KWAME NKRUMAH UNIVERSITY OF SCIENCE AND

TECHNOLOGY - KUMASI, GHANA

Challenges In Processing Payment For Road Maintenance Works In Ghana

By

Eric Addotei Akwei, Btech (Hons.), In Building Technology

A Thesis Submitted To the Department Of Building Technology, College of Art and Built Environment

In Partial Fulfilment of the Requirements for the Award Of

MASTER OF SCIENCE IN CONSTRUCTION MANAGEMENT.

NOVEMBER, 2015

DECLARATION

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

Eric Addotei Akwei (PG9127113)

.....……

Signature

.....……

Date

Certified By:

Mr. Peter Amoah

(Supervisor)

.....……

Signature

.....…

Date

Certified By:

Dr. Bernard Baiden

(Head of Department)

.....……

Signature

.....…

Date

ABSTRACT

A typical challenge facing the construction industry in Ghana is late payment for work done. Many challenges and problems facing the construction industry in Ghana must be overcome in order to realize the goals of the industry. Making due payments on time for work done can contribute to project success. The aim of this research is to explore the challenges in processing payments for progress of work done by road maintenance contractors in Ghana. The specific objects of the research are to identify the challenges in processing payment for roads maintenance contractors, the effects resulting from these challenges in processing payment for road maintenance works, and to recommend strategies and measures that can help to minimizing these challenges during processing of payment for road maintenance works in Ghana. After an exclusive literature review, structured questionnaires were designed to elicit opinions from Public Servants, Contractors and Consultants in the construction industry in Ghana. Purposive sampling technique was adopted and out of the 60 questionnaires distributed, 50 were collected back depicting a response rate of 83.33%.The field survey data was analyzed using statistical representation. Relative importance index was the method adopted to analyze the research objective based questions. The factors were ranked from not importance (1) to very important (5). Findings were made after analyzing the data and discussions. The findings made include: Improper feasibility study before starting a project, government lacks of commitment for road maintenance, cumbersome procurement procedures; Non availability of funds in the budget by Government to confirm its commitment for road projects, and Government in power influencing payment are challenges facing payment processing in the Ghanaian construction industry. It‟s also reveals that, poor project financing, project cost overruns and Diversion of fund for other government priorities

are few of the effects resulting from these challenges faced in processing payment. In view of the findings of the study, it is important to re-direct efforts towards strategies to be adopted in our payment processing system in Ghana. The following recommendations are vital for improving the construction contract administration and payment processing in road maintenance. Government to expedite the implementation of the decentralization policy to effect payment at the district level to reduce the number of signatories in payment. The introduction of prompt payment Act in the construction industry. According to Goldstein, in 2003 this will act as Security of Payment to deserving contractors in road maintenance. Government must undertake projects which are budgeted; thus and avoid politicking issues regarding road infrastructure. Funds should be made available and released on time for road maintenance works in Ghana Improper feasibility studies into the availability of finance to complete a Project. There should be proper feasibility study into project scope before procuring it to avoid being locked up at the middle of delivery and implementation. With the above recommendations, it can be concluded that when payment processing are made effective, a substantial amount of the challenges facing contractors would be removed.

DEDICATION

This Dissertation is dedicated to my wife **FLORENCE AFOLE AKWEI** and my children **EMMANUELLA NAA AKU SHIKA ADDOTEY, KENNETH NII KPAKPO ADDOTEY** and **GILBERT NII AKWEI ADDOTEY.**

ACKNOWLEDGEMENT

I wish to express my special gratitude and appreciation to **JEHOVAH,** our creator, for granting me all that I need to finish this program.

I also wish to express my sincere gratitude to my supervisor Mr. Peter Amoah for his immense contribution, expert guidance and support to this research without whose effort this research would not have been completed.

I owe special thanks to all my lecturers for their immense assistance provided me for this research work.

To staff of Ghana Highways Authority, Department of Urban Roads and Department of Feeder Roads in Kumasi, I say a big thank you for all the information you provided towards this Research work.

To my dear friend Mr. Anthony Nansie, I say a big thank you for all the help and contributions offered for this study.

I also wish to thank all my course mates for all their support and encouragement given me throughout the study.

Finally, I am thankful to all my siblings for the entire assistant they provided towards this programme.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

A typical challenge facing the construction industry in Ghana is late payment for work done. According Ameer, (2005), a good project‟s success come‟s about by the act of organized and well-timed payment in building projects. Work payments is deemed the sustainer of all construction works because it normally require huge sums of money and it also takes long period of time to complete (Naseem, 2006).

Many challenges and problems within the building business which includes delay in payments must be overcome to permit the goals of the industry to be realized thus making due payments on time for work done can help in efficient project delivery. An uninterrupted cash flow creates access to efficient distribution with respect to time and budget so that projects will be completed within the planned time and quality (CIOB, 2004). Late and non-payment issues are seen to have negative impact on various stakeholders in the building industry both in public and private funded projects (Abdul -Rahman et al. 2006).

Project delays, reduced profits and sometimes company liquidation are all effects of delayed payments. It also affects program timeline and eventually cash flow patterns. (Naseem, 2006). Hence the need to investigate the challenges involved in processing payment to road contractors in the Ghanaian building industry.

1.2 THE PROBLEM STATEMENT

In Ghana, the client (employer) and other players (stakeholders) who are in the road construction industry persistently complain about the industry‟s inability to complete

budgeted projects as scheduled, but there remains a constant problem of delays in payment to road contractors**.** An important factor which impedes the contractors work schedule is irregular delays in payment hence, high cost of capital from banks, poor quality works, late completion of projects, increase of total project cost, disputes, and liquidation of construction firms and loss of productivity **(Ameer Ali, 2005)**. There is, therefore the need to investigate the challenges faced in processing payments to road contractors to help reduce the late payment and to improve the financial standing of the road contractors in the Ghanaian construction industry.

1.3 AIM AND OBJECTIVES

AIM

The aim of the researcher is to explore the challenges in processing payment for progress of work done to road maintenance contractors in Ghana.

OBJECTIVES:

- To identify the significant challenges in processing progress payments for road maintenance works in Ghana;
- To identify the effects of these challenges on payment to road maintenance works; and
- To recommend strategies for effective payment processes for road contractors in Ghana.

1.4 RESEARCH QUESTIONS

The study poses the following research questions:

i. What are the causes of these challenges in processing payment for road contractors?

ii. What are the effective options and strategic methods available in processing payment for road contractors in Ghana?

iii. What are the means of improving the processing of payment in the construction Industry particularly for road maintenance works?

1.5 SIGNIFICANCE OF THE RESEARCH

This study is relevant because it will help the government and other construction stakeholders in mitigating the challenges associated with processing of payments for road contractors and effectively improve the payment system for the construction industry in Ghana. The outcome of this study will be of importance 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 JUSTIFICATION OF RESEARCH

The statement of the problem gives indication to the fact that there are challenges in processing payment certificate on Ghana Road Fund projects. These challenges in processing payment leads to Government spending substantial amount of money on interest, which could have been used for other laudable projects. The contractor on the other hand also incurs cost as a result, abandoned the project, lay off workers and divert into other lucrative businesses.

The research seeks to find the challenges that affect the processing of payment, from the point of views of the Clients, Consultants and Contractors on Ghana Road Fund projects in Ghana.

It is the hope that with the knowledge on the challenging factors affecting the processing of payment, all the parties to the projects will take concrete steps to prevent or minimize the delays in honoring payment certificates.

1.7 SCOPE OF STUDY

The study will be restricted to projects funded by Ghana Road Fund through the following government establishments in Kumasi:

i. Department of Feeder Roads. ii. Department of Urban Roads.
iii. Ghana Highway Authority, and
iv. Road Contractors in Kumasi.

1.8 ORGANISATION OF STUDY

The study is structured in the following five chapters. Chapter one which is the introductory chapter provides an overview of the context in which the research was conducted. Chapter two outline detailed literature review and was based on other researchers‟ viewpoint on the topic. Chapter three is the Research Methodology, this describe 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 1 – Introduction

Chapter 2 – Literature Review

Chapter 3 – Research Design and Methodology

Chapter 4 – Analysis and Discussion of Findings

Chapter 5 – Conclusion and Recommendation

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

Payment process of construction work done by contractors is a very huge challenge due to the bureaucratic nature of the process (Laryea, 2010). Failure to pay within time limits stipulated by the contract is deemed to be a breach of contract.

As a developing country, the construction industry is very crucial in its development. The industry puts up structures and roads works vital for social and economic development of the country. To ensure this, the processing of payment for works dully certified must be done in an urgent manner to avoid delays in payment. According to Naseem, (2005) payment is the monies paid to contractors for works completed successfully. Delays in payment will lead to: extension of time; non-completion; termination of contract.

There are many factors which give rise to payment problems and the effects that come along with such phenomena are disastrous. Thus, processes to alleviate the challenges associated with payment are addressed in the contract conditions. Hence, some of these remedies for securing payment debt for road contractors are frustrating and needs urgent attention.

2.2 IMPORTANCE OF ROAD MAINTENANCE

2.2.1 Maintenance

Stankevich, (2005), maintenance is extensively acknowledged but yet still not given too much significance in practice. Maintenance is done regularly to preserve facilities in a structure. Roads rapidly deteriorate if not maintained regularly.

According to Heggie, (1994) construction of a road is a single payment activity but its maintenance a time related activity thus payments for maintenance are made from time to time.

Government normally provides funds for road maintenance. These monies are most of the time gained from loans and grants from other countries and taxes. The same funds are also used to manage other sectors like healthcare and education, therefore there is a lot of pressure on the funds. Therefore it has become necessary for countries to come up with alternative ways of sourcing monies for road maintenance.

Most government administration now requires road users to pay for the use of a road. These charges are incorporated in fuel levies, vehicle license fees and tolls. Alternative ways could also involve the private sector companies who will invest in road maintenance if the benefits outweigh the costs. Many countries have acquainted with Public Private Partnership to help secure funds for road maintenance on regular bases.

2.2.2 Importance of Maintenance in Ghana

According to **Donnges, et al, (2007),** the importance of road maintenance is to extend the life span of the structure. Maintenance eradicates huge investments that have to be made to reconstruct the road due to early deterioration. Cost of maintaining a road is a small portion of the initial investment thus adoption of preventive maintenance is necessary. Investment of huge funds in construction of roads is of small significance if effective maintenance processes is not adopted.

2.2.3 Growth:

According to Shaw, (2012) Historically, Ghana‟s construction sector represented 4-6% of GDP, but it has seen increased activity in recent years. The industry grew by 20% in 2011 in the wake of the high foreign direct investment (FDI) inflows following the development of the Jubilee oilfield; this slowed to 11.2% in 2012, but it is projected to rise by 12.5% in 2013.

The 2012 “Bruce Shaw Handbook”, published by the eponymous UK surveying group, estimates construction will represent over 10% of GDP from 2012 onwards, up from 8.1% in 2010, and that output will grow by 12% annually in 2013 and 2014.

2.2.4 Regulation and Oversight:

The main bodies that supervise and oversee construction in Ghana are the Ministry of Water Resources, Works and Housing, which over sees housing infrastructure, and the Ministry of Roads and Highways, which is responsible for civil infrastructure. Contractors generally fall under either building or road construction categories, with airports falling under road construction. The Ghana branch of the Chartered Institute of Building (CIOB) estimates that there are 1600 active building contractors in Ghana, and the Ministry of Roads and Highways lists 2095 road contractors in good standing as of October 2012. Road contractors falls under four categories: Category A, which includes roads, airports and related structures; category B, which includes bridges, culverts and other structures; category C, which comprises laborbased road works, and category S, which is for steel bridges and structures.

2.3 PROCUREMENT OF ROAD WORKS

2.3.1 Award of Contracts

The Public Procurement Act, 2003, (Act 663) provides the general rules governing Public Procurement. The purpose of the public procurement mechanism is to offer value for money to the Government by guaranteeing that state funds are expended judiciously.

An entity in accordance with the Procurement Act, advertises in the daily papers inviting eligible contractors to bid for projects budgeted for awards by the Republic of Ghana which will be funded through the Road Fund or Donor support with Standardized Tender, Evaluation and signed Contract documents. Clause: 42 and 43 of the general conditions of contract attached to these awards stipulates in clear terms the mode of payment as a risk factor assuring the contractor of payment and means of adjudications on payment disputes between the parties.

2.4 FUNDING

2.4.1Funding and Execution

Anne, (1995) pointed out that the road funds was established to finance portions of the periodic maintenance budget, leaving all repetitive maintenance to be financed from the state‟s budget, together with donor grants and loans.

2.4.2 Allocating Funds between Different Road Agencies

According to Anne, (1995) Road funds board has the capacity to allocate funds between the different road departments in a transparent manner to avoid any disagreement. The road fund is an account managed by the Ministry of Roads and Highways (MRH). The ministry separates the funds at the source and chooses how much to allot to the Ghana Highway Authority (GHA), Department of Feeder Roads (DFR), and Department of Urban Roads (DUR).

Anne, (1995) indicated that **Ghana** and **Tanzania** split funds at the source between various roads departments. Ghanaian government firstly allocates eighty percent of the income for main and regional roads and twenty percent for urban and rural district roads but with time the Ghanaian government adopted a new way of distributing funds which involved about fifty percent for trunk roads, thirty percent for rural roads, and twenty percent for urban roads. The percentages of allocation were varied annually. Even though the distribution process has some advantages, it in a way not tuned to actual requirements of construction.

2.4.3 Road Fund Processes

The funds are intended to develop businesslike (rather than bureaucratic) systems to make provision for satisfactory financing for road maintenance. Funding systems have now been made clearer because of the introduction of financial audits Acts in most countries. Even though delays are inevitable, allocations of approved revenue to road construction are more secure.

2.4.4Auditing Arrangements

The road fund allocation in Ghana is subject to an autonomous audit. These audits in Ghana is only designated to confirm that all allocations to the road fund have been received and that drawings have been used solely for payments to contractors maintenance units operated by the Ghana Highway Authority, Department of Feeder Roads and Department of Urban Roads.

2.4.5Withdrawal Procedures

The procedures followed in withdrawing money from the road funds accounts is a problem to many stakeholders. In Ghana, drawings of specific sums have to be agreed upon and authorized by the Accountant General on joint instructions from the Ministry of Roads and Highways and the Ministry of Finance which consequently leads to delays

2.5 CHALLENGES IN PROCESSING PAYMENT

2.5.1 Challenges Facing Local Road Contractors

Geza, (2013) delayed payment is a big set-back in every industry but the exclusivity of the building industry intensifies the effects of delayed payments. The building industry is different from others because of its composite system of contracting and sub-contracting. However, the system of contracting and sub-contracting requires cash flows through various stages of the structure. A disruption in the payment flow wherever in the construction pyramid has a falling effect down the rest of the contracting and sub-contracting chain. In most cases there is no interest paid on the delayed payment and contractors are required to continue working even though payments are not made. A contractor whose payment is delayed has no choice to complain than just to confirm.

Geza, (2013) payment mechanism in the building industry in Ghana is very defective. These defects lead to lower employment in the building industry, investments by stakeholders are reduced and many other consequences. The opportunism of the minority will drive the entire industry‟s practices down. Left to its own strategies the building industry will not abandon the

use of contingent payment clauses. Lack of on time payment legislation, the situation will worsen, rather than improve.

According to Johnston (1999), a study on the Payment Performance in Britain has revealed that the building industry was faced with delayed-payment attitude, with payment to subcontractors and suppliers being made, on average, fifty-three days after invoices have been submitted. It is predicted that disputes if unsolved will elevate into serious issues which can also serve as a reason for late payments. Many related studies have been conducted in the

United Kingdom to address the problems of payment in the building industry. For instance (Latham, 1994) has presented various radical tools to meet the challenges concerned with payment problems in the building industry by introducing the Construction Contracts Act, stipulating that, the obligatory trust funds for payments and signifying that adjudication should be the standard method of dispute resolution. Some of the recommendations have been incorporated in the Part II of the Housing Grants, Construction and Regeneration Act 1996.

2.5.2 Payment after Completion

This payment is done after a successful project have been delivered thus the contractor is entitled to a payment certificate of completion after this time. In this approach, the contractor is financing the project to a large extent. The client pays the total cost of the works to the contractor when works are satisfactorily completed.

2.5.3 Challenges in Processing Progress Payment in Ghana

Laryea, (2010): A reason for payments of works done been a challenge in Ghana is that jobs procured for infrastructural development exceeds what the government can pay. The main source of funds for road construction in Ghana is obtained from road tolls, the fuel levy, the Consolidated Fund, and donor agencies. The bureaucratic nature of payments to contractors renders it‟s even more challenging for payments to be issued. It also takes time for the contractor to prepare the documentation required to prepare the payment of works due him.

Since 2008, government had no funds accessible to pay to contractors hence he opted for soliciting money from other organizations like Social Security and National Insurance Trust (SSNIT). A different government took over and wanted to comprehend how the debt had accumulated. Consequently, payments to contractors were ceased and it took a long period of time before they were paid.

2.5.4 Disbursement Procedures

Anne (1995). There are two possible options for disbursement (i) payment is made for measured outputs; or (ii) payment is made for measured inputs. If payment is decided on *outputs*, the work is normally executed under contract. Disbursement is then made against tendered contracts and arbitrated through the government tender procedure, after certification that the work has been finished and undertaken with respect to the specifications indicated in the contract.

During contract period, the usual format adopted is interim payments. In Standard Forms, the interim are achieved by the issue of „interim certificates". Interim certificate is the periodic certification for the payment due to contractor. Failure to issue the interim certificate by the consultant could be deemed as a breach of contract (Singh, 2003). Interim payments are usually monthly but parties to contract can decide when interim payments should be made.

2.5.5 Timely Payment

Naseem, (2006) it is relevant to differentiate between the actual time that payment should be made and timeliness of payment. Time within which to make payment is the number of days within which payments could be made while timeliness depicts the exact day that payment should be made. Between the two, constant timely payment is more relevant. This is due to the fact that calculated cash flow is critical to a business in the building industry and also a longer time for payment and known upfront can be scheduled and priced for before time.

2.5.6Actual Time for Payment

Naseem, (2006) the actual time for payment would be different between stakeholders in the building Construction industry. The time required can be stated in the contracts – upfront and Terms and Conditions of the paying stakeholder can be merged.

2.6 THE EFFECTS OF THE CHALLENGES IN PROCESSING PAYMENT

2.6.1 Introduction

Naseem (2006) a failure on timely payments have lots of effects on the construction industry. Building industries in developed countries like United States and Singapore can end up in liquidation of their assets due to delayed or lack of payments. Other effects include suspension of works, slowdown of work progress and many others.

This section discusses the effects of the challenges that causes delayed in processing payments in the building construction industry.

2.6.2 Suspension of Work

The contractor is expected to continue the work in a steady and manner notwithstanding the point that previous work executed have not being paid. The Court of Appeal of New Zealand in the case of British Pipe Lines vs. Christchurch Drainage was held that a contractor has no implied right of brief suspension following non-payment on the part of the employer. The choice was then followed in the English case of Lubenham vs. South Pembrokeshire that confirmed the position of contractor‟s right of suspension. According to Murdoch and Hughes (1996), it is common that a contractor or sub-contractor who has not been paid warned to suspend work under the contract until payment is made. It should be indicated that without a clear contractual right to suspend the works, the contractor is not allowed to do so even though the employer has not paid him within the time stipulated in the contract. In this respect, if the contractor suspends the work, the court might find him guilty of rejecting the contract.

2.6.3 Right to Slow Down Work

According to Lim (2005), right to slow down the performance of work is also not known under the common law separately from the right to suspend the work. Currently, in any Construction Contracts Act around the globe, such a right is omitted. It is a practical to note that provisions made for suspension of work in the Ghanaian Construction Act are not meaningful to the contractor to suspend work altogether since there is a situation whereby hiring machinery and equipment left idling on site are to be paid by the contractor.

2.6.4 Delays in Processing Payment for Road Contractors

The negative effects of delay in honoring payment certificate on contractors prompted the Association of Road Contractors (ASROC) Ghana, to secure grant from Business Sector Advocacy Challenge (BUSAC) Fund (a Non-Governmental organization functioning in Ghana), to provide funds to a joint Advocacy programme to lessen the occurrence of delays in the payment of road projects completed by private road contractors ASROC, (2008).

In May 2008 at the launch of the Advocacy programme held at Kumasi, Mr. J. TwumasiMensah, the then national Chairman of ASROC indicated that the native Ghanaian Road Contractors have not been satisfied with the bureaucratic nature of payments to contractors in relation to road projects undertaken by them. He said the method, which comprises of over thirty seven (37) procedures, contains one of the problematic sectors in the operations of Road Contractors and said, “even though the result of our study were communicated to the Ministry of Transportation and all the important Road Agencies, it is unfortunate that, the system did not change, it even worsened to the detriment of contractors”. This indicate that although private sector has been able to find some factors that affects this delay in payment, bureaucrats and Government appointees in the ministry have not been able, since 2004, to solve the problem.

Laryea, (2010) a professor at South Africa‟s University of Witwatersrand, in a research conducted, it was found that local contractors are hit hard by consistent payment delays in a highly competitive operating environment that is becoming dominated by large foreign companies operating in dollars or euros, and with access to a larger financial base and easier lending conditions. Asamoah stated that. “Payment delays hold up projects and cause costs to rise, which has ramifications for the entire economy as it stunts local level growth,” he said.

2.7 STRATEGIES FOR EFFECTIVE PAYMENT PROCESS

2.7.1 Payment Bond

This is a mechanism fundamentally needing a third party to guarantee payment in a situation of failure to pay on the part of the paying party (Lim, 2005). Basically, it requires the party awarding a construction contract in excess of certain limit to provide a payment guarantee to the contractor. The concept is similar to performance guarantee that is widely used in government projects but the onus lies on the employer to obtain the payment guarantee. It should also be noted that the contractor is not permitted to begin the work unless the payment guarantee is received.

Theoretically, a contractor is only permitted to suspend works due to non-payment if such a stipulation is expressly spelled out in the contract. The right to suspend 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 Honoring Certificate, and continues such default for fourteen (14) days, the contractor can give a notice specifying his intention to suspend 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. Having talked about the imperative of such right, it is suitable to add these conditions in all the standard forms accessible in Ghana. Maybe, by adding this condition in the Ghanaian Construction Contracts

Act in the future, it will compulsory provide the incorporation of the right to suspend the work in all the standard forms of contract, since the Act is in force it will offer certain obligatory necessities that should be adhered to by any construction contract that falls within the realm of the Acts

2.7.2 Pay When Paid Clause

According to Ameer (2005b), 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 demoralizing effect on the sub-contractors due to events which are beyond their control. If the client exercises his right to refuse payment for whatever reasons stipulated in the contract to the contractor, the sub-contractor who may have done his work properly will not get paid if such a clause is in place. It would be discriminating for the sub-contractor for not being paid due to the accountability of others.

2.7.3 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. Essentially the right to adjudicate is 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 essentially covered under clause 108 of the HGCRA. Adjudication is a process where parties to contract request, an autonomous adjudicator steps in and makes a binding decision on disputes within days or weeks.

This is not satisfactory practice in a claim concerning a large sum of money. Sometimes it is already late to take this matter to court as the contractor may have suffered severe cash flow problem which could cause 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 enforceable until the dispute is finally determined by legal proceedings 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 improving contractor‟s cash flow. Historically, adjudication provisions were introduced in standard form to prevent interim payments to sub-contractors 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 usually 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. 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, significant to note that the subjects of the disputes are still concerned with the cash flow of the contractors and the sub-contractors. Construction adjudication introduced by the HGCRA provides a quick and interim but enforceable award which allows opportunity for improvements in cash flow.

2.7.4 The Creation of a Right to a Lien

The security of payment by the contractor to the client is extensively dealt with by way of mechanic lien statues in USA and Canada, which is currently not used 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 labor 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 not used 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.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter talks about the methodological approach to this research. It describes how the data will be collected, handled and how it will be utilized in addressing the issues brought out by the research aim and objectives. It also explains data analysis method that will be used in analyzing the data, how the sampling population and sample size will be determined. In summary, it seeks to describe the entire approach that will be adopted to address the research aim, specific objectives and questions.

3.2 RESEARCH DESIGN

Research design basically talks about a collection of guides or rules or data collection (Adams and Schvaneveldt, 1985; Ogoe, 1993). Researchers suggest that, research design shows the structure for data collection and analysis. The structure influences the technique for collection and analysis of data and provides the connection between empirical data as well as its conclusions in a logical sequence to the initial research question of the study (Baiden, 2006).

The research adopts a questionnaire survey in the quest to explore the various challenges in processing payments for road maintenance and develop strategies to improve the punctuality of payments. The questionnaire will be designed for civil engineers, quantity surveyor and specialist consultant in the public sector and contractors in the Ghanaian road construction industry. Questionnaire survey enhances consistency of observations and improves replication due to its inherent standardized measurement and sampling techniques

(Oppenheim, 2003).

3.3 RESEARCH STRATEGY

This section constitutes the approach that will be adopted for this research. It describes the logical position of the research, the strategy that will be adopted, and why that strategy was

adopted. An insight of the research process will be given. This section also describes the quantitative approach to research: what it entails and the main reasons why the quantitative method was selected for this research. Finally the section seeks to justify the strategy that was adopted for this research.

3.3.1 Philosophical Considerations of the research

Philosophical positions have significant effects on research design. (Christou, *et al.*, 2008). According to Bryman (2004), there are two main logical positions of research, namely ontology and epistemology.

Ontology is the nature of reality (Hudson and Ozanne, 1988) while epistemology is the relationship between the researcher and the reality (Carson et al., 2001) or how this reality is known. There are two main ontological and epistemological ideologies: Positivism and "Interpretivism." At the ontological level, the position adopted for this research is objectivism. The positivist ontology believes that the world is external (Carson et al., 1988). Positivist researchers are detached from the participants therefore they are emotionally unbiased to make perfect distinctions between reason and feeling (Carson et al., 2001). This paper addresses the challenges in processing payment for road maintenance works in Ghana. This aim is completely out of the influence of the researcher hence objectivism ontological position will be followed. At the epistemological level, this research follows the positivists approach. Statistical and mathematical techniques are central to positivist research that adheres to precise structured research techniques (Carson et al., 2001). This research will be carried out using statistical tools. This will bring out the ability to generalize the outcome of the research.

3.3.2 Quantitative Research

According to Bryman (2004), quantitative research is a research approach which emphasizes the measurement and the quantification in the collection and the analysis of data. By definition, measurement must be objective, quantitative and statistically must valid and the sample size

for a survey is calculated using formulas to determine how large a sample size will be needed from a given population (Anderson, 2006).

The justification for this research approach is that, quantitative approach is deductive which implies that it is associated with verification of theories and hypothesis testing and it also employs the use of questionnaires and existing databases. It also involves the use of statistical tools in analyzing large sample size from a population to get an outcome that can be generalized. It also obeys all the rules of positivism.

3.4 DATA COLLECTION AND INSTRUMENTATION

3.4.1 Questionnaire Design and Development

Questionnaire includes instruction for completion, response alternatives and specific means for recording responses (Frazer and Lawley, 2000). Oppenheim (1992) described questionnaire design as a crucial part of the research design stage. Questions in a questionnaire can be open-ended, close-ended or a mixture of the two (Frazer and Lawley,
2000; Oppenheim, 1992). There are four main methods of questionnaire administration. These include mail questionnaire; personally administered questionnaire; telephone questionnaire; and internet questionnaire (Frazer and Lawley, 2000).

In order to achieve the aims and objectives of the research an elaborate questionnaire was developed based on the stated objectives of the research. The questionnaire used in this research (Appendix), first sought the background of the respondent and then asked questions pertaining to the objectives of this research. The opinions and perceptions of the various respondents were collected and scaled with scores ranging from 1-5 popularly called the likert scale. The scale was used because the data is primarily ordinal where 1= not important, 2= Fairly important 3=neutral, 4= important and 5 = very important.

3.4.2 Sampling Technique and Sample Size

Sample means a part of a population drawn to reflect the remaining of the population (Naoum, 1998). The population of a research is the universe of units from which the sample is selected (Bryman, 2004). The targeted group were public servants, contractors and consultants in Ghana.

3.4.3 Instrument Administration

The questionnaires were self-administered by hand delivery by the researcher. Some of the questionnaires were retrieved on the spot whiles the rest were retrieved a week after their administration. In all sixty (60) questionnaires were administered and fifty (50) of them where retrieved representing a response rate of 83.33%

3.5 DATA PREPARATION AND STATISTICAL TOOLS INTENDED FOR THE ANALYSIS

This section talks about how the quantitative data collected was processed and analyzed. Oppenheim (1992) prescribed a way of going about analyzing collected data. He proposed that, routines, which should be followed, has to be set. This includes: allocating numbers to instruments; giving each entry a name; entering them into appropriate statistical package; producing a simple two way matrix of variables versus responses; giving respondents serialized numbers to ensure there is no mix-up; and coding the data to allow for statistical analysis. In relation to the above the individual responses collected were processed and entered into the Statistical Packages for Social Sciences (SPSS version 16) and later processed by Excel 2007 for analysis. The statistical tool used to run the analysis was descriptive statistics and the Relative Importance Index (RII) was used to rank the identified variables.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 INTRODUCTION

This chapter describes of the Challenges in Processing Payment for Roads Maintenance Works in Ghana. It"s also present statistical data and background information of respondents. The discussions cover the extent of involvement of "in-house" actors and their constraints or challenges in processing progress payment for road maintenance contractors in Ghana. These analyses were made using descriptive statistics and presented using text, figure, tables and bar charts. The use of relative importance index was adopted for the analysis for its fairness and equality in dealing with the views of the respondent.

4.2 RESPONSE RATE

Sixty (60) questionnaires were administered personally to Departments, Authorities and Contractors actively involved in road works and other public projects in Ghana. Out of the total number, fifty (50) questionnaires were received, hence 50 questionnaires were considered for the analysis and representation of the data.

4.3 PERSONAL INFORMATION

Respondents who were selected for this study were personnel working in either the government sector or private. The personal data gave the personnel educational level and working experience acquired.

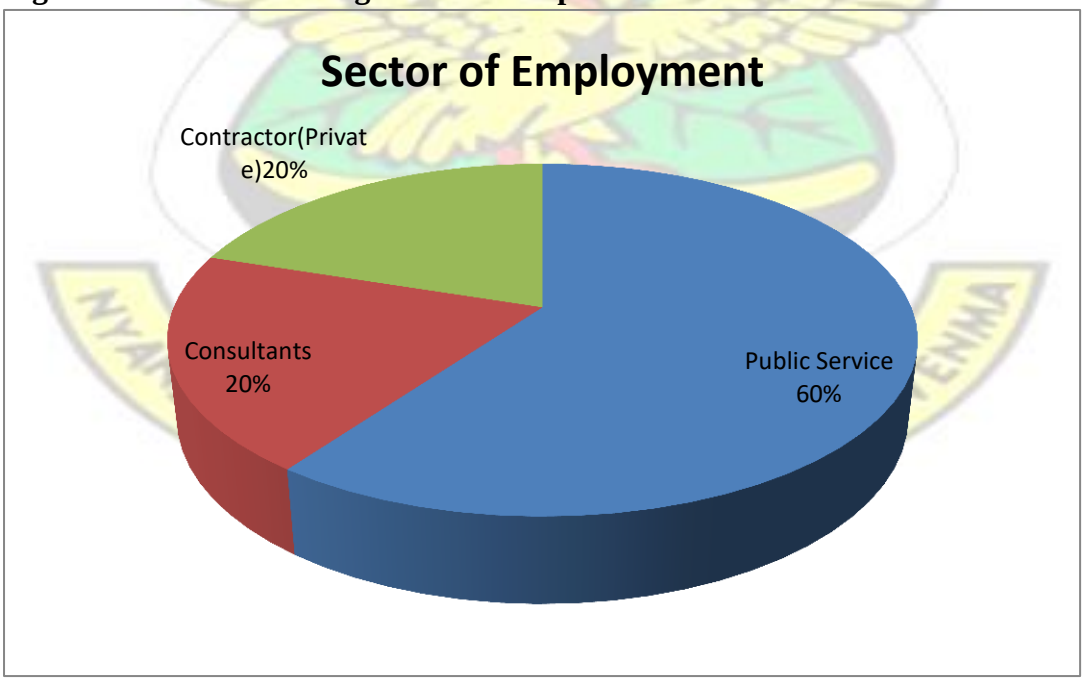
Table 4.1 Economic Working Sector of Respondent

Employment sector	Respondents	Percentage
Public Service	30	60
Consultants	10	20
Contractor(Private)	10	20
Total	**50**	**100**

Source: Field Survey 2014

The Survey reveals the economic sector in which the respondents are employed. Table 4.1 and figure 4.1 contain statistical information which indicates that sixty percentages (60%) of the total respondent are working in the public sector of the economy. On the other hand, 20% of the respondents are contractors. Ten respondent representing twenty (20%) are also working as consultants, thus; majority of the respondent are public servants

Fig 4.1 Economic Working Sector of Respondent



4.4 RESPONDENT WORKING EXPERIENCE

Table 4.2 indicates the working experience of the respondent in years. The table indicates twenty two (22) people has up to five years representing 44% of the total respondent whiles fourteen respondent representing 28% have between five to ten years working experience.

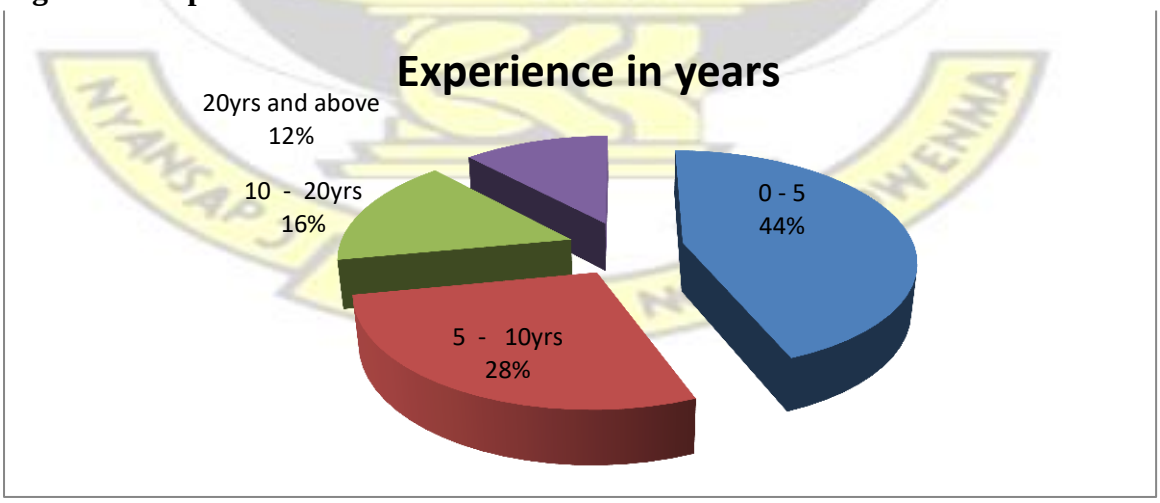
Finally 16% and 12% of the respondents have more than ten to twenty years and above 20 years of working experience respectively. These are represented in figure 4.2.

Table 4.2 Experience in the construction Sector

Experience in Years	Respondents	Percentage
0 - 5	22	44
5 - 10yrs	14	28
10 - 20yrs	8	16
20yrs and above	6	12
Total	**50**	**100**

Source: Field Survey 2014

Figure 4.2 Experience in the construction Sector



4.5 EDUCATIONAL LEVEL OF RESPONDENT

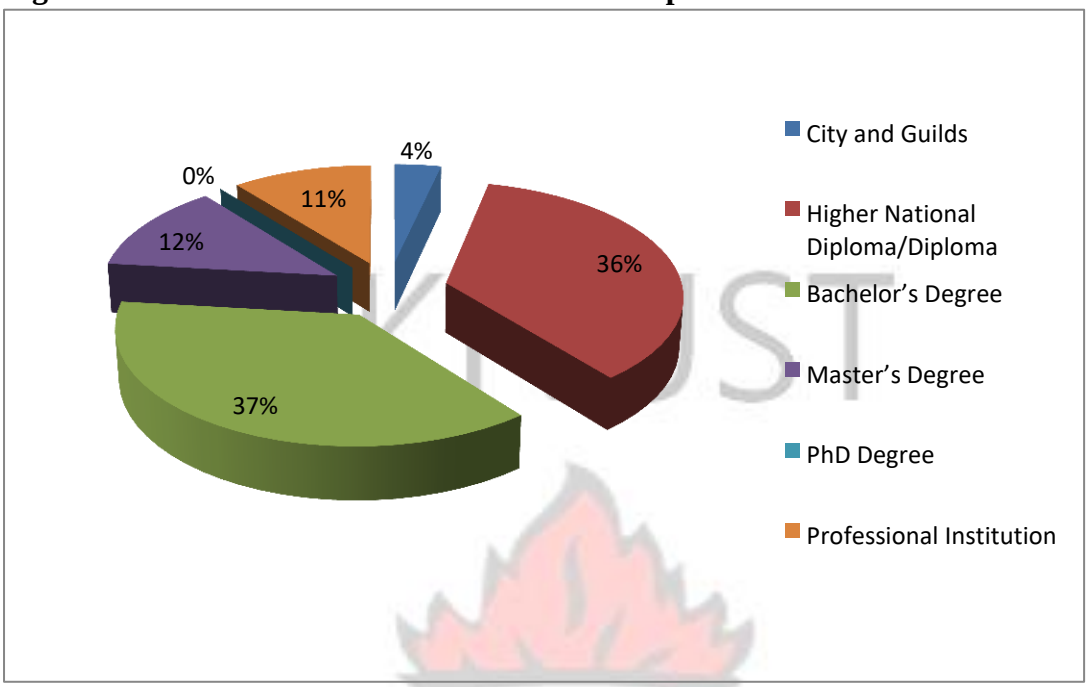
Table 4.3 represents the educational level of respondents who participated in the data collected. Out of the overall participation, 40% and 42% are Higher National Diploma/Diploma and Bachelor Degree holders respectively. The table also reveals that 14% of the respondents are Master‟s Degree holders while 4% hold City and Guild Certificates. It can be deduced from table 4.3 that most of the respondents are diploma and bachelor degree holders. The table indicated 12% out of the whole respondents are members of professional institutions.

Table 4.3 Professional Educational level of Respondents

Educational Levels	**Respondents**	**Percentage**
City and Guilds	2	4
Higher National Diploma/Diploma	20	40
Bachelor‟s Degree	21	42
Master‟s Degree	7	14
PhD Degree	0	0
Professional Institution	6	12
TOTAL	**50**	**100**

Source: Field Survey 2014

Figure 4.3 Professional Educational levels of Respondents



4.6 ROAD FUND GENERATION

Table 4.4 represents the generation of funds for road maintenance as suggested by the respondents. Its deduced that majority of road revenue generation is by the road toll, as suggested by 53.57% of the total respondents. According to KjellLevik in 1997, road toll or road levy is the major source of funding for road improvement, this assessing is in line with the outcome of the respondents.

From figure 4.3, it"s also shown that fuel levy contributes 29% to the total revenue for the road fund in Ghana whiles 10.71% comes from donor agencies.

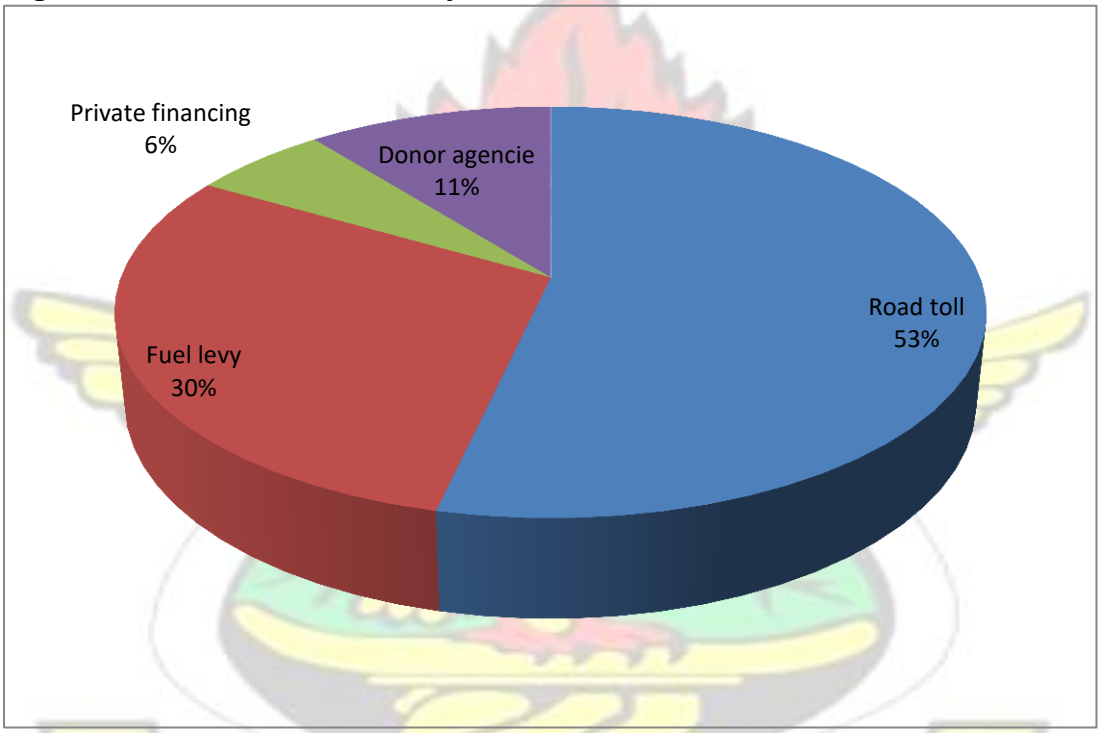
Finally, in Ghana private financing as a form of revenue generation for road fund is least among all as 5.95% of the respondent considered it as a form of generating revenue for road maintenance work.

Table 4.4 Generation of Fund by Road Fund

Forms of Funds Generation	Respondents	Percentage

Road toll	45	53.57
Fuel levy	25	29.76
Private financing	5	5.95
Donor agencies	9	10.71
TOTAL	**84**	**100**

Figure 4.4 Generation of Fund by Road Fund



4.7 CHALLENGES IN PROCESSING PAYMENT ON ROAD FUND PROJECTS IN GHANA

According to Laryea, (2010) and Naseem, (2006) there is complications of bureaucratic structure of payment to contractors in Ghana which makes it difficult for contractors to sustain on projects sometimes even when the government has release funds for payments.

Futhermore, Geza (2013) clearly stated that the payment system in the construction industry in Ghana is seriously blemished.

Some challenges have been identified in the literature which is ranked using the relative importance index (RII) and the results are displayed in table 4.5

From table 4.5, Bureaucratic procurement procedures for road maintenance works has been highly ranked, thus 1st (RII=0.92) while 2nd (RII=0.88) challenge in processing payment is as a result of Improper Proper feasibility studies into the availability of finance to complete a Project. Non availability of Funds in the budget by Government to confirm its commitment, late release of funds for payment of road maintenance works confirms such commitment and Delays in preparation of payment certification for work done are all ranked 3rd with RII rating of 0.84.

Contractors making request for claims in accordance with the conditions of contracts is the 6th factor most challenging when processing payments.

The table indicates that, Lack of Government commitment to infrastructure, signatories that append to the certificate before payment delivery, poor communication among parties and Government in power influencing payment process are considered the least challenges in processing road contractors payment in Ghana, as they are ranked 7th ,8th, 9th, and 10th in that order.

Table 4.5 Challenges in processing payment on Road Fund Projects in Ghana which has been ranked to indicate their scale of importance.

CHALLENGES IN PROCESSING PAYMENT	MEAN	RII	RANKING
Lack of Government/Client‟s commitment in making good the existing road asset.	3.78	0.76	7th

Improper feasibility studies into the availability of finance to complete a Project.	4.38	0.88	2nd
Bureaucratic procurement procedures for road maintenance works	4.6	0.92	1st
Non availability of Funds in the budget by Government to confirm its commitment for road maintenance works.	4.22	0.84	3rd
Late release of funds for payment of road maintenance works confirms such commitment.	4.18	0.84	3rd
Contractor making request for claim in accordance with the conditions of contract.	3.92	0.78	6th
Delays in preparation of payment certification.	4.18	0.84	3rd
Signatories that append to the certificate before payment delivery.	3.68	0.74	8th
Poor communication between contracting parties.	3.26	0.65	9th
Government in power influencing the payment processes.	2.88	0.58	10th

4.8 EFFECTS RESULTING FROM THE CHALLENGES IN PROCESSING PAYMENTS

4.8.1 Lack of Government/Client's commitment in making good the existing road asset

Table 4.6.1 indicates the effects resulting from lack of government commitment in making good the road asset. The effects include:

I. Government attention on roads with heavy traffic which increases travel time, maintenance cost, etc. Government inability to attend to roads with heavy traffic as early as practicable result in many roads being deteriorated at a fast rate and that increases the cost of road maintenance which poses the payment challenges to Government. With RII of (0.73) is highly ranked among three others.

II. The urgency with which roads in deplorable state are attended to by Government, Government decision on road projects abandoned due to payment issues are both effects resulting from challenges of payment as far as government commitment is concerned.

4.8.2 Improper feasibility studies into the availability of finance to complete a Project.

I. Project cost overrun ranked first with RII=0.74, multiple project procured under insufficient year budget is secondly ranked , and followed by Poor project financing strategy are all effects which affect payment of contractors doing road maintenance in the Country.

4.8.3 Bureaucratic procurement procedures for road maintenance works.

It‟s also deduced from the table that Bureaucratic Procurement procedures also has an effects on road maintenance work. These effects are indicated below:

I. Evaluation processes for selecting eligible contractors is the most severe effect as far as procurement as a challenge to processing payment for road maintenance works is concern.

II. Other effects as analyzed are areas of award of contract to eligible road contractors, and invitation for eligible Road contractors have been ranked 2nd and 3rd respectively.

4.8.4 Non availability of Funds in the budget by Government to confirm its commitment for road maintenance works.

The results shown in the table for Budget provision for road works satisfactory indicate that it is an effect of the above challenge in processing payment for road maintenance works.

4.8.5 Late release of funds for payment of road maintenance works confirms such commitment.

When government releases funds early and on time it leads to prompt Payment for certified works. It therefore implies that, late release of funds will in effect resultant in late payment which is identified as major challenge in processing payment for road contractors.

4.8.6 Contractor making request for claims in accordance with the conditions of contract.

From table 4.6 it can be deduced that when the conditions of contract as enshrined in the contract is not adhered to or followed by contractors when making claims that poses challenges in processing their payment.

4.8.7 Delays in preparation payment certification.

The table indicated that Site inspection made by project team to ensure quality, compliance with works specification and Measurement for works duly executed be done together by all parties also poses some challenges in processing payment.

4.8.8 Signatories that append to the certificate before payment delivery. It was suggested that Signatories that are involved in appending payment certificates before final delivery be replaced with the implementation of the decentralized Governance so that payment is done at the district level since that is one of the major challenges faced in the construction industry in Ghana.

4.8.9 The results in the table indicated **Poor communication between contracting parties** as a challenging factor in processing payment for contractors since that in many cases results in dispute which in effect takes much longer time for settlement between the parties.

4.8.10 Government in power influencing the payment processes

The challenges faced by Government agencies responsible for final delivery of payment is diversion of funds for other Government priorities by the Government in power and this result in delays in processing payment

Table 4.6 shows the effect resulting from the challenges faced in payment processing.

EFFECTS OF DELAY PAYMENTS	MEAN	RII	RANKING
4.8.1 Lack of Government/Client's commitment in making good the existing road asset.			
Government attention to roads chocked with heavy traffic increasing travel time, maintenance cost, etc.	3.64	0.70	2nd
The urgency with which roads in deplorable state are attended to by Government.	3.52	0.73	1st
Government decision on road projects abandoned due to payment issues.	3.5	0.70	2nd
4.8.2 Improper feasibility studies into the availability of finance to complete a Project.			
Many projects are procured than budgeted by Government.	3.5	0.70	2nd
Poor project financing.	3.06	0.61	3rd
Project cost overrun.	3.72	0.74	1st
4.8.3 Bureaucratic procurement procedures for road maintenance works			
Invitation for eligible Road contractors.	3.98	0.80	2nd
Evaluation process for selecting eligible contractors.	4.24	0.85	1st
Award of contract to eligible road contractor.	3.9	0.78	3rd
4.8.4 Non availability of Funds in the budget by Government to confirm its commitment for road maintenance works.			
Budget provision for road works satisfactory	3.7	0.74	1st
4.8.5 Late release of funds for payment of road maintenance works confirms such commitment.			
Government releasing funds early and on time.	4.04	0.81	1st
Payment for certified works made on time.	4.06	0.81	1st
4.8.6 Contractor making request for claim in accordance with the conditions of contract.			

Request of claims to conform to contract conditions.	3.9	0.78	3rd
Contractor to attach all invoices necessary.	4.02	0.80	2nd
Contractor to collaborate with project team.	4.04	0.81	1st
4.8.7 Delays in preparation of payment certification.			
Engineer to ensure compliance with works specification.	4.3	0.86	2nd
Site inspection to be made by project team to ensure quality.	4.34	0.87	1st
Measurement to be made together by all parties.	4.2	0.84	3rd
Certificate to be completed within duration specified.	4.06	0.81	4th
4.8.8 Signatories that append to the certificate before payment delivery.			
Project leader, team and consultant appending signatories.	3.68	0.74	4th
Regional/MMDAs directors appending signatories for approval of work done due payment.	3.78	0.76	3rd
Agencies/Department directors to append signatories.	3.92	0.78	2nd
Ministerial appointees to append their approval signatories for payment.	3.16	0.63	5th
Directors of Ghana Road Fund secretariat to finally sign and issue payment when funds are release by Government.	3.96	0.79	1st
4.8.9 Poor communication between contracting parties.			
Poor communication among parties results in disputes	3.64	0.73	1st
Long adjudication process to resolve disputes	3.22	0.64	4th
Disagreement with other stake holders in the community.	3.33	0.67	3rd
Disagreement among project team.	3.44	0.69	2nd
4.8.10 Government in power influencing the payment processes.			
Payment controlled by leaders in power.	3.16	0.63	2nd
Government in power delays in releasing fund.	3.18	0.64	1st
Diversion of fund for other government priorities.	3	0.60	3rd

4.9 STRATEGIES IN MINIMIZING DELAY PAYMENTS

Table 4.7 shows strategies and policies which can help to minimize or eradicate the challenges faced in processing payment for road maintenance contractors in Ghana. The factors are relatively ranked in order of weightings. Highly ranked on the list of

strategies is Government to expedite the implementation of the decentralization policy to effect payment at the district level to reduce the number of signatories in payment with RII of 0.86 and is followed by the introduction of prompt payment Act in the construction industry. In 2003, Goldstein stated that Prompt Payment Act can help minimize payment difficulties.

Its further deduced that good engineering planning will help in overcoming cost overruns and government undertaking projects which are budgeted will also do a lot of service to paying of deserving contractors have both been ranked 3rd on the RII=(0.84) scale.

Also, strict complaince of payment conditions in the contract is 4th on the scale with RII of 0.83. its also a clear indication that when all payment are made in accordance to the conditions stated in the contract it will help minimized payment challenges.

Finally, the introduction of a check list at all the signatories‟ points to ensure timely delivery for payment can also minimize these challenges.

Tables 4.7 Shows strategies in minimizing the challenges in processing payment

STRATEGIES TO MINIZING DELAY PAYMENTS	MEAN	RII	RANKING
Government to expedite the implementation of the decentralization policy to effect payment at the district level to reduce the number of signatories in payment.	4.28	0.86	1st
The introduction of prompt payment Act in the construction industry.	4.26	0.85	2nd
Engineer must plan adequately to overcome cost over runs.	4.22	0.84	3rd
Strict compliance of payment conditions in the contract	4.14	0.83	4th
Government must undertake projects which are budgeted.	4.18	0.84	3rd
Introduction of a check list at all the signatories points to ensure timely delivery for payment.	3.96	0.79	5th

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 INTRODUCTION

This chapter summarized the recommendations and suggestions for further research.

5.2 SUMMARY OF FINDINGS

After careful consideration of the analysis of the research work, the following findings were made objectively from the data collected from public servants, contractors and consultants.

5.3 CHALLENGES IN PROCESSING PAYMENT ON ROAD FUND PROJECTS IN GHANA

The result in table 4.5 indicates Challenges in processing of payment on Road Fund Projects in Ghana which has been ranked to indicate their scale of importance. Discussed below are some of the major challenges involve in payment processing for road maintenance contractors in Ghana per the research survey.

5.3.1 Bureaucratic procurement procedures for road maintenance works The public procurement Act, 663 of 2003 which is an administrative and institutional arrangement for procurement; stipulate tendering procedures and provide for purposes connected with these. By the authority vested in this Act, all process and procedures involve in pre, during, and post contract would have to be in line as stipulated in the Act, hence sometimes turns to delay issues relating to payment because parties involve carry the fear of breaching this legislative instrument.

Naseem, in 2006 stated that there is too much bureaucracy in the system as a result of internal accounting procedures, audit procedures and even management protocol.

From table 4.5 it can be deduced that there are long payment procedure which needs to be addressed.

5.3.2 Improper feasibility studies into the availability of finance to complete a Project.

Inappropriate feasibility studies into the funding before embarking on a project is also a major challenge to payment of deserving road contractors in Ghana. In Ghana where most of our road sector projects are pre finance by the contractors before raising certificate and where proper feasibility is not done, payment of work done by contractors becomes a challenge. From the survey data, it‟s ranked second with relative importance index of 0.88.

5.3.3 Non availability of Funds in the budget by Government to confirm its commitment for road maintenance works.

Another challenge in processing payment for road contractors is insufficient budget allocation for road infrastructure in Ghana.

5.3.4 Delays in preparation of payment certification.

Table 4.5 shows that the time spent on preparation of interim payment certificate is a major hindrance in processing of payment; thus ranked 3rd on the scale of severity index. This view from the field survey goes on well to support Samuel Laryea, (2010) a professor at South Africa‟s University of Witwatersrand, in a research conducted; it was found that local contractors are hit hard by consistent payment delays.

5.3.5 Late release of funds for payment of road maintenance works confirms such commitment.

Finally, late release of fund by government to support road maintenance work is also another factor which is a challenge in processing payment. Mostly in Ghana,

governments come into power with a lot of campaign promises to fulfill, hence causing delay in pumping resources into funding road projects.

5.4 EFFECTS RESULTING FROM THE CHALLENGES IN PROCESSING PAYMENT

5.4.1 Project cost overrun.

Project delays and cost Overruns is also reveals as an effect of challenge in payment as its ranked second on the scale with RII of 0. 0.74. When Proper feasibility studies into the availability of finance to complete a Project is not done before contracts are awarded, it leads to project delay and overruns.

5.4.2 Poor project financing.

From table 4.5 it also indicates that, poor project financing do occur when proper feasibility is not done. This has been highly ranked in the scale of severity. Most of the respondents are of the views that project financing is bound to suffer when initial project implementation concept is poor.

5.4.3 Many projects are procured than budgeted by Government.

Lim, (2005) in a study stated that sometimes government agencies, departments, and authorities do procure works beyond the financial muscles of the sector ministries hence making the budget allocated to such department woefully inadequate. From the field survey in table 4.5 it indicates that one major challenge facing processing of payment for deserving contractors is that works procured within the financial year is more than the money provided hence making it difficult for payment to be done.

5.4.4 Government in power delays in releasing fund.

Government sometimes feels reluctant in releasing money to respective department‟s ministries and agencies, hence making it impossible for contractors directly working

under such departments to be paid. Layea (2010), in a related study stated that government rather concentrates in scoring political points instead of tacking the realities on the ground. Deducing from the survey data, Government in power sometimes delays releasing fund especially where policies are not prioritized.

5.4.5 Directors of Ghana Road Fund secretariat to finally sign and issue payment when funds are release by Government.

From the field data its deduced that persons in charge of the disbursement of the road are the administrative body that finally clear ways for payment so when funds are not released on time their work also end up further delaying the system and making the system appears cumbersomes, Laryea (2010). The respond form the participants indicates that‟s its adversely affect the processing of road fund.

5.5 STRATEGIES IN MINIMIZING OR ERADICATING THE CHALLENGES IN PROCESSING PAYMENT.

5.5.1 Government to expedite the implementation of the decentralization policy to effect payment at the district level to reduce the number of signatories in payment.

From the research survey, most of the respondents are of the view that when government implements the decentralization system of governance it will go a long way to minimizing challenges in processing payments. In a related development,

Abdul-Rahman et al in 2006 stated in their study that when governance machinery is brought down to the ordinary it help better understand the grassroots problems and address them as such.

5.5.2 The introduction of prompt payment Act in the construction industry.

Goldstein in (2003) stated in similar study that the introduction of a prompt payment policy or act is in the right direction in insuring that deserving contractors in general

are paid. In the survey data of this study, respondent are also of the views that the introduction of the prompt payment legislature can help addressed the issues of payments.

5.5.3 Government must undertake projects which are budgeted.

From table 4.6, government undertaking projects which falls within the financial year budget instead thinking of satisfying the selfish goals in order to score political points.it has been ranked third on the scale of importance. Undertaking budgeted projects is a good strategy in reducing challenges in paying contractors in road maintenance in Ghana.

5.5.4 Strict compliance of payment conditions in the contract and Engineer must plan adequately to overcome cost over runs.

Another strategy in minimizing challenges of payment processing is by the Engineers planning adequately and knowing the precise scope of works at the project onset to avoid cost overruns and too much variation in works scope.

5.5.5 Introduction of a check list at all the signatories' points to ensure timely delivery for payment.

That"s, providing a time check list for all persons are directly involved in acting on payment so that one can easily determine the time duration a payment request or certificate has delayed in a particular office. In most of the public sectors the certificate would have to pass through a series of individuals before it finally gets road fund for disbursement.

5.6 FINDINGS

5.6.1 Challenges in Processing Payment on Road Fund Projects in Ghana It can be concluded through the study that, challenges in processing payment of deserving road maintenance contractors among others include:

a) *Bureaucratic procurement procedures for road maintenance works*
b) *Improper feasibility studies into the availability of finance to complete a Project.*
c) *Non availability of funds in the budget by Government to confirm its commitment for road maintenance works.*
d) *Delays in preparation of payment certification.*
e) *Late release of funds for payment of road maintenance works confirms such commitment.*

5.6.2 Effects Resulting from the Challenges in Processing Payment

The research acknowledges the fact that, a series of challenges militate against payment of road maintenance contractors in Ghana. These factors in long term when not catered for develop effects in the payment system.

In conclusion, these are the underpinning effects as which result from the challenges involved in processing payment.

a) *Poor project financing.*
b) *Many projects are procured than budgeted by Government.*
c) *Government in power delays in releasing fund.*
d) *Directors of Ghana Road Fund secretariat to finally sign and issue payment when funds are release by Government.*
e) *Diversion of fund for other government priorities*

f) *Government in power delays in releasing fund.*

g) *Payment controlled by leaders in power.*

h) *Disagreement among project team*

i) *Disagreement with other stake holders in the community*

j) *Poor communication among parties results in disputes*

k) *Agencies/Department directors to append signatories.*

l) *Regional/MMDAs directors appending signatories for approval of work done due payment.*

m) *Site inspection to be made by project team to ensure quality*

n) *Engineer to ensure compliance with works specification.*

o) *Contractor to collaborate with project team*

p) *Contractor to attach all invoices necessary.*

q) *Government releasing funds early and on time*

r) *Payment for certified works made on time.*

5.6.3 Strategies in Minimizing or Eradicating the Challenges in Processing Payment.

In conclusion, the following are the strategies stakeholders must employ to address the issues of payment processing difficulties for road maintenance work.

a) *Government to expedite the implementation of the decentralization policy to effect payment at the district level to reduce the number of signatories in payment.*

b) *The introduction of prompt payment Act in the construction industry.*

c) *Government must undertake projects which are budgeted.*

d) *Strict compliance of payment conditions in the contract and Engineer must plan adequately to overcome cost over runs.*

e) *Introduction of a check list at all the signatories' points to ensure timely delivery for payment.*

5.7 RECOMMENDATION

In view of the findings of the study, it is important to re-direct efforts towards strategies to be adopted in our payment processing system in Ghana.

The following recommendations are vital for improving the construction contract administration and payment processing in road maintenance.

I. Government to expedite the implementation of the decentralization policy to effect payment at the district level to reduce the number of signatories in payment.

II. The introduction of prompt payment Act in the construction industry. According to Goldstein, in 2003 this will act as Security of Payment to deserving contractors in road maintenance.

III. Government must undertake projects which are budgeted; thus and avoid politicking issues regarding road infrastructure.

IV. Funds should be made available and released on time for road maintenance works in Ghana

V. Proper feasibility studies into the availability of finance to complete a Project. There should be proper feasibility study into project scope before procuring it to avoid being locked up at the middle of delivery and implementation.

5.8 CONCLUSION

With the above recommendations, it can be concluded that when payment processing are made effective, a substantial amount of the challenges facing contractors would be removed.

REFERENCES

Adams, G. and Schvaneveldt, J. D. (1985). Understanding research methods (Vol.1)

Ameer, A. N. (2005), *Payment in the Construction Industry – Towards Zero-Default*.. (2005a) ed. Hilton, Kuala Lumpur, Malaysia, : QS National Convention.

Ameer, N. (2005b). *Construction Industry Payment and Adjudication Act, Reducing Payment Default and Increasing Dispute Resolution Efficiency*.. September 2005 ed. Kuala Lumpur, Malaysia. : International Forum on Construction Industry Payment Act and Adjudication,.

Anne Balcerac de Richecour, I. G. H. (1995). *African Road Funds What Works and Why?,* s.l.: Africa Region The World Bank.

Baiden, B. K. (2006). *Framework for the integration of the project delivery team* (Doctoral dissertation, © Bernard Kofi Baiden).

Bryman, A. (2004). *Social Research Methods.* [2nd Ed]. Oxford: Oxford University Press.

Carson, R. C., Butcher, J. N. and Coleman, J. C. (1988). *Abnormal psychology and modern life* . Scott, Foresman & Co.

Chambers, S. G. (2003). *An Overview Of The Building And Construction Industry,* s.l.: Steven Goldstein - Edmund Barton Chambers.

CIDB:, (2004). *South African Construction Industry Status Report- Synthesis Review on the South African Construction Industry andits Development:*. 2004 ed. Pretoria, South Africa: Construction Industry Development Board.

CIOB, (2004). *Construction Act Consultation:"Improving Payment Practices",*. 2004. ed. South African: Construction Industry Development Board.

Donnges, C., Edmonds, G. and Johannessen, B. (2007). *Rural Road Maintenance - Sustaining the Benefits of Improved Access (SETP 19).* First published 2007 ed. Bangkok,: International Labour Organization.

Geza Banfai, H. B. (2013). *The Need for Prompt Payment Legislation in the Construction Industry.* Ontario: Prism Economics and Analysis.

Ghana, A. o. R. C. i. (2008). *Fight Against The Problem Of Delayed Payment,* Accra Ghana: ASROC.

Goldstein, S. (2003). *An Overview Of The Building And Construction Industry Security Of Payment Act,* Australia: Edmund Barton Chambers.

Heggie, I. (1994). *Commercializing Africa's Roads. Transforming the Role of the Public Sector.* SSATP Working Paper No. 10, ed. Norwegian: World Bank.

Hudson, L. A. and Ozanne, J. L. (1988). Alternative ways of seeking knowledge in consumer research. *Journal of consumer research,* 508-521.

Johnston, S. (1999). *Debts and Interest in the Construction Industry: A guide to The Late Payment of Commercial Debts (interest) Act 1998.* Act 1998 ed. London.: Thomas Telford Limited,.

Kish, L. (1965). *Survey Sampling,.* 1965 ed. New York: John Wiley and Sons Inc.

Laryea, S. (2010). *Challenges And Opportunities Facing Contractors In Ghana,* Accra, Ghana,: West Africa Built Environment Research (WABER).

Latham, M. (1994). *Constructing the Team – The Final Report of the Government Industry Review of Procurement Arrangements in the UK Construction Industry.* 1994 ed. London: HMSO: The Latham Report.

Levik, K. (1997). *How to sell the message "Road maintenance is necessary".* Norwey: Norwegian Public Roads Administration.

Lim, C. F. (2005). *The Malaysian Construction Industry – The Present Dilemmas of the Unpaid Contractors. International Forum on Construction Industry Payment Act and Adjudication – A Small Step Towards Zero Payment-Default but a Giant Leap Towards Greater Efficiency,.* 13 – 14 September 2005, ed. Kuala Lumpur, Malaysia.: Kuala Lumpur Convention Centre.

Murdoch, J. a. H. W. (1996). *Construction Contracts Law and Management,.* 2nd ed. London.: E & FN Spon.

Naseem, A (2006). *"Construction Industry Payment And Adjudication Act": Reducing Payment-Default And Increasing Dispute Resolution Efficiency In Construction.* 3rd Quarter, 2006 ed. Malaysia: Construction Industry Working Group On Payment.

Oppenheim, A. N. (1992). *Questionnaire Design, Interviewing and Attitude Measurement*, [New Edition]. London: Continuum.

Singh K.S. (2003). *Engineering and Construction Contracts Management – Post Commencement Practice.* 2003 ed. Singapore:: Lexis Nexis Business Solutions..

Stankevich, S. B. a. N. (2005). Why road maintenance is important and how to get it done. *Transport Notes, Operational Guidance,* Transport Note No. TRN4(TRN-4), p. 1.

APPENDIX 1

A QUESTIONAIRE TO PUBLIC SERVANTS, CONSULTANTS, AND CONTRACTORS

DATE: SEPTEMBER, 2014

PROJECT TOPIC: CHALLENGES IN PROCESSING PAYMENT FOR ROAD MAINTENANCE WORKS IN GHANA

INTRODUCTION

I am a student of Kwame Nkrumah University of Science and Technology currently studying for MSc degree in Construction Management in the Department of Building Technology. In partial fulfilment of my degree requirements I am currently undertaking a research into The Challenges in Processing Progress Payment for Road Maintenance Works in Ghana.

The purpose of this questionnaire is to solicit the opinion of officials involved in the process of payment certificates.

Your contribution towards this survey is highly valued. Please be assured that any information you provide will be treated with strict confidence and do not leave any identification marks on the form in order for you to remain anonymous.

Thank you.

Please tick your choice of selection.

Section A (Personal Data)

1. Which area of construction are you involved in?

a. Public Servants ☐

c. Consultant ☐

d. Contractor ☐

2. How long have you been in the construction industry?

a. 0-5years ☐

b. 5 - 10years ☐

c. 10 -20years ☐

d. 20 years above ☐

3. Please indicate your training/educational level

a. City and Guilds ☐

b. Higher National Diploma/Diploma ☐

c. Bachelor of Science/Bachelor of Arts/ Bachelor of Technology ☐

d. Master of Science/Master of Arts/ Master of Technology ☐

e. PhD or higher ☐

f. Professional Institution…….

4. How does the Ghana Road Fund generate money to pay for road maintenance works?

Road tolls Fuel

levy

Private financing

Donor agencies ☐

☐

☐

☐

Others, Please state……

Section B (Challenges)

The table below is a list of **challenges** in processing ofpayment on Road Fund Projects in Ghana. Please rank these variables in order of severityby ticking the appropriate column.

Rank them to indicate their scale of importance to the challenges faced in processing progress payment for road maintenance works in Ghana.

(1) Not important (2) Fairly Important (3) Neutral (4) Important (5) Very important

No.	Challenges in Processing Progress Payment	Severity Ranking / Grading				
		1	2	3	4	5
1	**Lack of Government/Client's commitment in making good the existing road asset.**					
2	**Improper feasibility studies into the availability of finance to complete a Project.**					
3	**Bureaucratic procurement procedures for road maintenance works**					
4	**Non availability of Funds in the budget by Government to confirm its commitment for road maintenance works.**					
5	**Late release of funds for payment of road maintenance works confirms such commitment.**					
6	**Contractor making request for claim in accordance with the conditions of contract.**					
7	**Delays in preparation of payment certification.**					
8	**Signatories that append to the certificate before payment delivery.**					
9	**Poor communication between contracting parties.**					
10	**Government in power influencing the payment processes.**					

(1) Not important (2) Fairly Important (3) Neutral (4) Important (5) Very important

No	**Others Challenges in Processing Progress Payment**	**Severity Ranking / Grading**				
		1	**2**	**3**	**4**	**5**
11						
12						

Section C (Effect Resulting From the Challenges)

The table below is a list of**Effects resulting from those challenges** in processing ofpayment on Road Fund Projects in Ghana. Please rank these variables in order of significant by ticking the appropriate column.

Rank them to indicate their scale of Effect in processing progress payment for road maintenance works in Ghana

(1) Not important (2) Fairly Important (3) Neutral (4) Important (5) Very important

No.	**Effects resulting from the Challenges in Processing Progress Payment**	**Severity Ranking / Grading**				
		1	**2**	**3**	**4**	**5**
1	**Lack of Government/Client's commitment in making good the existing road asset.**					
a	Government attention to roads chocked with heavy traffic increasing travel time, maintenance cost, etc.					
b	The urgency with which roads in deplorable state are attended to by Government.					
c	Government decision on road projects abandoned due to payment issues.					
2	**Improper feasibility studies into the availability of finance to complete a Project.**					
a	Many projects are procured than budgeted by Government.					
b	Poor project financing.					
c	Project cost overrun.					
3	**Bureaucratic procurement procedures for road maintenance works**					
a	Invitation for eligible Road contractors.					
b	Evaluation process for selecting eligible contractors.					
c	Award of contract to eligible road contractor.					
4	**Non availability of Funds in the budget by Government to confirm its commitment for road maintenance works.**					

a	Budget provision or road works satisfactory.					
b						
5	**Late release of funds for payment of road maintenance works confirms such commitment.**					
a	Government releasing funds early and on time.					
b	Payment for certified works made on time.					
6	**Contractor making request for claim in accordance with the conditions of contract.**					
a	requestof claims to conform with contract conditions.					
b	Contractor to attach all invoices necessary.					
c	Contractor to collaborate with project team in doing that.					
7	**Delays in preparation of payment certification.**					
a	Engineer to ensure compliance with works specification.					
b	Site inspection be made by project team to ensure quality.					
c	Measurement be made together by all parties.					
d	Certificate be completed within duration specified.					
8	**Signatories that append to the certificate before payment delivery.**					
a	Project leader, team and consultant appending signatories.					
b	Regional/MMDAs directors appending signatories for approval of work done due payment.					
c	Agencies/Department directors to append signatories.					
d	Ministerial appointees to append their approval signatories for payment.					
e	Directors of Ghana Road Fund secretariat to finally sign and issue payment when funds are release by Government.					
9	**Poor communication between contracting parties.**					
a	Poor communication among parties results in disputes					
b	Long adjudication process to resolve disputes					
c	Disagreement with other stake holders in the community.					
d	Disagreement among project team.					
10	**Government in power influencing the payment processes.**					
	Payment controlled by leaders in power.					
	Government in power delays in releasing fund.					
	Diversion of fund for other government priorities.					
11	**Others**					

Section D (Strategies to Minimize the Challenges)

The table below is a list of **Strategies**to minimize or eradicate the challenges in processingpayment on Road Fund Projects in Ghana. Please rank these variables in order of significant by ticking the appropriate column.

Rank them to indicate their scale of urgency in avoiding or minimizing the challenges in processing progress payment for road maintenance works in Ghana

(1) Not important (2) Fairly Important (3) Neutral (4) Important (5) Very important

No	Strategies to minimize or eradicate the challenges	Severity Ranking / Grading				
		1	2	3	4	5
1	Government to expedite the implementation of the decentralization policy to effect payment at the district level to reduce the number of signatories in payment.					
2	The introduction of prompt payment Act in the construction industry.					
3	Strict compliance of payment conditions in the contract					
4	Government must undertake projects which are budgeted.					
5	Introduction of a check listat all the signatories points to ensure timely delivery for payment.					
6	Engineer must plan adequately to overcome cost overruns.					
	Others					
7						
8						
9						