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KNUST

TOPIC:

EFFECTS OF DELAYED PAYMENT ON PROJECTS AND STAKEHOLDERS

A CASE STUDY OF KETA MUNICIPAL ASSEMBLY

BY:

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EFFECTS OF DELAYED PAYMENT ON PROJECTS AND STAKEHOLDERS

A CASE STUDY OF KETA MUNICIPAL ASSEMBLY

KNUST
By:

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A Thesis submitted to the Department of Building Technology, Kwame Nkrumah
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degree of

MASTER OF SCIENCE

Construction Management

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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.

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ABSTRACT

Delay payment is endemic in the construction industry and needs to be explicitly recognized as this problem recurs from project after project. Its' alarming rate may go out of hand if measures are not put in place to curtail it. The researcher researched into the causes and effects of delayed payment on project and stakeholders. The objectives of the study are to identify the underlying causes of delayed payment that are characterized with the Keta Sea Defence and Resettlement Housing Units, establish the effects on projects and stakeholders and to determine effective solutions to mitigate these effects. The target groups of respondents were contractors with D1K1, D2K2 and D3K3 classifications, Keta Municipal Assembly and the direct project beneficiaries. The study was limited to Keta Sea Defense Resettlement Housing Unit projects at Adzido, Vodza and Kedzi. A deductive methodological approach was adopted for the study using literature review and surveys. Questionnaires and personal interviews techniques were used to collect data. Results from this study were analyzed using Statistical Package for Social Science (SPSS 11.0). Findings reveal that the main causes of delays are; poor financial arrangement by the clients, improper planning of projects, poor contractual relationship between parties, bureaucracy, political influence and delay in submission of claims by contractors. On the other hand, cost overrun, time overrun, total abandonment of projects and poor quality of work are effects on contractors, clients and projects. It was also revealed that, the ripple effects on projects beneficiaries (end users) includes; decline in economic activities of the people, poor living condition, insufficient accommodation readily available, denied of early use of project, fast spread of disease among households which claims lives and poor

health conditions. It was recommended that, since direct beneficiaries of projects will continue to suffer the consequences of delayed payment in various ways and degrees, clients' financial capacity and credit rating be made transparent to facilitate contractors to assess the employers' ability to pay for projects, projects should be well planned and must not be politicized. Conditions of contracts must be modified and balanced. Risk should be allocated evenly to all parties involved and be enforced.

KEYWORDS: Delayed Payment, Causes of Delayed Payment, Effects of Delayed Payment



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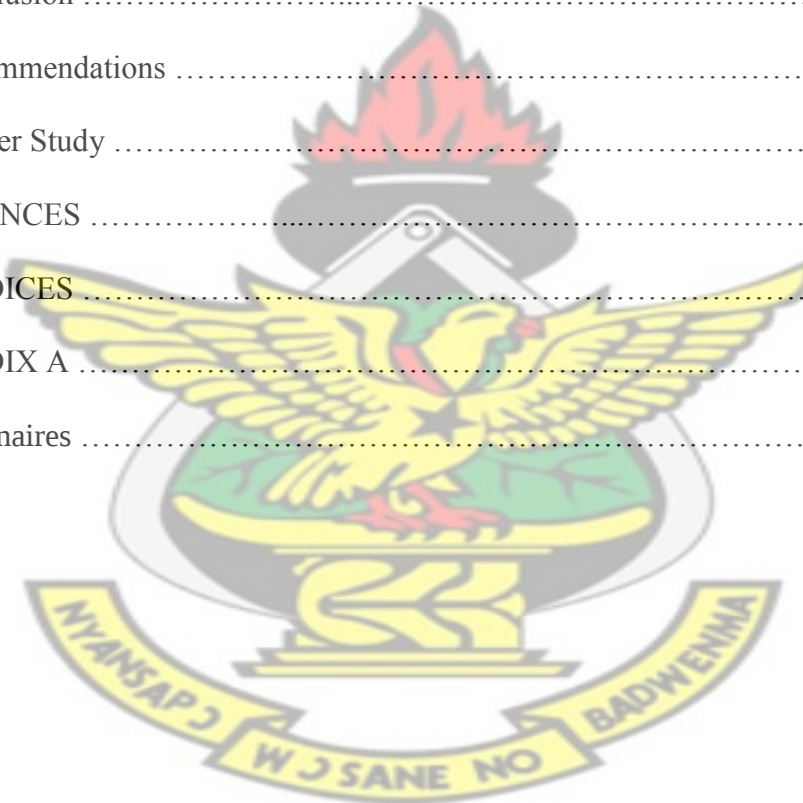
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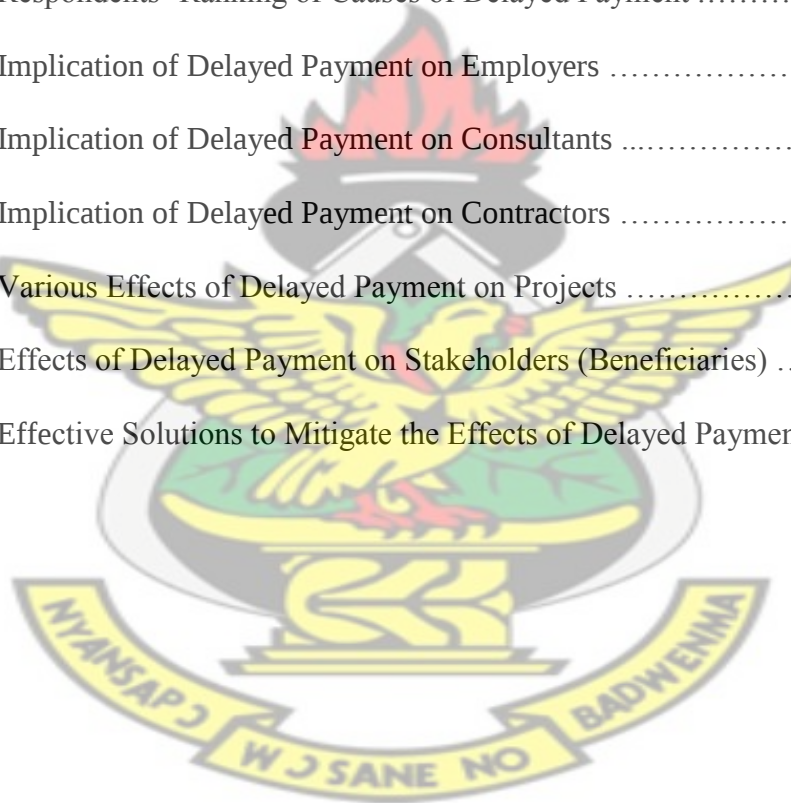
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DEDICATION

This project is dedicated to my lovely wife Emefa Yaa Josephine Ahiableame and my cherished children, Harrison K. Teku and Ewoenam A. Esther Teku for their love, support and encouragement throughout this course.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The practice of 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 quality (CIOB, 2004). According to Abdul – Rahm et al. (2006) delayed and non-payment issues or rather contractors' payment woes are considered to affect many players in the construction industry and are referred to as financial problems by those affected by it, whether in public or private funded projects.

Payment snags are ancient age issues that infuse the world's construction industry of which Ghana as a developing country is not exempted. It is a universally evident reality not only in Ghana but rather all countries faced this global fact. So often, contractors and other parties in the construction industry criticize that payments have been unduly delayed by the employer. The issues of delayed payment from parties are typical of the construction industry compared to other industries. This is as a result of the following evidences; unlike many other industries, the size of each construction project is relatively large; the duration of construction projects are relatively long, payment sum involved are often relatively large, payment terms are usually on credit rather than payment on delivery, services are rendered before progress payment is made, and products turn out to be fittings incapacitating removal (Hasmori et al., 2012).

Failure of contractors in getting consistent and timely payment could result in project delay, reduced profitability and in the extreme case the company may go into liquidation.

It will also have a knock-on effect on the entire procurement and construction value chain. This is because when clients delay payment or do not pay the main contractors on time, the sub-contractors, suppliers, hirers and everyone in the construction value chain will suffer its consequences and will eventually have effects on the project and its' beneficiaries as a whole. It is time therefore for the parties involved in this industry to develop strategies if not to eliminate entirely, then to mitigate the rampant delayed payment faced in the Ghanaian construction industry.

1.2 Problem Statement

Delayed payment problem is prevalent in construction and needs to be explicitly recognized as this problem recurs project after project. Payments which implies money, is needed to pay for materials, labour, plant, subcontractors' account rendered, preliminaries and general overheads expended during the progress of the work (Odeyinka, and Yusif, 2004). When the flow of money into a business is delayed, the net cash flow will become negative. When this happens, the contractor would require immediate funding to overcome the cash deficit. Also over the years, contractors and other parties in the construction industry lament seriously over delayed payment by clients to the service providers in the industry. This has tremendously affected projects in terms of time overrun, cost overrun, product quality, dispute, arbitration, litigation, total abandonment of project and liquidation of construction firms (Aibinu and Jagboro, 2002). Delayed payment may also render projects challenged or impaired. This may also have serious effects on end users (stakeholders) of the projects. Consequently, there is the need to explore the effects of delayed payment on projects and stakeholders and determine

effective solutions to mitigate the risks of delay payment in the Ghanaian construction industry so as to increase productivity in the industry.

1.3 Research Questions

The followings are research questions that this study opts to address:

- (i) What are the critical causes of delayed payment that characterize the Ghanaian Construction Industry with specific focus in Keta?
- (ii) What are the impacts of delayed payment on projects?
- (iii) What are the effects of delayed payment on stakeholders
- (iv) What are the possible strategies and solutions that need to be developed and adopted to mitigate its rampant occurrence in the construction industry?

1.4.1 Aim

The prime aim of this research is to identify the causes and effects of delayed payment on projects and stakeholders in the Ghanaian Construction Industry with specific focus in Keta and determine effective solutions to mitigate them.

1.4.2 Objectives of the Study

Subsequently, the specific objectives of this study are:

- (i) To identify the underlying causes of delayed payment that are characterized with the Ghanaian Construction Industry;
- (ii) To establish the effects of delayed payment on projects and stakeholders in Keta Municipality and

- (iii) To determine effective solutions to mitigate the effects of delayed payment on projects and stakeholders.

1.5 Significance of the Study

It is envisaged that this study is relevant, in that it will assist the government and parties involved in addressing challenges associated with delayed payment on projects and stakeholders in Ghana's construction industry. In addition, it will describe and elaborate the relationships among effects of delayed payment variables in the construction industry which may contribute to the success of the industry. It is hoped that this study will help the government and other stakeholders that are found in the industry to mitigate to the minimum level, the effects of delayed payment on projects and stakeholders so as to improve upon the deficiencies in respect to project delivery especially in the public sector.

1.6 Scope of the Study

Due to the broad and complex nature of the Construction Industry, the study was focused on contractors with D1K1, D2K2 and D3K3 classifications who were working on the Keta Sea Defense and Resettlement Housing Projects. This is because such companies usually undertake large and complex projects and, therefore engaged large number of workforces. Also due to the time frame allotted to this study, it only covered a maximum of forty-five (45) of such contractors together with the client and beneficiaries. The study was also concentrated on Keta Sea Defense Projects and Resettlement Housing Units Project in the Keta Municipality of the Volta Region.

1.7 Methodology

The proposed methodologies that were employed in this research work include the following; structured interviews, internet sources, library search, questionnaires, surveys and Checklists and observations (Physical Survey).

1.7.1 Structured Interviews

This method was adopted to enable one fully understand the effects of delayed payment on projects and stakeholders.

1.7.2 Internet Sources

To match up with the global trend of technological advancement, the writer sourced information on the internet as well. This enabled him have broader knowledge of the topic.

1.7.3 Library Search

The researcher visited the library and carried out an in-depth study of already published data relating to the topic at hand. This includes books, journals, published and unpublished student's dissertations and other relevant articles of interest.

1.7.4 Questionnaires, Surveys and Checklist

Well-structured questionnaires was prepared and administered to all that matters in the construction industry so as to get quick and accurate information. This was carried out in friendly manner.

1.7.5 Observations

A physical survey was conducted under the study. Visual inspection of projects was undertaken.

1.7.6 Sampling

A probability sampling method, specifically the simple random sampling was used in this work. This ensured that all stakeholders forming the population are given an equal opportunity to be selected to form the sample size for the research.

1.8 Structure of the Report

For this research to be accepted and well understood and appreciated by anyone who intends to read or do further study, the format below was used.

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 Analysis and discussion and Chapter five is about Conclusions and Recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

As specified in Chapter One, the objectives of this study include the establishment of effects of delayed payment on Ghanaian contractor and stakeholders (beneficiaries) and to determine effective solutions to mitigate the effects of delay payment on projects and beneficiaries so as to satisfy their agitations. In the construction industry, payment is the sum of money paid to contractors after successfully executing a defined task. 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 can lead to extension of time; non-completion; termination or abandonment of contract (Ameer, 2005).

2.2 THE CONSTRUCTION INDUSTRY

According to Fales (1991), the construction industry is a major contributor to a nation's economy. It then affects a nation's economy by employing millions of people. It is a major employer of labour, from skilled, unskilled through to the high technological professionals. It includes architects, engineers, surveyors, accountants and managers. It is identified to be a high hazard industry that comprises a wide range of activities involving new construction, alteration and or repair of bridges, roadways, paving, buildings etc. Each job provides workers with income that allows them to buy their needs and wants. This process of buying and spending money contributes to the health of the economy. Also, Construction industry according to Graydon (2012) may be defined as 'that sector of the economy which plans, designs, constructs, alters, maintains, repairs, and eventually

demolishes buildings, of all kinds, civil engineering works, mechanical and electrical engineering structures and other similar works’.

2.2 MAJOR DISTINCTION BETWEEN THE CONSTRUCTION INDUSTRY AND OTHER INDUSTRIES

According to Lewis (2011), construction industry can be distinguished in the following areas.

2.2.1 SIZE

The construction industry unlike other industries includes a small number of relatively large construction firms and a very large number of small firms.

2.2.2 PROCESSES

The processes involved in construction entail a complex mixture of different materials, skills (based on experiences), trades, tools, plants and equipment of various kinds.

2.2.3 SCOPE

The scope in the construction industry appears to have swing of activities than most other industries.

2.2.4 LIMITATIONS

The construction industry activities are affected by the vagaries of the weather. Many of its products are one of designs in the absence of a prototype model. The arrangement separates design from manufacture.

2.2.5 PRODUCT

The industry produces investment rather than consumer goods.

2.3.1 WHAT IS PAYMENT?

Payment is a sum of money paid to someone for work or services rendered. In the construction industry, payment is the sum of money paid to contractors after successfully executing a defined task (Ameer, 2005). According to Black's Law Dictionary, payment is defined as the performance of a duty, promise, or obligation, or discharge of a debt or liability by the delivery of money or other value. It is also the fulfillment or accomplishment of a promise, contract, or other obligation according to its terms. It can also be defined as an amount of money paid for the services rendered.

2.3.2 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 the amounts certified, it all literally means big problems to the contractors as cash flow will be effected. Some small construction companies would go into liquidation 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 (Chen et al. 2005):

2.3.3 PERIODIC SCHEDULE DURING CONTRACT PERIOD

During contract period, the most common method used is interim payments or “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.

2.3.4 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 most especially in services assignments. These proportions are fixed and do not depend upon any re-measurement of work. Nevertheless, in the application, this mode of payments is also applied in Design & Build as well as contracts involving repetitive works (Singh, 2003).

2.3.5 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.

2.3.6 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 (Singh, 2003).

2.4.1 DELAYED PAYMENT

Also known as a “payment delay” is a term that is usually applied to two different scenarios. In one scenario, the term is used to describe the amount of time that passes in between the reception of a bill and the actual remittance of the payment that is due. A delayed payment can also be described as the time that lapses between the receipt of the mortgage payment and the forwarding of principal and interest payments to investors of any security that is partially backed by that mortgage loan (Khalili and Al-Ghafly, 1999). It was generally acknowledged as the most common, costly, complex and risky problem encountered in construction project (Singh, 2003). Construction project could be susceptible to considerable pressure on the time delay. Such pressure environments lead to extension of time and cost. Delays in construction might be caused by one or a combination of several reasons. It might start with a simple reason and lead to a substantial set of interrelated complex disputes in contract agreement. Most of the typical delays were unrealistic contract duration and cost, differing site conditions, change orders, delays, impact and ripple effects of delays, evaluation the quality and quantity of works, owner furnished items, difference in the interpretation of plans and specifications, unfulfilled duties, acceleration, inefficiency and disruption (Khalili and Al-Ghafly, 1999).

Delay payment between owner and their creditors in residential building projects were initially caused from imbalance between demand and supply in real estate which was consequence of financial crisis (Kongprasert, 2009). The situation initially had an impact on the debtor's ability to make mortgage loan payments under real estate purchase agreements, and then impact spread to the financial sector. The situation was the result of the burst of the real estate bubble because of the deep plunges in real estate prices. Therefore, the loan debtors were unable to pay their home mortgage installments, intentionally evaded their obligations under mortgage agreement (Kongprasert, 2009). Banks would then be tightening on their loan policy. Consequence, thy Banks would likely offer lesser amounts and shorter loan term. Owner companies could experience financial problems and subsequently had difficulties paying their main contractor, consultants and material suppliers, and thus the progress of project was compromised.

Cost overruns might amount to a substantial percentage of the overall contract value and delays might reach disturbing proportions. The allocation of risk among the owner, the main contractor and the designer was stated in the construction contract. However, the construction contract was typically prepared by the owner who ensured that a considerable portion of the risk rests with the main contractor. The main contractor therefore faced a multitude of risk among which are inflation, strikes, labor problems, adverse weather, accidents, shortages of materials and staffs and unforeseen conditions at the construction site (Wong, 2006). Sambasivan and Soon (2007) have developed 28 construction delay factors in construction and categorized into eight main groups. These are client-related, contractor-related, consultant-related, material-related, labour and

equipment related, financial related contract related and external factors. Algahbari et al. (2005) reported that a financial related factor was one of the most critical factors that cause delays in construction projects. Sweis et al. (2007) also found in their survey that financial difficulties factor caused delay in construction projects. As the size of construction increases further materials, time and labour are required. In which main contractors were forced to beyond their normal financial capability. Imbalances in risk allocation may usually end up in disputes between involved parties and probably seek for settlement in court.

The review of the literature above indicates that construction practitioners have not still received the attention from both national and international researchers in general, and or from the aggressive moment of demand and supply change on building residential market of the Bangkok in particular. Therefore, a further emphasize on empirical research to complement, understanding and extend existing knowledge is appropriated. The review has underscored that delay factors in construction projects were many and vary from country to country and from one circumstance to another. Therefore, in principle, delay hinder or even prevent the implementation of construction projects. The danger of appearance and consequences of delay increases with the duration of project. Delays are harmful and should be reduced to the objectively lowest level possible. For that purpose, author tries to identify and evaluate the delay in payment in construction project.

Delayed payment is prevalent in construction and needs to be clearly recognized as this problem reappears from project after project. Payments which implies a major problem as

monies, is needed to pay for materials, labour, plant and equipment, subcontractors' services provided, preliminaries and general overheads expended during the progress of the work (Odeyinka, and Yusif 2004). When the flow of money into a project is delayed, inevitably the net cash flow will also become negative. When this happens, the contractor would require immediate funding to overcome the cash deficit. Therefore, delay payment affects time, cost and quality as good quality construction requires prompt payment, so that progress would not be affected. Some practitioners may think that delays in payment are common place in the Ghanaian construction industry. It could be argued that there are core individuals who believe that delayed payment is acceptable. This kind of perception has exacerbated the problems of delay payment and makes it more difficult to deal with. Therefore, delay payment in the construction industry can be adversarial and disastrous. It will affect cash flow of a company and may eventually lead to company's insolvency. Timeliness of payment is important to circumvent the risk of late payment problem. Why is it that, payment is delayed when the economy is bad and the payment is also delay even if the economy is good? Once a payment problem starts to expand, it typically gets worse over time and will shift the financial burdens from one participant to other participant and create cash flow problem. Clients have become more demanding, more discerning, and are less willing to accept risk (Flanagan, 2002). It is a normal practice for some clients to shift some risks to other parties further down the chain by reducing their financing costs through delaying of payments. This will shift the financial burden to the contractors who may not have large capital assets and large amounts of credit available to cover payment delays. Hendrickson's (2003) postulated in his research which is parallel with that of Davis' (1999) who claimed that the adage of strategic cash flow is to "collect

early and pay late”. This has created a dilemma in which delayed of payment is a two-edged sword. This will also create serious problem while contributing to the large number of insolvencies in the construction industry. A common scenario is for clients to hold back the money as long as possible whereas contractors wish to obtain their money as soon as possible. Hence, delay payment is a predicament which is difficult to be dealt with due to different interests of the parties involved.

2.5.1 IDENTIFYING FACTORS CAUSING DELAYED PAYMENT

A delayed payment by a party who is involved in the process of payment of claims may have an influence on the supply chain of payment in whole. According to the Construction Industry Working Group on Payment (2007), problems in payment at the higher end of the hierarchy will lead to a serious knock-on cash flow problem down the chain of contracts. The previous research done by Hasmoni et al. (2012) stated that client’s employees are wrongfully holding the payment and most of the time they do this to obtain some kind of “gift” from contractors once they made out the payment. According to Ye and Abdul Rahman (2010), clients deliberately delay for their own financial advantages, delay in releasing of the retention monies to contractor and willful withholding of the payment for personal reasons are the cause of the paymaster’s withholding of payment. He also added that, contractors in Malaysia perceived that delay for few days less than 5 working days is acceptable and accepted delay payment from the clients as they are always at the mercy of the clients. This could be due to the inherent culture of delay payment in the Malaysian construction industry that the contractors perceived delay payment for a few days were acceptable. Again, delay in certification by

parties involve in the project might also be the cause of late payment issues. The parties involve may delay in approving the application for payment of claims due to certain reasons which may arise because of his own or other parties involved.

Delays on projects are a universal phenomenon and the construction industry is no exception. It has been regarded as a serious problem by Al-Khalil and Al-Ghafly (1999), who further state that it proves costly for both owners and contractors. According to the authors, the owner loses by missing out on the potential revenues from the use of the project and by increased overhead cost for contract administration. Meanwhile, the contractor is said to lose as a result of increased overhead costs and lost opportunities for new projects because of diminished financial capabilities. A Literature Reviews and a Report of Industry Responses 2012 indicate the followings in Table 2.1:

Table 2.1: Factors contributed to delayed payment

Factor	Description	Author
Paymaster's Poor Financial Management	1. Cash flow problems because of deficiencies in client's management capacity 2. Client's ineffective utilization of funds 3. Scarcity of capital to finance the project for instance, clients need money to roll 4. Poor cash flow because of lack of proper process implementation 5. Financial failure due to bankruptcy or winding up of paymaster's other business activities 6. Overlook the ripple effect of economic downturn on cash flow 7. Client's poor financial and business management	Abdul-Rahman et al. (2011); Hasmori et al. (2012)

Paymaster's Withholding of Payment	1. Withhold of payment by client	Hasmori et al. (2012)
Conflict among the Parties Involved	1. Contractor's misinterpretation of client's requirement of variation order 2. Heavy work load of consultant to do evaluation for variation order 3. Argument of the amount to be paid 4. Non-payment for certified sums	Abdul-Rahman et al. (2009)
The Use of Pay When Paid Clause In Sub-Contractor	1. The sub-contractor will only be paid after the main contractor himself has received payment from the employer	Ab. Halim et al. (2010)
Local Culture / Attitude	1. Delay for few days less than 5 working days is acceptable and accepted late payment from the clients as they are always at the mercy of the clients	Hasmori et al. (2012); Abdul-Rahman et al. (2006)
Short of current year's project	1. Over deduction of the sum payment 2. Bank line of credit constantly borrowed to the limit	Hasmori et al. (2012); Supardi, A. et al. (2011); Ab. Halim et al. (2010)
Delay in certification	1. Inaccuracy of valuation for work done 2. Unpaid of work done due to failed defect work 3. Decreased in productivity 4. Unclear instruction and miscommunication due to language barriers 5. Verbal instruction given is not confirmed in writing 6. Work carry out by contractor does not comply to the specific	I Mohamad et al. (2012)
Contractual	1. Contract agreements do not bring any justice to	Ab. Halim et al.

Provisions	both main contractors and sub-contractors 2. Disrespectful from parties involve regarding to the contractual provisions effectiveness	(2010)
Technical Problems	1. Delay in processing for approval 2. Delay in receiving progress payment from client 3. Absence of a comprehensive business plan 4. Wrongly calculated claims without using the right procedures 5. Claims without adequate supporting documents 6. Errors in submitting claims 7. Failure to identify technical problem and remedial action to be taken 8. Insufficient information and poor documentation on work progress 9. Inexperience of site supervisor and contractor's representative 10. Unclear material description and details in specification and drawings 12. Actual quantities does not match as stipulated in Bill Quantities (BQ) 13. Incomplete claim document	Ab. Halim et al. (2010); Abdul - Rahman et al. (2009)

Source:

2.6.1 EFFECT OF DELAYED PAYEMENT IN THE CONSTRUCTION INDUSTRY

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. Complex 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).

According to Wong and Hui (2006), delayed payment by owners is among the risk factors which affects the construction's project time and/or cost. Delayed payment from clients can be categorized as financial risks which involve high level of uncertainty. Managing financial and economic risks are important because these risks may cause a negative impact on the cash flow, endanger a project's viability and limit profitability. Financial risks come from several sources encompassing all causes that lead to possible delays on clients' payment (Assaf et al., 1995).

Delayed payment from owner will impact the duration and cost of the project. These risks cause the project's cost to increase abnormally and subsequently delay the progress of the project.

Zou *et al.* (2007) pointed out that project funding problems have been identified as cost-related risks, time-related risks and quality-related risks which can significantly influence the delivery of construction project. This implies the significance of funding problems of construction projects to mitigate cost-related risks. As a result of delayed payments,

financial stress can occur due to inaccurate cash forecasts and/or deficiencies in cash flow management Mansfield et al. (1994). Proper cash flow management plays a strategic role even when a firm is not facing financial stress (Belassi and Tukel, 1996). Contract conditions and penalty clauses are often used to pass risks “down the line” by allocating them to organizations in the supply and production chain. The organization least able to carry the risk such as the small specialist contractor has to accept the risk or not win the work. As a result, the parties down the line will be more vulnerable to the risk of delay payment.

Aibinu and Jagboro (2002) identified the effects of delay payment on project delivery in Nigerian construction industry. They said that the six major effects of delays include time overrun, cost overrun, dispute, arbitration, litigation, and total abandonment.

2.6.2 Time overrun

Time overrun means the contractor could not carry out their work within contract period. Generally, time overrun can be categorized into two groups which include justifiable delays and unjustifiable. Once the project is facing time overrun, it will affect the progress of work and cannot be finished on time. Besides that, the fault party will take the responsibility to pay the relevant parties for damages because of delay. For instance, if the project is almost completed, but at the same time contractor because of exceptionally implement weather he cannot complete the project within contract period. In this situation the contractor entitle to claim extension of time. On the other hand, if that contractor cannot complete the work within contract period due to his own fault, he has

no entitlement to claim extension of time and he need to pay liquated damages Abdul-Rahman et al (2011).

2.6.3 Cost overrun

During construction stages, the client and contractor always faced cost overrun. Cost overrun is an unexpected cost incurred in excess of the estimated amount. Cost overrun is related to time overrun, once a project cannot be done in time, it will also affect the cost of project over budget. Commonly, cost overrun always happens due to inaccurate of cost estimate or delayed of payment by clients which affect the duration of project Bob (2005).

2.6.4 Dispute

In construction industry, some of project delay because of dispute between contractual parties such as client, consultants, contractor and some relevant parties. Those disputes are because of client's failure to make payment to the contractor. Once dispute happen, the relevant parties will go through with mediation. The mediator will make a decision to solve the problem. But if one of the parties does not accept the decision made by mediator, the parties will appeal the decision with arbitrator. If both parties accept the decision and the fault parties will take responsibility to pay damages for project delay but the early completion of the project is affected Bob (2005).

2.6.5 Arbitration

In current delay project, some of the contractual parties do not accept the mediator decision and they appeal in arbitration. Arbitrator will also make the decision to solve the

problem. But if one of the parties does not accept the decision again made by Arbitrator, they still can appeal the decision in litigation. The time, money and other resources spent on the process will also go a long way to affect the project Bob (2005).

2.6.6 Litigation

In some delayed project, the relevant parties do not accept with the arbitrator decision. They appeal the result in litigation which is dispute resolution in the courts. In litigation, the parties have a trial either by a court alone or by jury. If those parties are not satisfied the judgment again, then they can appeal again if they have any new evidence to proof their right. But once the parties accept with the judgment, the faulty of parties need to take responsibility to pay the penalty Bob (2005).

2.6.7 Total abandonment

Total abandonment means the whole project will come to a standstill because of the client's financial difficulties. Some delayed projects are totally abandoned because of client's inability to pay contractors. The effect of project totally abandoned will affect many parties such as contractual parties which include contractor, consultant, sub-contractor, supplier and some other relevant parties. Besides those parties, the purchasers will also suffer in cost damages due to project abandoned.

Haseeb et al (2011) also identify the four major factors which caused delay in construction and these are client problem, service provider problem, sources problem and universal problem. Based on the survey results, client factor is identified as a major factor causing the delay in construction with the inability to make payment due to economic background and lack of financial arrangement for the project. Delays in construction projects lead to serious consequences that may retard the development of the construction

industry and influence the overall economic condition of a country (Abdul-Rahman et al., 2009). According to Abdul-Rahman et al. (2009), delay in the completion of construction projects could be the greatest cause for extra cost and loss in financial return or other benefits from project. Thus, delay is costly for both owner and contractor. To the owner, a delay means loss of potential revenue, whereas to the contractor, a delay means increased costs in overhead. Payment has been an issue of major concern in the construction industry and majority of contractors reported that they have went through late payment situation in government funded projects whilst more of them affirmed the same situation in private funded projects as told by (Hasmori et al., 2012). The late payment issues in the construction industry is a global phenomenon and in Malaysia the impact of this problem had cause a massive destruction to the country's economic and this have tarnish the good image of the construction industry and has also came out with the impacts of delay payment are described in Table 2.2.

Table 2.2: Effects of Delayed Payment

Impact	Description	Author
Creates negative chain effect on other parties	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-contractors and suppliers.	Mohamad et al. (2012)
Results in delay in completion projects	Delay payment causes cash flow problems which in turn can affect the overall progress of works. Financial problem is confirmed by the top management as the main cause of delay in addition	Rahman et al. (2009) Haseeb et al. (2011)

	to manpower shortage.	
Leads to bankruptcy or liquidation	Delay payment may affect the financial status of the contractor. It will influence a company's cash position.	Ab. Halim et al. (2010)
Project delay	A failure of the Contractor getting regular and timely payment could result in project delay, reduced profitability and in the extreme case, the company may go into liquidation	Judi and Rashid (2010)
Affect the contractors Reputation	Frequent delay payments could result in loss of reputation, trade credit constraints, and reduced credit ratings	Hasmori et al. (2012)
Profitability of the project	The profit margin is small and this situation can led a player to go on bankruptcy and there goes another project on abandoned list	Hasmori et al. (2012)

Source: Mohaned et al. (2012).

2.7.1 CASH FLOW IN CONSTRUCTION PROJECT

Delay payment problem is interrelated with the cash flow problem. Cash flow in the construction industry is critical because of the relatively long duration of projects. Any deviation due to either project delays or cash flow delays can have major impact on the project (Assaf et al., 1995). Most construction projects are individual profit centers, each with its own cash cycle based on the costs of activities related to the project and on payments from a client as prescribed in a contract. The times of receiving payments from the client will affect cash flow of a project. Many construction projects have negative net cash flows until the very end of construction when the final payment is received or advanced payment is received before starting the project. The delay of payment from owners will affect the cash flow of the contractor and retention withheld by the owner will also create cash flow problem to the contractor. When taking into consideration the

payment delayed from owners and negative cash flow of contractors, prompt payment from owners in this circumstance is utmost important to minimize financial hardship of a contractor. The cash flow requires the combination of estimating and planning evaluations in which estimating evaluate the use of resources in terms of time. Adding both of these together is to obtain the cash flow as cash flow, profits and growth can all be adversely affected. Longer payment periods mean that other participants in the downstream supply chain will and can become cash starved, forcing greater reliance on borrowing. They will also seek to impose longer payment periods on downstream sub-subcontractors and suppliers. In relation to advancing or borrowing additional capital to fund cost overruns, there will be an increment in interest cost in collecting on another defaulted promise.

2.8.1 Potential Solution of Delayed Payment

Banwell (1964), 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.”

Regarding cash flow management, Abdul-Rahman et al (2011) suggested that clients should be given training on cash flow and financial management whereas contractors be given training in risk management and managing material, transportation, labour and maintenance. Apply payment bond with bank and client is also the suggestion that should be taken in account. Contractor need to be smart in accepting the contract and to choose a

good paymaster (Abdul-Rahman et al., 2011). Before any payment is being certified, it is a contractual responsibility of the committee to also monitor whether the claim is made in accordance to the terms, product delivery and other criteria prescribed. In fact, 98 percent of such processing can be completed within 10 days. If the payment is late, the finance officer must inform the reason for the delay in writing (Hasmori et al., 2012).

Legislation should be amended to give a clear message to constructors and clients as to clarity in payment matters and refund procedures (Abdul-Rahman et al., 2011). Termination at common law can only take place where one party commits a breach of contract, and that breach amounts to a repudiatory breach. A party is said to have repudiated a contract if he expressed by his words or conduct that he does not intend to be bound by the contract or to perform his obligations. Normally, refusal by the Employer to pay sums due is clearly a default and Contractor can take action based on such reason. But, failure to pay one installment out of many is not ordinarily sufficient to amount repudiation.

Hasmori et al. (2012) said that the remedies to overcome the late and non-payment is by adopting a new way of payment method among developers or clients whom wrongfully withholding the payment. Penalties shall also be given personally to the employees if they are found wrongfully withholding the payment. Table 2.3 shows the potential solutions of delayed and non-payment issues in construction industry.

Table 2.3: Potential solutions of delayed payment

Solutions	Description	Author
Financial Management	1. To conduct training on cash flow management and financial management 2. Accessing risk management in managing material, transportation, labour, and maintenance. 3. To apply payment bond with bank and client.	Abdul- Rahman et al. (2011)

Contractual Matters	1. To be smart in accepting the contract and to choose a good paymaster. 2. Determining the contract with the Employer 3. The development of principles of modern construction contracts 4. There should be a specific clauses in the contract related to managing construction failure.	Abdul- Rahman et al. (2011); Hasmori et al. (2012)
Legislation	1. Legislation should be amended to give a clear message to constructors and clients as to clarity the payment matters and refund procedures. 2. A right to a speedy dispute resolution mechanism 3. A right to suspend work 4. A right to regular periodic payment. 5. Applying charges to overdue payments. 6. A right to a defined time frame for payment 7. Collection period (CP) in 48 days. 8. A specific agencies or bodies must be existed for the party involved to set guideline in resolving that matters.	Abdul- Rahman et al., (2011); Judi and Rashid (2010)
New way of Payment method	1. Adopting a new way of payment method among developers or clients whom wrongfully withholding the payment.	Hasmori et al., (2012)
Local Attitude	1. Fundamental change in the mind-set towards timely payment and statutory enactment to deal with payment in construction industry	Hasmori et al. (2012)
Technical Issue	1. The detail and proper procedures of claim issuance to resolve matters arising 2. The relevant provisions of construction failure should be stated in separate clause due to its scope of event.	Mohamad et al. (2012)
Financial Institution	1. Reduced interest rates/bank fees for businesses with robust cash flow management 2. Extension of credit facilities on a temporary basis 3. Seasonal repayment/ payment based on money flowing into the business 4. Repayment holidays 5. Slow or delayed start to repayment terms 6. Access to free/ heavily subsidized cash flow software	

Nguyen, et al. (2004) studied the factors that can be applied as a method of minimizing of construction delays as follows: competent project manager; frequent progress meeting; accurate initial cost estimates; accurate initial time estimates; awarding bids to the

right/experience consultant and contractor. During pre-construction stage, a client should employ a depth knowledge project manager to organize a good project team member to progress the work. On the other hand, contractors should employ some employee with such experience so that, during the time or cost estimate they can add on some unforeseen event to avoid the cost and time overrun. Furthermore, the developer should hire experienced consultant and contractor since they have enough experience in previous work they executed.

Aibinu and Jagboro (2002) identified two methods to minimize or if possible eliminate time overrun were: acceleration of site activities, and contingency allowance. During construction stages, the contractor should carry out his responsibility to make sure the work progress can complete in time. If found that work progress are not equal to the estimate schedule. The contractor may carry out with acceleration such as hire additional worker. Besides that, the client may allow contractor standby some extra cost for unforeseen event such as accidents.

Koushki, et al. (2005) revealed that, the minimization of time delays and cost overruns would require adequate availability of funds until project completion and ensure timely delivery of materials. During pre-construction, a client may prepare a good cash flow within the contract period. Once the client does not have enough money to cover up construction cost, he can borrow a term loan or bridging loan from the bank to cover the cost until the whole project is completed. It will avoid project delay due to client not having enough capital. Besides that, the contractors should make sure that material are ordered with reliable suppliers and can receive it on time.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Research methodology is the overall approach to the design process from the theoretical underpinnings to the gathering and collection of data and analysis of the data (Collis and Hussey, 2003). Naoum (1998) said that the result and outcome of any research is directly related to the methodology adopted and consequently the success and validity of the research critically depends on the appropriate selection and implementation of the research methodology.

This chapter discusses the research design and methodology best suited for this study. The research methodology basically provided a guide to the effects of delayed payment on projects and beneficiaries using Keta Municipal Assembly (KeMA) as a case study.

An in depth and comprehensive search through literature of related documents and text books was conducted in Chapter Two. It discusses among other things the effects of delayed payment on projects, on the beneficiaries and the reactions from the beneficiaries.

On the other hand, the general attitude towards delayed payment and effects coupled with reactions from end users at the Assembly level was considered and discussed.

3.2 APPROACH AND SURVEY DESCRIPTION

This aspect of the research methods addresses data collection techniques, instruments, methods, and procedures. It provides detailed explanations to each of the methods adopted and how it addresses the aims, objectives and research questions. An important issue to consider in this section is the level of detail to include about survey instruments, methods and data collection and data management.

The study investigated 102 projects of diverse and varied types and type, scope and costs. These projects were substantially new constructions and completion of abandoned projects in Keta Municipal Assembly (KeMA). They include;

- Construction of Three (3) Bedsitter type “A” houses
- Construction of Two (2) Bedsitter type “B” houses
- Construction of One (1) Bedsitter type “C” houses
- Construction of Classrooms Blocks in all the three communities (Adzido, Vodza and Kedzi)
- Construction of Septic tanks
- Construction of access roads and market places.

The assessment covered projects/works that were successfully completed under funds such as the District Assemblies Common Fund-DACF and GoG funded projects. There were 102 Projects identified under the various funding programmes. They are distributed as follows;

- District Assemblies Common Fund Projects (DACFP) :- 2 projects
- Ghana Education Trust Fund (GETFund) Projects :- 2 projects

- Government of Ghana (GoG) Projects :- 98 projects

The data covered projects awarded under the Public procurement Act, 2003 Act 663 between 2004 and 2014. Basically each of the 102 projects was taken through the 28 questions on possible activities that led to delayed payment on projects and its effects on stakeholders. Consequently, 368 data points were realized for the purpose for analysis.

3.2.1 The Research Process

The following, as illustrated in the Table 3.0 gives the basic research process.

Table 3.1: Illustration of the basic processes of the research work.

Item	Process	Activity
1	General Observation	General areas of research interest identified
2	Preliminary Survey	Literature Survey and conducting of interview
3	Problem Definitions	Identify aim, objectives and scope of study
4	Theoretical Framework	Study of related previous studies
5	Research Design	Shows how the research is structured
6	Data collection, analysis and Interpretation	Data collected is analysed and interpreted to provide information needed
7	Inference (Deduction)	Observation and inferences from the research
8	Recommendation	Proposals for contract procedure; on time payment to contractors
9	Conclusion	Recommendations for future related study

Source: Author's own description

3.2.1 Research Design

The Sources of funding for the various projects, the General Conditions of Contracts (GCC) and Specific Conditions of the various contracts is the main reference point coupled with Government of Ghana's Operational Manual for projects implementation and GETFund Operation Manuals. Primary information on effects of delayed payment on

project from available literature on effects of delayed payment on projects stakeholders was the basis for the research.

The strategies adopted for all projects were identified and analyzed. These include GETFund, District Assemblies Common Fund (DACF and Government of Ghana (GoG) Projects awarded from 2004 to 2013 under the Keta Sea Defense Resettlement Housing Unit Projects.

A well-structured questionnaire was developed to gather information for the study. The format of the questionnaire followed a logical structure in the conditions of payment, operation manuals, causes and effects on projects and stakeholders.

Table 3.2: Effects of Delayed Payment on Projects and the Stakeholders

STAGES	ACTIVITY DESCRIPTION	NO. OF QUESTIONS
1.0	Project Identification	2
2.0	Sources of funding to the projects	1
3.0	Consultants / Technical Personnel Involved	1
4.0	Information / Design	2
5.0	Conditions of the Contract with respect to time	3
6.0	The possible causes of Delayed Payment	3
7.0	Effects of Delayed payment on project and stakeholders	16
	TOTAL	28

The questionnaire was administered to the Municipal Economic Planning Officer (MEPO), the Municipal Budget Analyst (MBA), the Municipal Engineer (ME), the

Municipal Co-ordinating Director (MCD), the Municipal Finance Officer (MFO), Consultant on Ghana Education Trust Fund (GETFund) projects – Architect Co-Partners, residents and Consultant on GoG projects in the Keta Municipality. Also, “face - to-face” interviews were conducted in order for respondents to fully appreciate the technical meaning of the questions. This method allowed for general discussion and additional comments to be noted. This augmented in contextual sense, evidences given by the respondents, who include officers of the Municipal Planning Coordinating Units (MPCU), and the Technical Planning and Development wing of the Municipal Assembly.

3.3.1 DETERMINATION OF SAMPLE SIZE

In order to obtain the sample size for the survey, a statistical method was used which represent the total population of D1K1, D2K2 and D3K3, and project beneficiaries of the Keta Sea Defense Resettlement Housing unit project cut from Keta Municipality.

3.3.2 Sample Size

In the sampling, a confidence level of 95% and an absolute limit of 5% are usually used. Thus the size of sample was determined using the following formula (Kish, 1965)

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

n = sample size

$$N1 = \frac{S^2}{U^2}$$

N = Total population

V = Standard error of sampling to be 0.05

S = Maximum standard deviation population elements (total error = 0.1 at a confidence level of 95%)

$$S^2 = P(1 - P)$$

P = the proportion of population elements

$$D1 = 7$$

$$D2 = 62$$

Therefore total population = 69

$$S^2 = 0.5(1 - 0.5) = 0.25$$

$$N^1 = 0.25/0.05^2 = 100$$

$$n = \frac{100}{(1 + 100/69)}$$

$$n = 40.83$$

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) $12/100 * 40.83 = 4.89 = 5$; 5 plus 40 = 45 Total contractors = 45

It was observed that distribution of the questionnaire was fast since it will cover only the key personnel in the Keta Municipal Assembly and other stakeholders.

3.1.2 Questionnaires Distribution

The questionnaires were personally administered through face-to-face interactions and interviews supported with documented proofs from records. This approach was chosen because it was suitable to the exploratory stages of the research and the main advantage of this approach was the fact that the questions can easily be adapted. The main disadvantages of the face-to face administering are inherent in the geographical

limitations that were imposed on the surveys and the vast resources needed; making it more expensive and time consuming (Frazer and Lawley, 2000).

3.3.4 Analysis of Result

The collected data was analysed using quantitative methods. Inferences were therefore drawn based on the results. Deductions were also based upon evidence gathered from quantitative results and insights gained from discussions with survey participants. This information from the responses to the administered questionnaire, together with interviewees, helped in explaining the effects of delayed payment on projects and beneficiaries as well as the reactions from the beneficiaries.

3.4 DATA PROCESSING, ANALYSIS AND ANALYTICAL TOOLS

3.4.1 Method of data analysis

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

3.4.2 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).

Relative Important Index (R.I.I) = $\Sigma P_i U_i / N(n)$

Where, R.I.I = Relative importance index

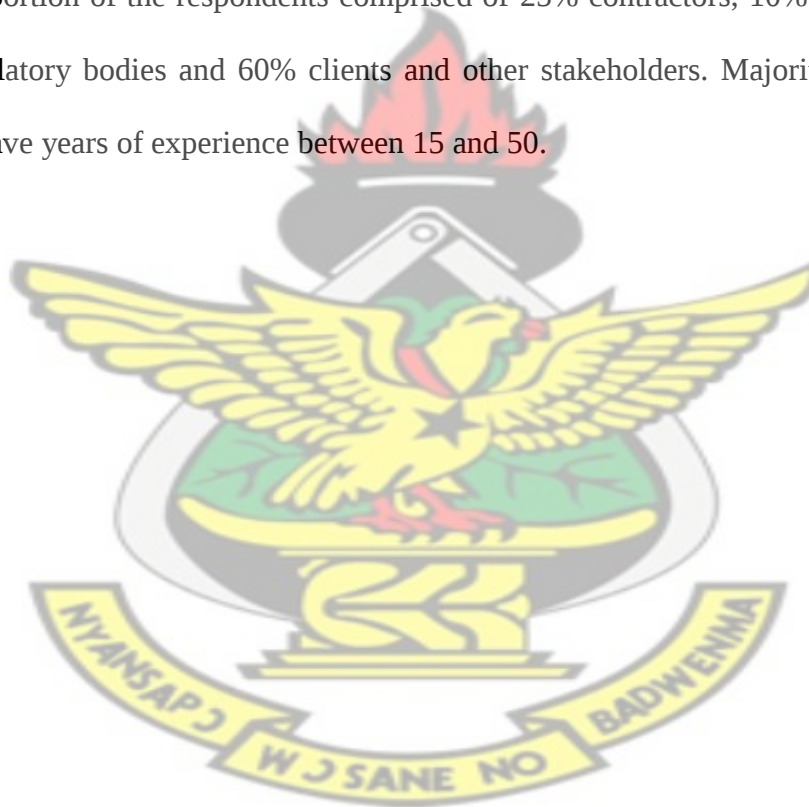
P_i = respondent's rating of options and strategic measures employed by contractors and stakeholders

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)

3.4.3 Respondents Profile

The proportion of the respondents comprised of 25% contractors, 10% consulting firms, 5% regulatory bodies and 60% clients and other stakeholders. Majority of respondents (85%) have years of experience between 15 and 50.



CHAPTER FOUR

DATA COLLECTION, ANALYSIS AND DISCUSSION

4.1 Introduction

In this chapter the data collected from the questionnaire surveys and one-on-one interviews were analyzed and interpreted.

Table 4.1: What are the sources of funding to the projects?

S/N	Source of funding	Number of projects	Percentage (%)	Rank
1	Government of Ghana (GoG)	98	96.08	1 st
2	Ghana Education Trust Fund	2	1.96	2 nd
3	District Assemblies Common Fund	2	1.96	2 nd
4	District Development Facility	0	0.00	-

Source: Author's field data (2014)

4.2.1 Sources of funding

From table 1 above, 98 projects representing 96.08% identified was funded by the government of Ghana.

4.2.2 Respondents' Background and Experience with Delayed Payment

An analysis of the respondents indicated that contractors classified under D3K3 and above made up to 95.56% representing (43) of the total respondents experienced delayed payment whilst 4.44% representing (2) of the total respondents as shown in table 4.2 below.

4.2.3 Position of Company Respondents

From the result, the people who responded on behalf of the firms are; 12 project directors responded, 8 site engineers, 14 contract managers and 11 General Foreman.

4.2.4 Status of Projects Identified

Based on the analysis, 504 projects were identified, 398 are new construction, 115 repackaged and 26 is abandoned,

Table 4.2: Respondents' Background and Experience with Delayed Payment

S/N	Category	Number of respondents	Percentage (%)
1	Delayed payment	43	95.56
2	No delayed payment	2	4.44
	Total	45	100

Source: Author's field data (2014)

Table 4.3: Respondents Ranking of Causes of delayed payment

S/N	Causes	No.	RII	Rank
1	Poor financial arrangement by the clients	44	0.98	1 st
2	Improper planning of projects	41	0.91	2 nd
3	Poor Contractual relationship between parties	40	0.89	3 rd
4	Government Interference	40	0.71	4 th
5	Bureaucracy	38	0.68	5 th
6	Political influence	38	0.68	6 th
7	Delay in submission of claims by contractor	39	0.52	7 th

Source: Author's field data (2014)

4.3 Respondents Ranking of Causes of delayed payment

The response as shown on Table 4.3 above indicates that poor financial arrangement of client before the start of the project causes delayed payment to contractors. From the analysis, 44 respondents representing 0.98 have agreed that poor financial arrangement by the clients causes delayed payment. Again a total of 41 respondents also indicated that improper planning of projects could also lead to delayed in payment whilst 40 respondents also indicated that poor contractual relationship between parties also amounted to delayed payment. Also 40, 38, 38 and 39 respondents also signposted that government interference, bureaucracy, political influence and delay in submission of claims by contractors also led to delayed payment respectively.

Table 4.4 Effects of delayed payment on Employer

S/N	Effects	No.	RII	Rank
1	Payment of interest on late or default payment	44	0.98	1 st
2	Delay in contract completion by contractor	40	0.88	2 nd
3	Delay in having the expected benefit of property	45	0.80	3 rd
4	Delays order by the project manager to start or suspend or termination works	40	0.71	4 th
5	Delays order by the project manager to start or suspend or termination works	38	0.68	5 th
7	Stakeholders are not satisfied	39	0.52	6 th

Source: Author's field data (2014)

4.4.1 Effects of delayed payment on Employer

From survey conducted (Table 4.4), it was established that delayed payment on project can lead to payment of heavy interest by contractors on loans sourced to kick start the project at the initial stage. This represents 0.98 of Relative Important Index which means

44 respondents have strongly agreed that delayed payment to contractor need to be worked on to avoid it occurrences.

4.4.2 Delay in contract completion by contractor

It is clear from the analysis in the table above that, delayed payment has led to delay in contract completion period since most contractors do not have enough fund to pre-finance the projects to completion whilst they wait for the client to raise fund. Surprisingly, 44 people agreed to this factor and represent 0.88 RII.

4.4.3 Delay in having the expected benefit of property

Employers also indicated that delayed payment which also leads to late completion of projects amounts to denial of early use of the facility and consequently lead to loss of revenue or benefit for which the project is intended for.

4.5 Effects of delayed payment on Consultant

From Table 4.5 below, delayed payment also have effects on the activities of the consulting firms supervising the projects, in that their activities will reduce drastically, morally insisting on contractual requirements is weakened, slow-down of works, consultants spending longer time on projects than planned and consequently, cost of consultancy services increase due to stoppages in the construction activities.

Table 4.5 Effects of delayed payment on Consultants

S/N	Implications	No.	RII	Rank
1	Activities of Consultant reduces drastically	44	0.98	1 st
2	Morally insisting on contractual requirements weakened	42	0.93	2 nd

3	Consultants spend longer time on projects than anticipated	45	0.88	3 rd
4	Cost of consultancy services increases due to stoppages	40	0.88	3 rd
5	Slow-down of works	38	0.84	4 th

Source: Author's field data (2014)

Table 4.6 Effects of delayed payment on Contractors

S/N	Implications	No.	RII	Rank
1	Cash flow forecast affected	44	0.98	1 st
2	Increase in Construction Cost (cost overrun)	43	0.96	2 nd
3	Extension of intended completion date (time overrun)	42	0.93	3 rd
4	Payment of Liquidated Damages	41	0.91	4 th
5	Forced to borrow from financial institutions	40	0.89	5 th
6	Redundancy of equipment	40	0.89	6 th
7	Leads to bankruptcy or liquidation	38	0.84	7 th
8	Image of contractor tarnished	39	0.80	8
9	Late or non-payment of salaries to workers	43	0.78	9 th
10	May result in dispute (e.g. arbitration/litigation)	35	0.77	10 th
11	Difficult to tender for new projects	43	0.76	11 th
12	Termination of contractor's contract	40	0.71	12 th
		40		13

Source: Author's field data (2014)

4.6.1 Effects of delayed payment on Contractors

Various implications of delayed payment on contractors were established in Table 4.6 above from the survey conducted. Respondents were then asked to rate the implications of late payment based on the list provided. Six (6) persistent implications identified were: contractors' cash flow is affected, it leads to cost overrun, contractors are forced to borrow from financial institutions, difficult to tender for new projects and eventually lead to bankruptcy of the firm.

4.6.2 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 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 thereby creating tremendous financial burden on the contractor.

4.6.3 Cash flow forecast 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 the industry and as such, delayed payments by the employer have overwhelming 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 down to the labourers. The importance of cash flow is further explained 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 dangerous to the industry.

4.6.4 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.

4.6.5 Contractors' image tarnished

In a glooming industry like the construction industry, the credentials of individual contractors are of prime interest and therefore need to be 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.

4.6.6 Temporary suspension of work

Even though this is a breach of contract, one of the most unfortunate 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.

4.6.7 Bankruptcy or liquidation

From survey conducted, delayed payment causes contractors to go into bankruptcy or liquidation. It is obvious from table 4.6 that this phenomenon contributed to 0.87 RII of total response from the respondents. Literature reviews also confirm this as one of the effects of delayed payment.

4.7.1 Various effects of Delayed Payment on projects

It was established that, project cost overrun, time overrun, total abandonment, poor quality of work amongst others are effects of delayed payment on projects and was confirmed by Abdul-Rahman et al., (2011). Table 4.7 below indicates the various scale of degree to which these factors affect projects based on the survey conducted.

Table 4.7 Various Effects of Delayed Payment on projects

S/N	Effects	No.	RII	Rank
1	Cost overrun of the project	44	0.98	1 st
2	Time overrun of the project	43	0.96	2 nd
3	Abandonment of project	42	0.93	3 rd
4	Poor quality of work due to hurry	40	0.89	4 th

Source: Author's field data (2014)

4.8.1 Effects of delayed payment on stakeholders (beneficiaries)

Delayed payment has numerous effects on employers (clients), contractors, consultants and the project itself, however; its' effects on the end beneficiaries is crucial, especially when the projects are for social or economic activities. From the data collected and analysed, it is obvious that, delayed payment affects the completion period of the project and subsequently denied early use of the project or lead to total abandonment of projects.

The various effects of delayed payment on the end beneficiaries that are analysed in table 4.8 below are discussed as follows;

4.8.2 Decline in economic activities

From the survey conducted, respondents (beneficiaries) make it clear that, delayed payment to contractors has contributed tremendously to late completion of the housing units, markets, schools and roads and consequently led to decline in economic activities in the communities. It was established that, the people in these communities are farmers (crop and fishing farming) therefore the failure for the market places not to be completed on schedule affects their day-to-day business. The roads network that connects to vital areas are in standstill. No trader travelled again to their communities to transact business with them anymore because there are no places for such transactions to take place. According to them, this has affected their living conditions. From the Table 4.8 above, 44 respondents agreed to this factor and represents 1.00 RII. From this response and analysis, it is apparent that, delayed payment and its' subsequent implications affects the livelihood of the people living in Adzido Vodza and Kedzi communities.

4.8.3 Poor living conditions

From survey conducted, it was established that once the market places, roads and other social places were delayed or totally abandoned, living has become difficult to people. No trading activities in order to raise fund to pay their children's school fees, what to eat in the house becomes difficult, the clothes to put on also becomes difficult. The analysis

in Table 4.8 indicates that 43 respondents unanimously agreed to poor living condition as one of the effects on project beneficiaries which represent 0.98 RII.

4.8.4 Insufficient accommodation readily available

According to the respondents, one of the prime objective of the project was to build enough houses to accommodate those whose were displace by the sea and those whose houses were destroyed during the construction of the sea defence and the reclamation of the land. However, because of non-payment or delayed payments to the contractors, projects are virtually abandoned. Accordingly to them and also from observation, out of 1000 housing units which was planned to be constructed, only 504 was awarded since 2004 out of this, 115 are yet to be completed whilst 26 of them are virtually abandoned. Because of this, they have constructed their own temporary places to keep their belongings and rest their head with what they called “Kloba” and “Aflagba”. They used coconut branches both to roof and as cladding to the structures.

4.8.5 Denied of early use of the facility

According to the respondents, they are denied of the early use of the facilities because the time frame within which the projects were to be completed was elapsed, meanwhile they need them for their businesses. They will have to wait with the hope that these facilities will one day be completed. Analysis shows that 41 respondents are in favour of this effect and rated it to 0.93 RII as shown in table 4.8 below.

4.8.6 Reduction in performance of students

Reduction in performance of pupils or students was one of the effects emphasized by the respondents. According to them, classrooms were not readily available for teaching and learning. Students are close from school whenever the weather threat to rain simple because they are learning under “Aflagba and Kloba” classrooms which has no mercy from the weather. Teachers do not have accommodation to live in and have to travel from a far before coming to school. They use chunk of their salaries for transportation, consequently most of them requested for transfers to another schools. This in totality has affected the performance of pupils in these three communities.

4.8.7 Fast spread (outbreak) of diseases among households

Based on the analysis of responses, it is clear that because houses are not sufficient for the people, large number of people will have to occupy a small house and room. Once one the family member is attacked by contagious diseases, it quickly spread among the rest. This has claimed lives according to them. On one-on-one interview with some of them, they added that now that the case of the deadly disease “Ebola” is fast spreading all over nation, it will be disastrous to their lives in case it hit their communities.

4.8.7 High maintenance cost due to poor quality work

From the responses, it was ascertained that, once the quality of work is compromised at the construction stage, it will definitely increase the cost of maintenance in future. Consequently, 40 respondents agreed to it which represents 0.73 RII as shown in the table below.

Table 4.8 Effects on Stakeholders (Beneficiaries) of the project

S/N	Effects	No.	RII	Rank
1	Decline in economic activities	44	1.00	1 st
2	Poor living conditions	43	0.98	2 nd
3	Insufficient accommodation readily available	42	0.95	3 rd
4	Denied of early use of the facility	41	0.93	4 th
5	Reduction in performance of students	44	0.80	5 th
6	Fast spread (outbreak) of diseases among households	42	0.76	6 th
7	High maintenance cost due to poor quality work	40	0.7	7 th

Source: Author's field data (2014)

Table 4.9 Effective solutions to mitigate the effects of delayed payment on projects and stakeholders

S/N	Effective solutions to mitigate the effects of delayed payment	No.	RII	Rank
1	Enforcement of payment clauses in the conditions of contract	43	0.98	1 st
2	Regular periodic payment to contractors	42	0.95	2 nd
3	Payment of interest on delayed payment	41	0.93	3 rd
4	Proper planning for projects	40	0.91	4 th
5	Clients should raise sufficient funds before start of projects	44	0.80	5 th
6	Defined time frame for payment	43	0.78	6 th

Source: Author's field data (2014)

4.9. Effective solutions to mitigate the effects of delayed payment on projects and stakeholders

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 4.9). The survey revealed seven (7) 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 ten (10) alternative remedies in the questionnaire were all given a high score of importance as the least score was even as high as 0.76 as shown in Table 4.9. These include; "right to regular periodic payment", "payment of interest on default payment", "defined time frame for payment", "employer working within stipulated budget", "Clients should sufficient funds before start of projects", "Proper planning for projects" and "the right to temporarily suspend work" with their importance index as 0.98, 0.95, 0.93, 0.91, 0.80, 0.78 and 0.76 respectively.

4.9.1 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 persists 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 is 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 that contractors goes through with their cash flow by 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.

4.9.2 Interest on default payment

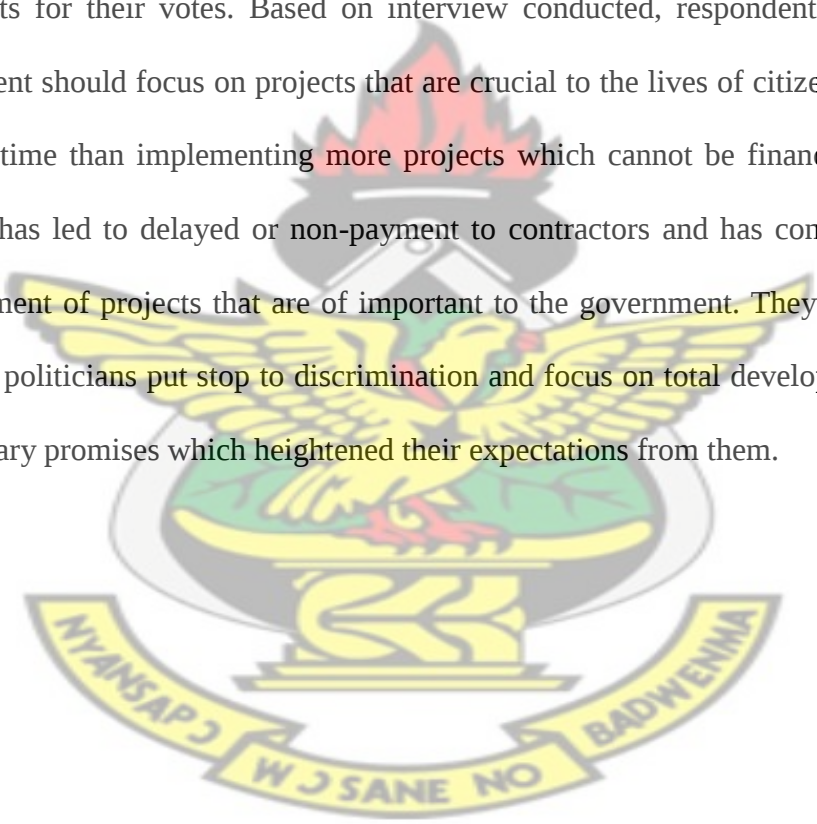
Payment of interest on default payment was ranked by the respondents as the third most favourable option available to contractors as it had an index of 0.93. Respondents were of the view that any interest placed on the default payment or payment in arrears could help improve their cash flow as they often 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.

4.9.3 Time frame for payment

Respondents were of the view 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 0.78. 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.

4.9.4 Working within stipulated budget

The main employer of these housing 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 budget. That is, they issue out a number of projects to contractors with little or without looking at the financial commitment which results in numerous construction firms not being paid at the end of it all. This according to the respondents happen often but especially during election period as they used projects to entice the inhabitants for their votes. Based on interview conducted, respondents suggested that government should focus on projects that are crucial to the lives of citizens and complete them on time than implementing more projects which cannot be financed. They added that this has led to delayed or non-payment to contractors and has consequently led to abandonment of projects that are of important to the government. They added that, it is time that politicians put stop to discrimination and focus on total development and avoid unnecessary promises which heightened their expectations from them.



CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Overview

The main objectives of this study were to identify the underlying causes of delayed payment that are characterized with the Keta Sea Defense and Resettlement housing units; establish the effects of delayed payment on projects and stakeholders and to determine effective solutions to mitigate the effects of delayed payment on projects and stakeholders. This chapter summarizes the findings from the previous chapter and draws the conclusions for this study in conformance to the aim and objectives the study.

5.2 SUMMARY OF FINDINGS

The study reveals that 43 respondents representing 95.56% agreed that they have experienced delayed payment on the resettlement housing projects. From literature review, it was established that poor financial arrangement, bureaucracy, poor contractual relationship between parties and improper planning of projects amongst others. This was confirmed from the data gathered that the major causes of delayed payment are; poor financial arrangement by the clients, improper planning of projects, poor contractual relationship between parties, government interference, bureaucracy, political influence and delay in submission of claims by contractors and represents 0.98, 0.91, 0.89, 0.71, 0.68 and 0.52 RII respectively. The study also revealed that delayed payment have critical effects like cost overrun, time overrun, total abandonment of projects and poor quality of work due to hurried manner at which it is executed which will eventually

increase cost of maintenance. It was also found out that, though contractors and consultants complain bitterly about delayed payment and its ripple effects on them, it is obvious that, the effects on beneficiaries are more crucial especially if it is a social project. Consequently it was revealed that delayed payment at the long run have the following critical effects on projects beneficiaries (end users); decline in economic activities of the people, poor living condition, insufficient accommodation readily available, denied of early use of project in cases where projects are delayed due to delayed payment, fast spread of disease among households which claims lives and poor health conditions due to large number of occupant to small rooms.

It was also revealed that, delayed payment can be mitigated by considering the following factors as indicated by the respondents; enforcement of payment clauses in the conditions of contract, regular periodic payment to contractors, payment of interest on delayed payment, proper planning for projects, Clients should raise sufficient funds before start of projects and defined time frame for payment.

5.2 CONCLUSION

The survey results indicated that majority of delay factors are client related. Literature reviews has also proofed that most of the causes of delayed payment is from the clients however, the contractors are of no exemption. It is also concluded from the survey that client must have strong financial arrangement for projects before its implementation. It can also be concluded from the survey that, most delay in payment occurs because of

delay in submission of claims to clients by contractors. From the survey it is established that some delay payment occurs in projects due to;

- Improper planning of projects
- Poor contractual relationship between parties
- Government interference
- Bureaucracy and political influence.

This study has also concluded that, critical effects of delayed payment on contractor, employer and the project itself are;

- Cost overrun
- Time overrun
- Total abandonment of projects
- Poor quality of work
- Tarnished image of contractor
- Bankruptcy of contractor.

It can also be concluded that delayed payment have the following effects on beneficiaries;

- Decline in economic activities of people in the communities
- Poor living conditions
- Insufficient accommodation readily available
- Denied of early use of project
- Decline in performance of students and
- Poor health conditions

It was further concluded that, beneficiaries will continue to suffer the consequences of delayed or total abandonment of projects until payment conditions are improved.

5.3 RECOMMENDATIONS

Since direct beneficiaries of projects will continue to suffer the consequences of delayed payment in various ways and degrees which were discussed in chapter four of this research, it is recommended that,

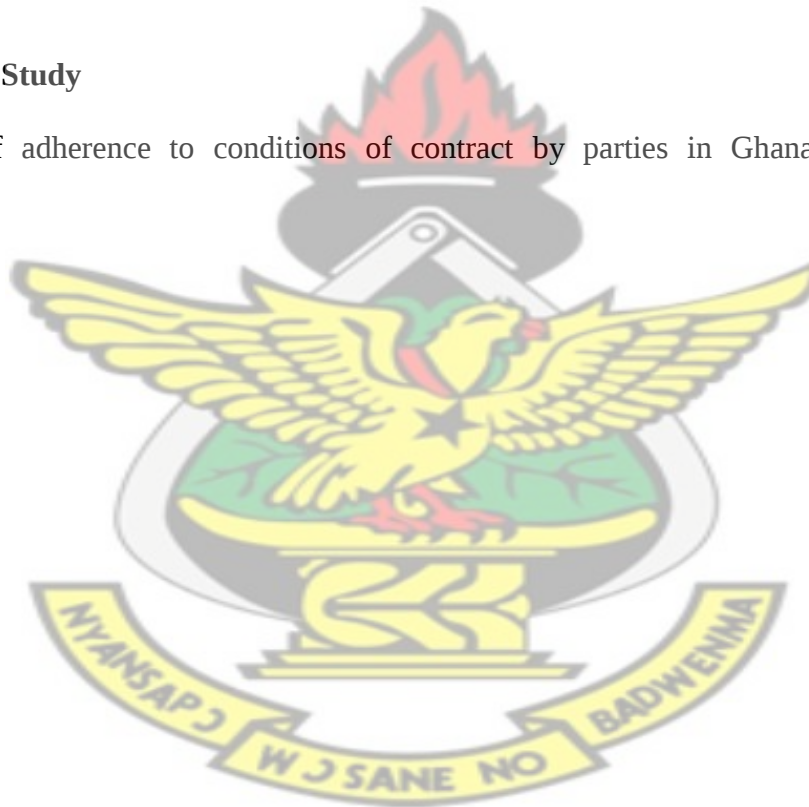
- Clients must have good financial arrangement for projects
- Payment clauses in the conditions of contract must be enforced.
- Early Transfer of funds from Government Exchequer
- It is perhaps timely for Ghanaian contractors to consider introducing its own legislation on the Payment and Adjudication Act. Nevertheless, introduction of such Act cannot be regarded as a panacea for all ills, rather it must be regarded as means to an end.
- Professional bodies and government agencies should study and amend the existing standard forms of contract to provide adequate protection and promote a balance allocation of risk and fair contract to all related parties.
- Promptness of submitting, processing, issuing interim payment certificates and honouring them are extremely important issues in relation to progress payment claims
- There should be an increased sense of professionalism in the construction industry in order to overcome some of the problems related to delay payment issues.

Another crucial issue that needs to be addressed is why and how to change the sometimes lackadaisical attitude on payment issues in the construction industry.

- It is also recommended that, politicizing projects must be entirely eliminated in order to avoid political influences on payment to contractors.
- It is also suggested that, government and private partners that are involved in construction industry properly plan their projects before its implementation in order to escape all the consequents of delayed payment.

Further Study

Level of adherence to conditions of contract by parties in Ghanaian Construction Industry.



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APPENDIX

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

**SCHOOL OF GRADUATE STUDIES
COLLEGE OF ARCHITECTURE AND PLANNING
DEPARTMENT OF BUILDING TECHNOLOGY**

**TOPIC: EFFECTS OF DELAYED PAYMENT ON PROJECTS AND
STAKEHOLDERS**

**A CASE STUDY OF KETA MUNICIPAL ASSEMBLY IN THE VOLTA REGION -
GHANA.**

QUESTIONNAIRE FOR DATA

Mr. Teku Aaron Yao, a final year student of Kwame Nkrumah University of Science and Technology, School of Graduate Studies, College of Architecture and Planning- Department of Building Technology is conducting a research into the **Effects of delayed payment on projects and stakeholders**. This will help improve upon the present conditions in government/public institutions as well as private organizations. This questionnaire covers projects awarded from 2004-2013.

Objectives of the Study.

The objectives of the study are as follows:

- (iv) To identify the underlying causes of delayed payment that are characterized with the Ghanaian Construction Industry with specific focus on Keta;
- (v) To establish the effects of delayed payment on projects and stakeholders
- (vi) To determine effective solutions to mitigate the effects of delayed payment on projects and stakeholders.

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 on contractors

Section C: Effects of delayed payment on projects and stakeholders.

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

This exercise is purely for academic purposes; therefore every information given shall be treated with confidentiality.

Thank you.



SECTION A

Company Respondent for Contractor

Please tick [✓] and state briefly where possible.

Organization/Company Name:

Address:

1.0 The classification category of the respondent company?

D1K1 [] D2K2 [] D3K3 [] A1B1 [] A2B2 [] A3B3 []

Others specified

2.0 What is the position of the respondents in the company

[] Managing [] Director Project [] Manager [] Engineer Site [] Manager Foreman

3.0 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. Project title:

6. Year awarded:.....

7. What type of project is the one identified above?

a. New Construction [] Completion [] Completion of a phase project []

Others:.....

8. What is the status of the identified project/work?

a. Completed [] On-going [] Abandoned []

b. Others:.....

9. What is the source of funding?

Districts Assemblies Common Fund (DACF) []

Ghana Education Trust Fund (GETFund) []

District Development Facility (DDF) []

Urban Development Grant (UDG) []

Government of Ghana (GoG) []

Others (state)

10. Who was the Consultant to the project?

11. What was the contract duration?

Between three (3) and six (6) months []

Between seven (7) and twelve (12) months []

Between thirteen (13) and eighteen (18) months []

Up to twenty-four (24) months []

Other

12. Has the company faced delayed payment from the employer since 2004?

[] Yes [] No

13. If Yes to the above question, then what were the causes of the delayed payment?

- a. Poor financial arrangement
- b. Improper planning of projects
- c. Poor Contractual relationship
- d. Bureaucracy
- e. Political influence
- f. Delay in submission of claims by contractors
- g. Other please, specify

14. Was the project completed successfully on scheduled?

Yes [] No []

Any Others

SECTION B

Establish the Various Implications of Delayed Payment and Its Effect on projects and Stakeholders.

Objective of the Study: Establish the various implications of delayed payment problems and its effects on Ghanaian contractors and 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 causes delayed payment.

Category	Implication	1	2	3	4	5
1. Employer	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 of works					
	Strong political influence					
	Stakeholders are not satisfied					
	Other implications, please specify:					
	a.					
	b.					
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:					

Each scale represents the following rating:

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

Category	Implication	1	2	3	4	5
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					
	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.					
4. Project	Poor quality of work					
	abandonment of project					
	Time overrun					
	Cost overrun					
	Others.					
	a.					
	b.					
	c.					

SECTION C

Effects of Delayed Payment on Projects Objective of the Study:

Establish the various effects of delayed payment problems and its effects on Ghanaian contractors and projects. 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 the effects of delayed payment on 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					
	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.					
	c.					
Project	Poor quality of work					
	Completion period of project delayed					
	Early use of the facility denied					
	Others					
	a.					
	b.					
	c.					
	d.					
	e.					

SECTION D

Effects on stakeholders:

Establish the various effects on 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 the on stakeholders of the projects?

Category	Effects	1	2	3	4	5
Stakeholders	Poor living conditions					
	Decline in economic activities					
	Inadequate accommodation readily available on time					
	Denied of early use of facility					
	Poor quality of projects					
	Fast spread of diseases					
	Reduce performance of school pupils					
	Other reactions, please specify					
	a.					
	b.					
	c.					

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					
	Enforcement of payment clauses in the conditions of contract					
	Payment of interest on delayed payment					
	Defined time frame for payment					
	Employer work within stipulated budget					
	Suspension of work					
	Other possible options, please specify:					
	a.					
	b.					
	c.					
2. Strategic Methods	Enforcement of payment clauses in the conditions of contract					
	Regular periodic payment to contractors					
	Employer seeking a loan to pay off debt					
	Payment of interest on delayed payment					
	Proper planning for projects					
	Clients should sufficient funds before start of projects					

	Defined time frame for payment					
	Others, please specify:					
	a.					
	b.					
	c.					

KNUST

