: resulting in cash flow problems, making it difficult to procure material and services, creation of enormous stress on contractors, leading to interruption of programme of works and likely suspension and resulting in disputes e.g. litigation/ arbitration.

5.2.3 Strategic methods and options available for contractors to improve their cash flow forecasting

Since the menace of delayed payment has a tremendous effect on the contractor. The contractors have suggested some strategic methods and options to so as to improve their cash flow. The following are the five (5) dominant strategies suggested by contractors were: issuance of a promissory note by the employer, introducing the construction

contract act, discounting facility from the banks, leasing of plant and equipments and contractors seeking for loan.

Aside these strategic methods proposed by construction firms to improve late payment, contractors also have recommended ways to eliminate late or default payment. These ways include: right to regular periodic payment, payment of interest on default payment, defined time frame for payment, employer working within stipulated budget, creation of a trust account for payment of retention monies and the right to temporarily suspend work.

5.2.4 Means of recovering payment-default in construction Industry

Most of the respondents agreed that a mechanism for avoiding or reducing this problem needs to be taken in the form of contractual or statutory rights. This study revealed that the preferred alternative remedies for securing default payment debt from the employer are by adjudication, litigation and creation of a right to a lien.

5.3 Conclusions

From this study, it may be concluded that efficient and timely payment in construction industry is a major factor leading to a project's success. Contractors' constant headache or fear had been poor payment practices. Payment has been referred to as the lifeblood of the construction industry due to latter's inherent nature that takes relatively long durations and large amounts of money to complete. Late Payment will cause severe cash flow problems especially to contractors, and this would have a devastating secondary effect down the contractual payment chain. Payment default issues are considered to affect many players in the local construction industry.

5.4 Recommendations

The drive to maximise positive cash flow will continue to lead to disputes about payment. The disputes predominantly about payment issues are becoming larger and more complex. There are various methods of dispute resolution ranges from the less structured form of mediation to the rigid procedures found in court litigation.

To improve the situation, the findings of this research must be addressed by a joint effort of all stakeholders in the construction industry. This calls for enforcing clauses of late payment in contracts. This could be done by applying charges to overdue payments in the same way as liquidated damages have been applied, the government which is the main employer should introduce payment bonds and “Construction Guarantee Fund” schemes to enable road contractors to obtain bonds and guarantees at concessionary terms, establishment of Construction Industry Payment and Adjudication Act which will help in the reduction of Payment Default and Dispute Resolution and finally, it is now a well-established fact that road infrastructure in the country is quite deficient and large investment is needed to build the required level of road facilities. It is also true that needed investment cannot alone be generated through public financing and therefore private funding needs to be geared up. Private sector financing in road development holds a very brilliant future.

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APPENDIX

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

COMMONWEALTH EXECUTIVE MASTERS IN BUSINESS

ADMINISTRATION

INSTITUTE OF DISTANCE LEARNING

Questionnaire for Road Contractor

KNUST
TOPIC: THE EFFECT OF DELAYED PAYMENT ON CASH FLOW
FORECASTING OF GHANAIAN ROAD CONTRACTORS

Introduction

In a road construction contract, it is obvious that the contractor has promise to carry out all the works under the contracts. Conversely, the employer must keep his side of promise by giving necessary consideration which in most cases comes in financial form. It is very understandable that a healthy and reliable payment of money is a central point in determining the contractor performance.

Objective of the Study

The objectives of the study are as follows:

- i. Establish the various implications of delayed payment problems and its effect on Ghanaian road contractors and other stakeholders;
- ii. Identify effective options available and strategic methods developed by contractors to improve their cash flow forecasting; and
- iii. Identify the means of recovering payment-default in construction Industry.

This questionnaire is made up of four sections:

Section A: Company Respondent for Contractor

Section B: Various Implications of Delayed Payment Problems and its Effects

Section C: Effects of delayed payment on road contractor

Section D: Options Available and Strategic Methods to Improve Cash Flow Forecasting

Section E: Means to recovering of Payment-Default

Mr. Kwame Boateng Amoako of the Institute of Distance Learning, Kwame Nkrumah University of Science and Technology, with the assistance from Professor E. Badu, is conducting the research for academic purposes.

Your assistance in answering the questions set out below would be very much welcomed.

Thank you.

KNUST



SECTION A

Company Respondent for Contractor

Please, tick one box and fill in the blanks if you select others.

Organization/Company Name:

.....

Address:

.....

1. The classification category of the respondent company.

A2B2

A1B1

2. The position of the respondents in the company.

Managing Director Project Manager Engineer Site Manager Foreman

3. State the number of year the organization / company have experience in construction.

0 – 5 years 5 – 10 years 10 – 15 years 15 – 20 years More than 20 years

4. Has the company faced delayed payment from the employer since January 2006?

Yes or No

SECTION B

Establish the Various Implications of Delayed Payment Problems and Its Effect on Ghanaian Road Contractors and Other Stakeholders

Objective of the Study: Establish the various implications of delayed payment problems and its effects on Ghanaian road contractors and other stakeholders

Please, tick and fill in the blanks if you select other.

Each scale represents the following rating:

(5) = Strongly Agree, (4) = Agree, (3) = Neutral, (2) = Disagree, (1) = Strongly Disagree

Question: State the level at which you agree with the following issues and how it affects delayed payment.

Category	Implications	1	2	3	4	5
1. Employer	Most road projects were unplanned					
	Payment of Interest on delayed payment					
	Delay in completion of contract by the contractor					
	Delay in having the expected benefit of property					
	Delays order by the project manager to start or suspend or termination works					
	Strong political influence					
	Stakeholders are not satisfied					
	Other implications, please specify:					
	a.					
	b.					
	c.					

Each scale represents the following rating:

(5) = Strongly Agree, (4) = Agree, (3) = Neutral, (2) = Disagree, (1) = Strongly Disagree

Category	Implications	1	2	3	4	5
2. Consultant	Slow down of the works					
	Activities of consultants reduced drastically					
	Consultants spend longer time than planned					
	Cost of consultancy services increased					
	Morally insisting on contractual requirement weaken					
	Other implications, please specify:					
	a.					
	b.					
	c.					
3. Contractor	Contractor's cash flow forecast affected					
	Increase in construction cost					
	Payment of Liquidated Damages					
	Payment of interest on delayed payment does not off-set contractor's liabilities					
	Non adherence to site instruction and advice					
	Scheduling of works or programme distracted					
	Extension of Intended completion date					
	Termination of contract by contractor					
	Leads to bankruptcy or liquidation					
	Other implications, please specify:					
	a.					
	b.					
	c.					

SECTION C

Effects of Delayed Payment on Road Contractors

Objective of the Study: Establish the various implications of delayed payment problems and its effects on Ghanaian road contractors and other stakeholders

Please, tick and fill in the blanks if you select others.

Each scale represents the following rating:

(5) = Strongly Agree, (4) = Agree, (3) = Neutral, (2) = Disagree, (1) = Strongly Disagree

Question: What are effects of delayed payment on road contractor?

Category	Effects	1	2	3	4	5
Contractor	Create cash flow problems					
	Force to borrow from financial institutions					
	Cost overrun of project					
	Leads to suspension of works					
	Leads to abandonment of projects					
	Interruption of programme of works					
	Difficult to procure material and services					
	Difficult to maintain equipment					
	Idleness of equipment					
	Late or non-payment of salaries					
	Image of contractor tarnished					
	May result in disputes e.g. litigation/ arbitration					
	Difficult to tender for new projects					
	Other effects, please specify:					
	a.					
	b.					

SECTION D

Options Available and Strategic Methods to Improve Cash Flow Forecasting

Objective of the Study: Identify effective options available and strategic methods developed by contractors to improve their cash flow forecasting.

Please, tick and fill in the blanks if you select others.

Each scale represents the following rating:

(5) = Very important, (4) = Important, (3) = Neutral, (2) = Not important, (1) = Not very important

Questions: What are the options available and strategic methods to improve cash flow forecasting?

Category	Improving Cash Flow	1	2	3	4	5
1. Options available	Regular periodic payment					
	Payment of interest on delayed payment					
	Defined time frame for payment					
	Employer work within stipulated budget					
	Suspension of work					
	Debt finance					
	Government or consortium to supply contractor with chippings, iron rods, bitumen and cement on credit					
	Increase the percentage of Advance Mobilisation loan					
	The mandatory creation of a trust account * for payment of retention monies					
	Other possible options, please specify:					
	a.					
	b.					
	c.					

Category	Improving Cash Flow	1	2	3	4	5
2. Strategic Methods	Employer to Issue a Promissory Note					
	Turn-key contract					
	Employer seeking a loan to pay off debt					
	Discounting facility					
	Support from friends or relatives					
	Entering into partnership agreement					
	Funds from the contractor's businesses					
	Leasing of equipment					
	Introduction to Construction Contract Act					
	Other strategic methods, please specify:					
	a.					
	b.					
	c.					

* **Trust account** is a separate bank account where retention sums are kept and released upon discharge of all obligations.

SECTION E

Means to Recovering of Payment-Default

Objective of the Study: Identify the means of recovering payment-default in construction Industry.

Please, tick and fill in the blanks if you select others.

Each scale represents the following rating:

(5) = Very important, (4) = Important, (3) = Neutral, (2) = Not important, (1) = Not very important

Questions: What are the means of recovering of payment-default in road construction?

Recovering Method	1	2	3	4	5
Speedy dispute resolution mechanism e.g.: Adjudication*					
The creation of a right to a lien*					
Litigation*					
Other possible solutions, please specify:					
a.					
b.					
c.					

* **Adjudication** is a process where upon request by one of the parties, an independent adjudicator steps in (even when work is ongoing) and makes a binding decision on disputes within days or weeks.

* **Lien** is the right to take another's property if a debt is not paid.

* **Litigation** is the process of taking a case to a law court so that an official decision can be made.