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**RESTRICTIONS IN THE ENFORCEMENT OF LIQUIDATED DAMAGES (LDs) IN
ROAD CONSTRUCTION:
THE CASE OF UPPER EAST AND UPPER WEST REGIONS OF GHANA.**

KNUST

BY

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CERTIFICATION

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

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DEDICATION

This research work is dedicated to Almighty God, my dear wife, Mrs. Sonia Adu-Amoako, and my sons.

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ABSTRACT

When a road project is completed late due to the fault of the contractor, the client is entitled to some remedy, which is a contractual provision by the Liquidated Damages (LD) clause. Often times contracting parties suffer in one way or the other through misapplication of LD clause of a contract. This research seeks to determine the level of enforcement of LDs, to identify the main measures that will enhance the enforcement of LDs for road construction contracts. The aim of the research was achieved by interviewing two major stakeholders involved in road construction contract administration; Clients organization and the contractor organization on the issue of restrictions in the enforcement of Liquidated Damages (LDs) in Road construction contracts. The main purpose of LDs in road construction contracts are not achieved, clients organization have created situations that makes LDs clause difficult to be enforced, LD amounts stated in contracts are also not realistic pre-estimates of the expected losses to be incurred.

In order to enhance the enforcement of LD clause, clients' organizations need to make every effort to adhere to the LD contract provisions; a more scientific method needs to be developed for the determination of quantum of LD. There is also the need for guidelines in regulating the LD deductions.

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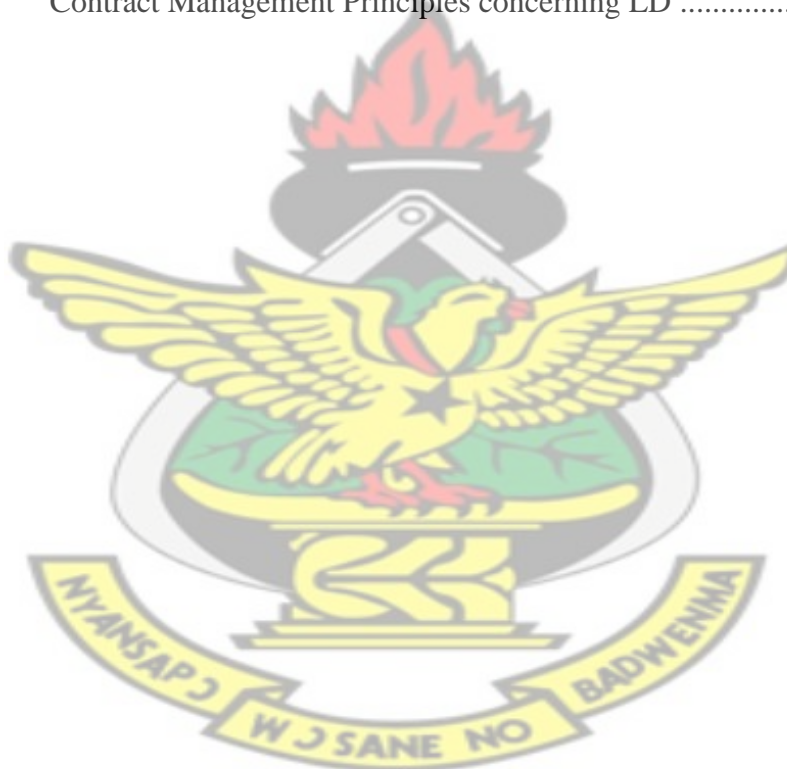
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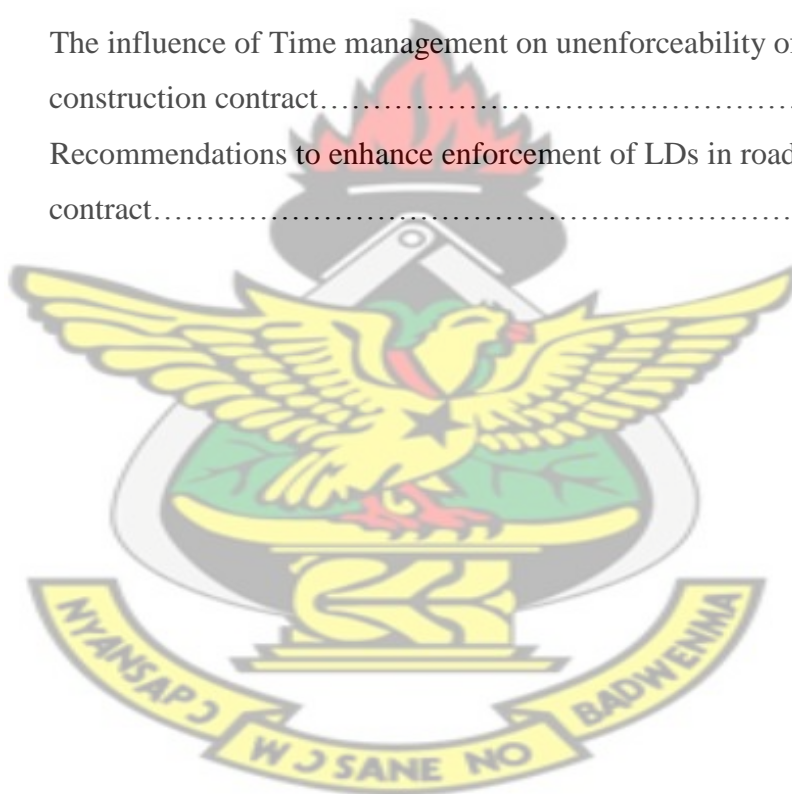
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ABBREVIATION AND ACRONYMS

CI	:	Construction Industry
GDP	:	Gross Domestic Product
CPAR	:	Country Procurement Assessment Report
LD	:	Liquidated Damages
A1B1	:	Road Contractors Classification
A2B2	:	Road Contractors Classification
CoC	:	Conditions of Contract
JCT	:	Joint Contract Tribunal
EOT	:	Extension of Time
PPA	:	Public Procurement Authority
MHD	:	Mass Highway Department
MWRA.	:	Massachusetts Water Resources Authority
RII	:	Relative Importance Index
RCI	:	Road Construction Industry
ASROC	:	Association of Road Contractors
PROCA	:	Progressive Road Contractors Association



CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Construction contributes to the national socio-economic development by providing significant employment opportunities at skilled and non-skilled levels. Beyond that, the industry provides the infrastructure and facilities required for other sectors of the economy to flourish such as; schools for education and training, factories and shops for commercial and business activities, housing for basic human needs, hospitals for health care, buildings for the national communications network and so on (Ahadzie *et al*, 2006a).

The road construction industry in Ghana, as in other parts of the world, is huge and a crucial segment in economic development, no matter what one does, there is road construction, and it cuts across all sectors, being among the top drivers of the Ghanaian economy, including agriculture, manufacturing, mining etc, and its importance cannot be overemphasised, especially as a country the construction industry is one of the most active economically in West Africa. (UNESCO, Ghana National Commission, 2006).

The Ghanaian Construction Industry (CI) has been the basis for civilization in the country and contributes widely to national economy. In Ghana, the potential of the CI being used as a vehicle for creating jobs is manifested by the fact that the industry has been growing at an average rate of 10 % per annum in the year 2008, but registered a negative growth rate of 1% in the year 2009 due to the global economic recession (Ministry of Finance and Economic Planning (MOFEP), 2009).

It is estimated that both public and private investment in the infrastructure provision accounted for about 7.5% of Gross Domestic Product (GDP), and contributed over US\$ 500

million per year to the economy during this period, despite this important role, the industry is still on a grand scale inefficient, especially regarding contract management (World Bank, 2006).

Notwithstanding the vital role played by the Ghanaian construction industry, there are a number of huge setbacks faced as it progresses to achieve optimum efficiency in all round performance (Tuuli *et al*, 2007). The setbacks are mainly in the area of contract management; encompassing prolonged payment delays, excessive cost and time overruns and poor project implementation (CPAR, 2003).

Normally contractors bear the risk of having to complete the road construction works on time, this duty arises from the responsibility the contractor assumes for scheduling the work, managing sub-contractors and developing the means and methods of construction (Lynch, 2003 cited in Tuuli *et al*, 2007). Delays on construction projects are a universal phenomenon. They are almost always accompanied by cost and time overruns (Enshassi *et al*, 2007).

1.2 Problem Statement

Most road construction projects may commence with poor or no feasibility study report, and such projects may not identify the possible risk factors which have bad impact on the accuracy of design and estimated cost. In many cases it is difficult to set out pre-contracting stage what the owner's potential losses or damages may be and are triggered by the contractor's failure to complete.

The growth of the CI seeks to encompass all deficient areas; the non-completion of road construction projects on time is rampant in the country but application of the LD clauses in the Public Procurement Act's Conditions of Contract in use for road construction projects is not pronounced.

Tuuli *et al* (2007) found that in Ghana, some “sympathetic clients” generally do not enforce the liquidated and ascertained damages (LAD) clause. They often ignore or overlook LADs when they are due. There are contracting parties that have suffered in one way or the other through misapplication of LD clause (Tuuli *et al* 2007). What is clear is that only those provisions that reflect a "genuine pre-estimate" of damages to be suffered by the owner on breach by the contractor are enforceable. This may lead to loss of capital as well as loss of capital recovery to the client. The contractor may also be faced with the difficulty of maintaining workforce, repaying of bank loans and collateral and others. In this light, it will be necessary to find out the reasons behind poor enforceability of the liquidated damages in road construction in Ghana.

1.3 Aims and Objectives

The research is aimed to identify the main measures that will enhance the enforcement of LDs for road construction contracts.

The objectives are;

- (i) To determine the level of enforcement of LDs.
- (ii) To identify the causes of the restrictions to the enforcement of LDs for road construction contracts.
- (iii) To determine the measures required to enhance the enforcement of LDs.

1.4 Scope of the Study

The study was limited to supervising agencies under the Ministry of Roads and Highways in the region and road construction projects by contractors with classification of A1B1 to A3B3 because such companies usually undertake large volumes of works and, hence any delay may have identifiable effect on the economy.

1.5 Significance of the Study / Justification

The outcome of this research would broaden knowledge in the road construction industry in the country. It will bring to light the restrictions to the enforcement of LDs for road construction, establish the factors that influence the restrictions and set out the measures required to enhance the enforcement of LDs.

1.6 Research Methodology

The research was conducted using Quantitative research approach. This is as because the nature of the research and the kind of desired results to be obtained at the end.

1. Relevant existing literature on the Liquidated Damages and the restrictions were reviewed.
2. Structured interviews and questionnaires were designed for the following stakeholders in the upper east region; Supervising Road Agencies (Ghana Highways Authority, Department of Urban Roads, Department of Feeder Roads & Other Consultant(s)) and Road Contractors.

1.6.1 Documentation of Information

- Information for the study was obtained from source documents of related subjects on the study.
- The internet was used to obtain supplementary information for the study.

1.6.2 Empirical Survey

Empirical data were obtained through personal interviews and collection of relevant data from construction professionals (Contract Administrators, Contractors, etc) involved in road construction in the upper east region. Structured questionnaires were administered and

informal interviews were used to obtain information from professionals and stakeholders in road construction.

1.7 Organisation of the Study.

The study was organised into five (5) chapters;

- Chapter one (1) contains the proposal which involves; Introduction / Background Information, Problem Statement, Aim and Objective, Scope of Study, Significance of the study / Justification, Research Methodology, Organisation of the study.
- Chapter two (2) was contain the review of existing literature on the subject matter,
- Chapter three (3) is devoted to the methodology employed in terms of the appropriate sampling techniques, interviews, questionnaires and other methods to be employed.
- Chapter four (4) covers findings and discussions of the research.
- Chapter five (5) contains conclusions and recommendations.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In the Ghanaian construction industry, there are various forms of contracts which come with their peculiar contract documentations and conditions of contract (CoC) per the project although they all follow the stipulated provisions for contract documentation in the country. Schedule IV of the Public Procurement Act, 2003 of Act 663 makes provisions for Standard Tender Documents and Standard Request for Proposals which consists of various sections including conditions of contract for all kinds of procurements; Goods, Works (Major, Minor) and Services. There are a number of provisions in this conditions of contract, among these include the Liquidated Damages clause, Extension of Time.

All clients want a project to be completed successfully that is on time, within budget and according to specification, financial remedy is not as satisfying as a perfect project delivered on time (Tuuli *et al*, 2007).

Liquidated Damages, hereafter referred to as LDs are inserted into Conditions of Contracts in the form of a clause as a way of protecting the Clients from the damages to be suffered as a result of project delays. This clause basically serves to protect the interest of the Client in question in terms of losses to be incurred if a contractor fails to deliver on time as agreed upon in the construction contract (ibid).

This shows that money may not be the answer to all programs which run late, as delivery on time may be the only priority.

2.2 Damages Clauses Discussion on Liquidated

It can be difficult and expensive to establish the precise amount of damage that flows from a particular delay, and therefore in their contract the parties may agree in advance a figure for LDs to be paid by the contractor if it is a Culpable Delay. The commercial benefit is that both parties know where they stand. The Joint Contract Tribunal (JCT) provisions are typical: The parties record in the Contract Particulars a figure for LDs per week for Culpable Delay; the employer must give the contractor a notice of non-completion and that LDs may be levied; the employer may then deduct LDs from payments otherwise due to the contractor, or recover the amount from the contractor as a debt. If an Extension of Time (EOT) is subsequently granted in relation to that period of delay, the employer must pay to the contractor the amount of LDs deducted, up to the new completion date (Eggleson, 2009).

2.2.1 History of LADs

The rule against penalty clauses was developed in the courts of equity and was adopted by the courts of common law (See *Law v Local Board of Redditch*, 1892). The figure must be in the right ball park, not necessarily strictly accurate, unless it is excessive compared to the likely damage. It should be acceptable if the amount is modest compared to the likely loss, but not if it is large or if the contractor could be liable for delays caused by another party. It will be relevant to their negotiations that the parties were of similar bargaining strengths. If the figure is unenforceable as a penalty, it may be opened to the employer to claim general damages, depending upon the precise words of the contract. Clear words must be used before the court will find that the parties agreed that no damages would be payable for delay. In the well-known case of *Temloc v Errill*, the figure for LADs was stated in the contract as ‘£ nil per week’ and that was held to be an exhaustive remedy for delay, leaving the employer no entitlement to LDs or general damages (Chappell 1998). However, in the Australian case of *J-*

Corp v Mladenis (Chappell 1998), the Supreme Court of Western Australia held that an entry of ‘Nil Dollars’ did not preclude the recovery of general damages, because an exclusion clause should be narrowly constructed and must be clearly stated to deprive a party of its rights. Whilst it is correct to say that an exclusion clause must be clearly stated and will be narrowly constructed, this Australian decision runs contrary to the English Court of Appeal authority in *Temloc v Errill Properties*. (Eggleston, 2009).

According to Ashok (2003), in all contracts, whether commercial or construction contracts, breach often occurs due to failure of one contracting party to fulfil its contractual obligations, and in law the party, which commits breach of contract, is required to pay damages to the other party.

Lewison, (2008), also defined damages as a way of compensating the claimant and not to punish the wrongdoer, he conducted anthology of judicial comments to that effects of what damages and in one of them he said in the case of *Co-operative Insurance Society Ltd v Argyll Stores* by Lord Hoffmann,

‘...the purpose of the law of contract is not to punish wrongdoing but to satisfy the expectations of the party entitled to performance. A remedy which enables him to secure, in money terms, more than the performance due to him is unjust.’

In ‘McGregor on Damages’, the word damages is defined as ‘the pecuniary compensation obtainable by success in an action, for a wrong which is either a tort or breach of contract, the compensation being in the form of a lump sum, which is awarded unconditionally’ as cited by Appau (2011). He therefore defined ‘damages’ as ‘the monetary compensation claimed or awarded to one who suffers a loss or detriment’.

2.2.2 Damages

There are a number of damages generally applied in law. Damages are of two main types, namely; General Damages and Special Damages. Apart from these two categorizations, damages may also be classified as Liquidated and Unliquidated. This second classification pertains to only contracts or agreements (Appau, 2011).

Damages are usually 'lump sum' awards. The general principle underlying the award of damages either in tort or in contract is that the plaintiff or claimant is entitled to full compensation for his losses; i.e. the principle of *restitutio in integrum*. However, in determining how much to award, the Court considers two matters (ibid).

Unlike other damages that have legal requirements to satisfy, a liquidated damages clause (LD) avoids those legal requirements. The Employer only needs to prove that a breach has occurred and the calculation based on an estimate of the costs resulting from the non-performance, (Turner & Townsend plc, 2009).

2.2.3 Genuine pre-estimates of loss

"A genuine pre-estimate means a pre-estimate which is objectively of the character: that is to say, a figure which may properly be called so in the light of the contract and the inherent circumstances. It will not be enough merely that the parties honestly believed it to be so." (Eggleston, 2009).

The definitive ruling on the distinction between Liquidated Damages and Penalties comes from the classic case of *Dunlop Pneumatic Tyre Company v. New Garage and Motor Company Ltd*, (Eggleston, 2009).

In this case, Dunlop sued its tyre retailer, New Garage, for breaching an agreement to not resell Dunlop tyres at a price lower than that listed in the contract. The agreement then said if that did happen New Garage would pay £5 per tyre 'by way of liquidated damages and not as a penalty'.

The judge held the £5 sum was liquidated damages and enforceable. The Court of Appeal held the clause was a penalty and Dunlop could only get nominal damages. Dunlop appealed. In this case, Lord Dunedin gave a classic judgement which remains the test on which other subsequent judgements have relied.

The House of Lords held the clause was not a penalty, and merely a genuine pre-estimate of Dunlop's potential loss, and so Dunlop could enforce the agreement. Lord Dunedin set out the following principles.

1. *"Though the parties to a contract who use the words 'penalty' or 'liquidated damages' may prima facie be supposed to mean what they say, yet the expression used is not conclusive. The court must find out whether the payment stipulated is in truth a penalty or liquidated damages.*
2. *The essence of a penalty is a payment of money stipulated as in terrorem of the offending party; the essence of liquidated damages is a genuine, covenanted pre-estimate of damage.*
3. *The question to whether a sum stipulated is a penalty or liquidated damage is a question of construction to be decided upon the terms and inherent circumstances of each particular contract, judged as at the time of making the contract, not as at the time of the breach.*

To assist this task of construction various tests have been suggested, which if applicable to the case under consideration may prove helpful, or even conclusive.

Such are:

- a) It will be held to be penalty if the sum stipulated for is extravagant and unconscionable in amount in comparison with the greatest loss that could conceivably be proved to have followed from the breach. This is illustrated by Lord Halsbury in *Clydebank Engineering & Shipbuilding Co. Ltd v. Yzquierdo y Castaneda* (Eggleston, 2009).
- b) It will be held to be a penalty if the breach consists only in not paying a sum of money, and the sum stipulated is a sum greater than the sum which ought to have been paid (*Kemble v Farren*, 1829, 6 BING 141). These though one of the most ancient instances is truly a corollary to the last test.
- c) There is a presumption (but no more) that it is penalty when "a single lump sum is made payable by way of compensation, on the occurrence of one or more or all of several events, some of which may occasion serious and others but trifling damage" Lord Watson in *Lord Elphinstone v Monkland Iron and Coal Co* (Eggleston, 2009).

On the other hand, it is no obstacle to the sum stipulated being a genuine pre-estimate of damage, that the consequences of the breach are such as to make precise pre-estimation almost impossibility.

On the contrary, that is just the situation when it is probable that pre-estimated damage was the true bargain between the parties is in the case of *Clydebank v Halsbury*. (Eggleston, 2009).

2.3 The Enforcement of the Penalty/Lad Clause

Tuuli *et al* (2007) found that in Ghana, some “sympathetic clients” generally do not enforce the liquidated and ascertained damages (LAD) clause. They often ignored or overlooked LADs when they are due.

Viscallero (2006) explained that not all liquidated damages clauses are enforceable and added, citing that for liquidated damages clause to be enforceable in New Hampshire for example, it must satisfy a three-part test.

- (i) First, the parties must intend to liquidate (i.e., stipulate to the amount) the damages in advance.
- (ii) Second, the damages anticipated as a result of the contract breach (such as a contractor's delay) must be uncertain in amount or difficult to prove.
- (iii) Third, the amount stipulated must be reasonable, that is to say, not greatly disproportionate to the anticipated loss or injury. The first requirement is fairly easy to satisfy.

Including a liquidated damages clause in a contract should suffice. The second, although more vague than the first part, is also fairly easy to satisfy. In most cases, at the time of contracting, anticipated damages as a result of delay are uncertain and not easy to prove.

Depending on the type and degree of delay, an owner may have relocation/rental costs, storage costs, carrying costs, lost profits, manufacturing delays, loss of goodwill, etc., all of which can be uncertain and difficult to prove. The most challenging part of the test is the third requirement.

Unfortunately, in determining whether a stipulated amount is reasonable or not there is no magic percentage of the total contract price that will provide a safe threshold. Viscallero, (2006).

Adjei-Kumi *et al.* (2006), highlighted the following as factors militating against the application of Liquidated Damages:

- a. Introduction of Fluctuation Clause in Contracts

- b. Inability of clients to study the contract documents very well
- c. Sum being a penalty

Courts will generally look to whether the presumed loss was a reasonable estimate of potential loss at the time the clause was agreed to. If so, courts then analyse whether the liquidated damage sum is grossly and unreasonably disproportionate by examining the actual damages. In light of the above owners should consider all of the possible elements that may be occasioned by a delay.

Elements such as the difference between construction period interest and permanent loan interest, temporary rental and relocation costs, loss of profits, loss of the ability to manufacture (if applicable), damages payable for holding over at a prior location, and costs associated with multiple moves should all be considered. Negativity to having a liquidated damages provision is that it may mar the relationship between the owner and the contractor.

An owner cannot utilize the benefits of a liquidated damages clause thus if he is the cause of the delay, a savvy contractor will immediately begin to send accusatory letters to the owner anytime the contractor believes there is deviation from the schedule that is even remotely related to the actions of the owner or those under his control for example, the Architect.

Many critics of liquidated damages provisions correctly assert that these provisions foster finger-pointing between the parties and result in an unnecessarily antagonistic relationship between the owner and contractor from day one of the project (Schmidt and Facundo, 2008).

In Canada, the leading case on liquidated damages is an old decision from the U.K. Courts as in the case of *Dunlop Pneumatic Tyre Company v New Garage and Motor Company Limited* (Eggleston, 2009).

This came up with the following as "criteria" or factors to consider when addressing "liquidated damages" provisions:

- The use of the words "penalty" or "liquidated damages" in the contract is not conclusive or determinative of whether it is in fact one or the other. The Court must find out whether the payment stipulated is in truth a penalty or liquidated damages. In other words, the parties' attempt to call it "liquidated damages" is not conclusive and the Court can still determine that it is a penalty.
- The essence of a "penalty" is a payment of money stipulated as against the offending party; the essence of "liquidated damages" is a genuine covenanted pre-estimate of damages to the innocent party. The key issue for the penalty and LD is the actual loss incurred due to the breach by the offending party and further, whether it is fair and reasonable.
- The question of whether a sum stipulated is penalty or liquidated damages is a question of construction it may be decided based on the terms and inherent circumstances of each particular contract. This is judged at the time of the making of the contract, not at the time of the breach.
- To assist this task of construction of such provisions various tests have been suggested:
 - (a) It will be held to be penalty if the sum stipulated for is extravagant and unconscionable in amount in comparison with the greatest loss that could conceivably be proved to have followed from the breach.
 - (b) It will be held to be a penalty if the breach consists only in paying a sum of money, and the sum stipulated is a sum greater than the sum which ought to have been paid (i.e. greater than the actual losses of the innocent party).

- (c) There is a presumption that it is penalty when a single lump sum is made payable by way of compensation, on the occurrence of one or more or all of several events, some of which may occasion serious and others but trifling damage (Schmidt and Facundo, 2008).

Smith (2010), identified that the time for assessment or construction of the provision as either a "genuine pre-estimate" of damages or a penalty is as at the time of the contract. In other words, if it is a genuine pre-estimate of damages or losses of the owner at the time the contract is entered, then it will likely be valid and enforceable.

Tuuli et al. (2007) found out that, LDs are not serving their purpose in construction contracts in Ghana. Clients have created situations that render LDs unenforceable. LD amounts are also not genuine pre-estimates of expected loss to be incurred, as assumptions and guesses rather than genuine calculations on case-by-case basis are adopted in their assessment.

LD clauses are particularly necessary in construction climates such as in Ghana, where time overruns in construction projects is common place (Tuuli *et al.* 2007).

Seidu (2001) as cited in Tuuli *et al.*, (2007) also said the enforcement of the LD clause in construction contracts in Ghana is problematic partly due to lapses in contract administration practices.

This shows that construction managements lack of understanding of the purposes of the LDs in construction contracts.

The problem is further aggravated by the pervasiveness of delayed payments, perpetuated more by the major client; The Ghana Government, without any form of compensation to contractors (Addo-Abedi, 1999, cited in Tuuli et al, 2007). Delayed payment without

compensation is particularly problematic in two ways; it renders the deduction of LDs by clients who perpetuate delayed payments unjustified. Contractors are also generally reluctant to seek redress in courts regarding delayed payments for fear of being blacklisted and denied the chance of participation in future tenders (Tuuli et al, 2007).

Tuuli *et al*, (2007) identified that the enforcement of a LD clause can be problematic and clients must ensure that the LD amount is not a penalty.

For a sum inserted as LD to be enforceable it must be a genuine pre-estimate of damages. In many building and civil engineering contracts however, LDs are not a genuine pre-estimate of the damages to be suffered by the client, but are often related to amounts included in previous contracts of similar nature (Seeley, 1997, cited in Tuuli et al, 2007).

2.4 Damages for Breach of Contract

Where the contract provides for LADs for culpable delay, it is not open to the employer to seek further damages for breaches of other provisions of the contract. In *Biffa Leicester*, Biffa argued that the LAD provisions related only to 'simple' delay, by which Biffa meant delay caused by the contractor's failure to complete on time rather than other breaches of contract, and claimed unliquidated damages for the other breaches. Ramsey, (2006) felt it did not make commercial sense to apply LDs only to 'simple' delay and not to delay caused by other breaches, and the advantage of certainty to both parties would be lost, he then approved the view expressed in *Keating on Construction Contracts* that if LD provisions are expressed to be a complete remedy for delayed completion, they should be treated as a complete remedy. If the delay arises from a breach of contract by the contractor, rather than its merely working slowly, that cannot affect the nature of the loss which the LADs are intended to compensate.

When contracts are delayed and it is certified that the delay is due to non-excusable reasons on the part of the contractor. The payment of LDs becomes due. Clause 49 of the Act 663 (Act 2003) of the PPA Conditions of Contract (CoC) empowers the client in such circumstances to deduct the LDs from any moneys payable to the contractor under the contract. It is applicable where the contract expressly gives that right, and this is the case under the Act 663 of PPA Conditions of contract. Clause 49 of the Act 663 CoC states among others that when LDs become due.

2.5 Time at Large

Whether an event is a Relevant Event, which caused Critical Delay depends upon the particular facts. If the contractor is granted an Extension Of Time (EOT), that act as a defence to a claim for LDs; if the contractor fails to obtain a EOT, the employer may be entitled to LDs, unless the LDs are unenforceable. In practice the relationship between EOTs and LDs is not always so straightforward (Eggleston, 2009).

The power to grant an (EOT) exist for the benefit of the employer, enabling it to grant EOTs for events for which it is responsible and preserve its right to LADs for Culpable Delays if the contract does not include this power, and the employer commits an act which prevents the contractor from meeting the completion date, the contractor cannot be held liable for failing the delay and the employer cannot grant an EOT. In these circumstances, the contractual completion date falls away and time is said to be 'at large' and the contractor is merely required to complete in a time that is reasonable in all the circumstances, to be judged as at time when the question arises. Time will also be large if the contract did not state a completion date. Because there is no fixed completion date, the employer is not entitled to LDs, although he may be entitled to general damages if the contractor fails to complete within

a reasonable time. Opinion is that the employer's general damages cannot exceed the specified amount of LDs (Eggleston, 2009).

2.6 Subsequent Grant of EOT

If LDs were deducted, and an EOT is granted subsequently, the LDs must be repaid to the extent of the EOT, within a reasonable time. In *Reinwood v Brown* (Eggleston, 2009), the employer issued a non-completion certificate and a notice of withholding of LDs, and two days later the architect fixed a new completion date. The house of Lords unanimously dismissed the contractor's appeal, holding that although the EOT can revoke the non-completion certificate, it was not retrospective in effect and at the time of making its payment the employer was entitled to on the current certificate, although the LDs had subsequently been repaid. To hold otherwise would be unfair to the employer, who would be deemed to have under-paid due to an event which occurred after the certificate was issued (Eggleston, 2009).

2.7 LDs After Termination of the Contract

The employer is not entitled to further LDs after practical completion of the works, but difficulties may arise if the contract is determined before practical completion. In the case of 'British Glanzstoff Manufacturing Co. Ltd. v General Accident Assurance Corp Ltd' (Eggleston, 2009), the contractor became insolvent; the employer determined the contract and engaged another contractor, who completed the works in six (6) weeks after the original completion date. The House of Lords held that the LDs apply only where the contractor itself completed the works, not when control was taken out of its hands. In the case of *Bovis v Whatlings* (Eggleston, 2009), the court held similar view.

However, the opposite position was reached in *Hall and Shivers v Mr Jan van Heiden* (Eggleston, 2009), under a JCT Minor Works contract. The contractor abandoned the site and the works were completed by another contractor on 17th May 2008. Coulson J held that the

date of practical completion, the contractor was in culpable delay to that date, it was not entitled to abandon the site and therefore the employers were entitled to determine the contract. The employers had moved into the uncompleted property in December 2007, but the contractor's liability to pay LDs did not cease until practical completion (note that the Minor Works contract makes no provision for partial possession). Having moved in, the employers saved the cost of alternative accommodation, but the amount of LDs was a genuine pre-estimate at the time the contract was made and was not a penalty. The contract did not provide that LDs would cease upon determination and Coulson J awarded LDs for the full period of delay. He rejected the contractor's argument that liability to pay LDs ceased upon determination, as there was no such provision in the contract and any such term would reward the contractor for its own default by avoiding paying LDs.

2.8 Determination of Liquidated Damages Amount

2.8.1 Determining LDs for Construction Contract in Ghana

Tuuli *et al* (2007) found that in Ghana there is no standard method used to determine the quantum of liquidated damages. The majority of public sector employers use LD or LAD from previous contracts and the "rule of thumb". However, Tuuli *et al* found that the loss of use of a facility emerged as one of the factors that influence the liquidated damages quantum the most. Interestingly, this is one factor where there was agreement between contractors, consultants and employers on its influence on the quantum.

2.8.2 South Africa's Views of calculating LADs (Penalty)

Maritz *et al.* (2007), observed that in South Africa, it is the employer who fixes the amount of penalty, but an employer who decides to use a disproportionately high penalty risks having the penalty/LAD reduced by the courts should a contractor succeed in proving that the penalty is

out of proportion to the prejudiced suffered. Loots (1995) suggested that careful investigations should precede the determination of the quantum of a penalty, in order to avoid this problem. Brümmer (1998), however, found that there are no standardised methods of determining the quantum of penalties or LADs for building contracts.

Loots (1995) recommended that in the case of commercial developments, the potential loss of profits can be used as a basis for the assessment of the quantum of the penalty. For public sector contracts, like highways, where the delay does not cause any direct loss of revenue to the employer, Loots recommended that the current rate of interest on the capital invested may be taken. Based on the results of the literature search, no subsequent studies seem to have taken this suggestion any further. It is proposed that this study, however, should include some element of this aspect and the extra cost of consultants, cost of acquiring or renting new spaces to accommodate operations until facility is completed.

Brümmer (1998) again found that the Department of Public Works uses a sliding scale to determine penalties for building projects where penalties for shorter construction periods are considerably higher, per unit, than those with longer construction periods. In terms of this scale, Brümmer found that penalties for building projects with duration of six months, twelve months and thirty months were calculated at 0.0575%, 0.0275% and 0.01%, respectively, of the estimated contract amount.

Brümmer (1998) again compared the penalties obtained using the sliding scale method, with those of commercial projects in South Africa. He concluded that penalties for commercial projects are generally higher than those of the department. For larger contracts, Brümmer found that penalties imposed by the department are substantially lower than those of the private sector. This suggests lack of an industry-defined method to determine penalties/LADs.

2.8.3 United Kingdom way of determining the LAD / Penalty.

Eggleston (2009) explained that in the United Kingdom (UK), where it is a requirement that liquidated damage be a genuine pre-estimate of the likely damages, Eggleston found that some central government departments use the following formula:

$$\text{liquidated damage / day} = \frac{\text{Estimated Contract Value}}{365} \times 15\% \dots\dots \text{equation (1)}$$

This liquidated damage amount is based on three components, namely;

- The notional interest on capital employed of 12.5%;
- Administrative/supervision costs of 2.5%;
- Additional accommodation costs (where necessary)

2.8.3.1 Local Government Contracts in United Kingdom

Maritz et al, (2007) again came out with the following components in calculating LAD for local government contracts in the UK, the method used to determine penalties or LADs is made up of the following components:

- Interest on capital expended;
- Administrative costs;
- Additional accommodation costs (where necessary)

The method further assumes that 80% of the cost of capital will have been incurred at the point of delay. If the interest rate is 12%, Eggleston proposes that the interest on capital be determined as follows:

$$\text{Interest on capital} = \frac{80\% \times 12\%}{52} = 0.185\% \text{ per week} \dots\dots \text{equation (2)}$$

The administrative costs are taken as 0.052% per week, which is then added to the interest on capital to yield a penalty of 0.237% per week.

2.8.4 United States of America's Vision

Many states in the United States of America have attempted to simplify the determination of the penalty through the development of 'schedules' based on the original contract amount (Tyler, 1994). But LD is damage but not penalty. These schedules show the recommended penalty per day, ranging from 0.17% for small contracts (up to \$25 000) to 0.02% for larger contracts (about \$2 m), for example in the state of Florida as shown in Table 1 below.

Table 2.1: Recommended Daily Penalty

Original Contract Amount (\$)	LAD per day (\$)
0-25,000	42.00
25,000-50,000	70.00
50,000-100,000	105.00
100,000-500,000	140.00
500,000-1,000,000	210.00
1,000,000-2,000,000	280.00
2,000,000	420.00

Source: Tyler (1994):

Tyler (1994) proposed the development of a Uniform Liquidated Delay Damages Act, for ten categories of contract amounts, ranging from small contracts to large contracts of approximately \$20 m and over, (Appendix C)

He further suggests that a schedule of maximum LAD's be developed as part of the act, using the above contract 'bands'. These LAD's would be based on reasonable estimates of actual delay damages of previous contracts for the previous two financial years that fell within these bands. These schedules would then be updated every two years and incorporated into public sector construction contracts through referring to the Act in the contract of project specification.

Additionally he also proposes the use of early completion bonuses together with penalties. These bonuses would not necessarily be equal to the delay damage, but should not be less than 25% of the delay damages.

2.8.5 Factors involved with Calculating LD / Penalty

In the Capital & Asset Management report, (July, 2010) there are provisions about the constituents of liquidated damages;

- I. Where a specific loss can be assessed on a particular contract the liquidated and ascertained damages provided for in the contract should reflect that loss and be assessed by Capital & Asset Management in consultation with the Section 151 Officer having due regard to its effect on tender prices. Check the position with the client department and consult the Capital & Asset Management representative if necessary.
- II. Where no specific loss can be determined at tender stage the liquidated and ascertained damages provided for in the contract should be assessed on the basis of the elements set out below as appropriated; the percentages being set by Capital & Asset

Management in consultation with the Section 151 Officer to ensure that they reflect the arrangements for the particular contract and provide for a reasonable and justifiable level of damages, again with due regard to the effect on tender prices.

- a) Loss of interest on capital – assessed by means of a percentage of the contract sum plus professional costs per week for the time between contractual and completion dates.
- b) Additional professional costs incurred – based upon an assessment of the average professional costs per week of the contract during the post contract.
- c) Further applicable costs.
- d) Fluctuations in the cost of labour and materials where applicable.

2.8.5.1 Project Examples

The Liquidated Damage provision was determined for two of Boston's major projects; the Boston Harbour Project at Deer Island of the Massachusetts Water Resources Authority (MWRA) and Central Artery/Tunnel Project of the Massachusetts Highway Department (MHD), make for a comparison of approaches and degrees of complexity in estimating liquidated damages (Allen & Martin, 2008).

2.8.5.2 Boston Harbour Clean Up Project

The Boston Harbour Project is a billion dollar plus construction effort to construct wastewater treatment facilities that will ultimately clean up the Boston Harbour. This project is Court ordered and must meet certain Court established deadlines for completion.

The MWRA's formulation is;

$$\frac{CONTRACT\ COST \times TOTAL\ EXTENDED\ COST}{DAMAGES} = LIQUIDATED$$

TOTAL PROJECT COST x CONTRACT DURATION

Whether such straight forward formulation meets the legal standard for an enforceable liquidated damage provision is another question (Ibid).

2.8.5.3 Central Artery/Third Harbour Tunnel Project

The Central Artery Project takes an alternate case by case approach in liquidated damage determination. The Central Artery/Third Harbour Tunnel Project is the largest project in New England. Like the Boston Harbour Project, the Central Artery Project will have numerous contractors working within interdependent schedules. Similarly, the Central Artery Project has an extensive and expensive management and support services burden for the project construction.

Unlike the Boston Harbour Project, however, the Central Artery Project determined liquidated damages on a case by case basis. The Mass Highway Department (MHD) examined the scope of each individual contract, determines where that contract fits in the procurement and scheduling of the entire project and estimates specifically how much support services such as resident engineers, office engineers, field inspectors, and secretaries would be needed if the project were to go beyond its contract completion dates. There are a number of ways to estimate liquidated damages.

The MWRA utilized a proportionate application of its extended costs across all contracts regardless of the interdependence between contractor performance, schedule logic and nature of contract work. The MHD estimated liquidated damages on a case by case basis using historical data adjusted for probability of impact as well as individual estimates of management and other costs. The MHD's method is more sophisticated and requires the exercise of engineering judgment.

Comparatively, the MWRA's method reflects an across the board application which is less reasonable and more likely to be successfully challenged (Ibid).

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The literature review indicated that public construction contracts are generally completed late, with poor work performance by the contractor being the major contributing factor. Despite the provisions of many standard construction contracts (condition of contract) and relevant legislation making it possible for the enforcement of the LD clause, the extent of the enforcement of the LD clause is unknown. The literature search also showed that there was no generally accepted method of determining the penalty amount inserted in contract documents. It was therefore imperative that this study is designed such that information is obtained from those that are involved in the implementation of road construction contracts, e.g. project manager, civil engineers, quantity surveyors and contractors, on the extent of enforcement of the LD clause.

The data had to be obtained such that an answer to each of the research objectives was obtained.

3.2 Research Design

A quantitative research design was adopted for this study, with a survey research custom being engaged. A written questionnaire was developed to obtain the respondents' opinions on a range of aspects of the LD clause. The responses were then summarised and interpreted through descriptive statistical methods, and conclusions drawn from the results of the interpretation. As emphasised by Leedy & Omrod, 2010, by its nature, survey research relies on "self-report" data, where the participants disclose what they believe is true or applies to them. There is always a possibility that the respondent's opinion is constructed "on the spot".

Control questions were therefore built-in in the questionnaire in an attempt to measure the consistency of the respondents' answers.

3.3 Research Methodologies

After a brief evaluation of all the available methodologies for the research, it was decided that literature review, questionnaire would be used. In order to satisfy the objectives of this research, literature review was done to enable the researcher to have an in-depth knowledge about the chosen research area. These methodologies chosen can be categorized under quantitative research which is more specific and result oriented and involves the collection of numerical data in order to explain, predict, and/or control phenomena of interest (Mojaheed, 2005).

A thorough literature research was undertaken to extract the available information on the topic 'Restrictions in the Enforcement of Liquidated Damages (LDs)'. The sources of the research were published professional journals, academic works, internet search and other relevant literature. A list of restrictions to the enforcement of LD's in the road construction industry were identified from the review of literature, internet search and preliminary survey and developed into a questionnaire for the main survey.

The review of literature also indicated that a common restriction in the enforcement of LDs in the road construction industry is that LDs are not realistic pre-estimates of the expected loss; hence the survey sought the views of respondents about the restrictions of the enforcement of LDs in the road construction industry in Ghana.

3.4 Sampling

3.3.1 Sampling Technique

The convenience sampling technique was used to derive a reasonable sample of the population. Non-probability sampling techniques generally have weaknesses in that they inherently introduce an element of bias in the sampling process (Leedy & Ormrod 2010).

The high respond rate was achieved by, amongst others, limiting the research population to management staff Client's organisations within the two regions and contractors that have registered and have their contact right with the associations and the client's organisation. This population is readily available and therefore convenient to include in the research population. However, it is believed that the data obtained will give an indication of the situation, in order to contribute to future, more intense research which would employ more structured samples. Very little variation in the characteristics of the construction industry environment means that the problems associated with the convenience sampling technique are less likely to lead to flawed conclusions. Contract administration in the public sector is generally regulated by common processes and standard contract conditions. This makes the operating conditions of all stakeholders in the target population very similar. The convenience sampling technique is also renowned for its relatively low costs of the study (Welman *et al* 2005), thus making it suitable for studies of this nature.

The client's organisations whose contact details (addresses) were readily available were included in the sample of prospective respondents. This technique was especially important in ensuring that the views of experienced client's organisations and contractors are obtained, as these client's organisations are typical of the group that handles the road contracts within the two regions.

3.3.2 Sample size

The targeted research population was split into two categories, Client's organisation (Project managers, Civil engineers and Quantity surveyors) and Contractors. There are, of course, limitations on the number of the research population in each of the above categories. The details of each category were obtained from Client's organisation and the Associations office's, records were obtained from agencies offices and other sources.

Three clients organisations are in the region namely Ghana Highway Authority, Department of Urban Roads and Department Feeder Roads, are able to assist through the provision of their staff details, and, sometimes the distribution of the questionnaires. There are two Registered Road Contractors Associations in the two regions, since these are partners in the road construction industry in the region, they were approached to participate in the study.

(a) Client's Organisations

Ghana Highways Authority (GHA) has three (3) Civil Engineers, two (2) Quantity Surveyors, and other supporting staff and is headed by Chief Engineer. Department of Feeder Roads also is made up of four (4) Civil Engineers, three (3) Quantity Surveyors, and other supporting staff and is headed by Principal Engineer. Department of Urban Roads is also two (2) Engineers and two (2) Quantity Surveyors. The population of the client's organisation is made of Twenty-Eight (28) and Twenty-Eight (28) questionnaire were sent out.

(b) Contractors

The Ministry of Roads and Highways has classified contractors into category A, B, C and S (Appendix D) and this work looks at contractors within the class A2B2 to A3B3 who are mostly found within the two regions and information on them are readily available from the two contractors associations in the regions. The population of the contractor's organisation is

made of One Hundred and Fifteen (115) but Sixty-Eight (68) was used for the study, the Forty-Seven (47) did not respond to the questionnaire.

3.4 Design Of Questionnaire

Structured questionnaires were self-administered (shown in Appendices A and B). Two sets of questionnaires were designed for the main study and were administered to all the stakeholders. All the stakeholders were grouped under two major categories; the first category; Supervision Agencies under the Ministry of Roads and Highways which is made up of Department of Feeder Roads, Department of Urban Roads, Ghana Highways Authority and other Consultant(s), and the second category is Road contractors under the same ministry.

3.4.1 Distribution of Questionnaires

The questionnaires were distributed and responses were collected personally from professionals in the Road Construction Industry (RCI), which is made up of supervision agencies or client's organisation and road contractors under the ministry of roads and highways. They include Civil Engineers, Quantity Surveyors, Project Managers, Construction Managers and Procurement Managers in the Upper East and West Regions of Ghana.

The survey questionnaires were sectioned into four (4) main parts which dealt with the following areas relevant to the study:

I. General Particulars of Respondents

This sought to find out basically about the demographical data of the respondents from the RCI within the Upper East and West Regions of Ghana.

II. General Aspects of Liquidated Damages

This section dealt with conditions of contract used in the RCI, the understanding of the respondent with regards to Liquidated Damages Clause in the road construction contracts and the purpose of inserting the Liquidated Damages Clause in Road Construction Contracts. This section also sought to find out how relevant a Liquidated Damages Clause is to Road Construction Industry.

III. The Extent of Enforcement of the LD Clause

This section assessed whether or not the respondents have had experiences of having a Liquidated Damages Clause being enforced or not enforced in previous contracts and the reasons for not enforcing it.

IV. Recommended Measures to enhance the enforcement of LD clause

This part, being the final section of the questionnaire suggested some possible solutions to the various challenges surrounding the application / enforcement of Liquidated Damages Clause in the RCI. The respondents were asked to rank the various suggested remedies and also allowed to write down their suggestions.

The questionnaire had provision for questions which required the respondents to rank a set of responses. The ranking questions sought to obtain the relative importance or impact index and recommendations of a set of factors compared to others in the same category. The various responses were ranked on a scale of 1-4 and 1-5 to indicate the extent of impact or importance of a recommendation.

3.4.2 Data Analysis

3.4.2.1 Relative Important Index

The analysis looked at the Relative Importance Index (RII), a good statistical tool to calculate the relative importance value of each variable. Using this, the Relative Importance Index of each factor is given by:

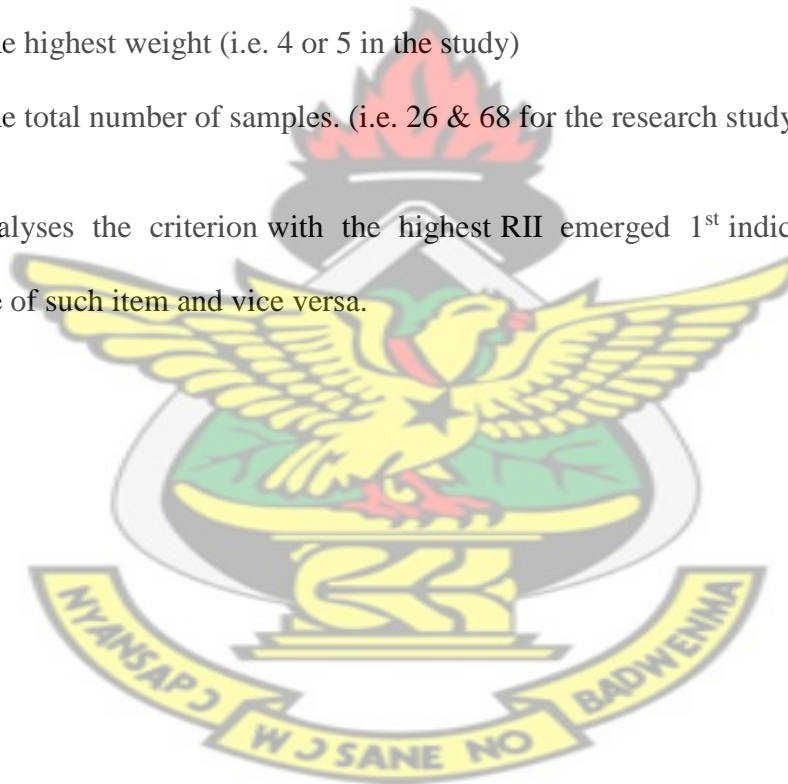
$$\text{Relative Importance Index (RII)} = \frac{\sum W}{AN}, \quad \text{Where,}$$

W = the weighing given to each variable by the respondents, ranging from 1 to 4 or 1 to 5; where applicable.

A = the highest weight (i.e. 4 or 5 in the study)

N = the total number of samples. (i.e. 26 & 68 for the research study)

After the analyses the criterion with the highest RII emerged 1st indicating high impact or importance of such item and vice versa.



CHAPTER FOUR

PRESENTATION OF RESULTS

4.1 Introduction

This chapter seeks to make meaningful deductions from the data gathered. The valid results from the questionnaires administered to the respondents are presented and the various views and relevant responses are highlighted. The approach used followed the structure of the questionnaires submitted which were of two kinds; one for Supervision Agencies or clients organisation and the other for Road Contractors, in each case the results highlighted Restrictions of the Enforcement of LDs in road construction contracts, and relating them to other information gathered since the commencement of this study.

The valid results from the questionnaires administered to the respondents are analysed and the various views and relevant responses are highlighted for discussion in this chapter.

4.2 Survey Responses

A total of 142 questionnaires were distributed to professionals of supervision agencies and road contractors in the Upper East and Upper West Regions of Ghana, out of this number 27 of the questionnaires were distributed to supervision agencies; 16 Civil Engineers and 11 Quantity Surveyors, and 115 of the questionnaires were also distributed to professionals working with road contractors. The responses rate is analysed and presented in Table 4.1 below

Table 4.1: Questionnaire Response Rate

Category of Target Respondents		No. of Questionnaires Distributed	No. of Questionnaires Completed	Response Rate (%)
Supervising Agencies	Civil Engineers	16	15	93.80
	Quantity Surveyor	11	11	100
Road Contractors		115	68	59.13
Total		142	94	66.20

The analyses and the discussions in this chapter are 94 valid questionnaires which were retrieved, representing a positive turnout of 66.20% which is adequate.

4.3 Demography of the Respondents

The professional background of the respondents is shown in Figure 4.1. About 45% (42) of respondents are Civil Engineers, 30% (28) are Quantity Surveyors, 17% (16) are Project Managers and 8% (8) are Construction Managers.

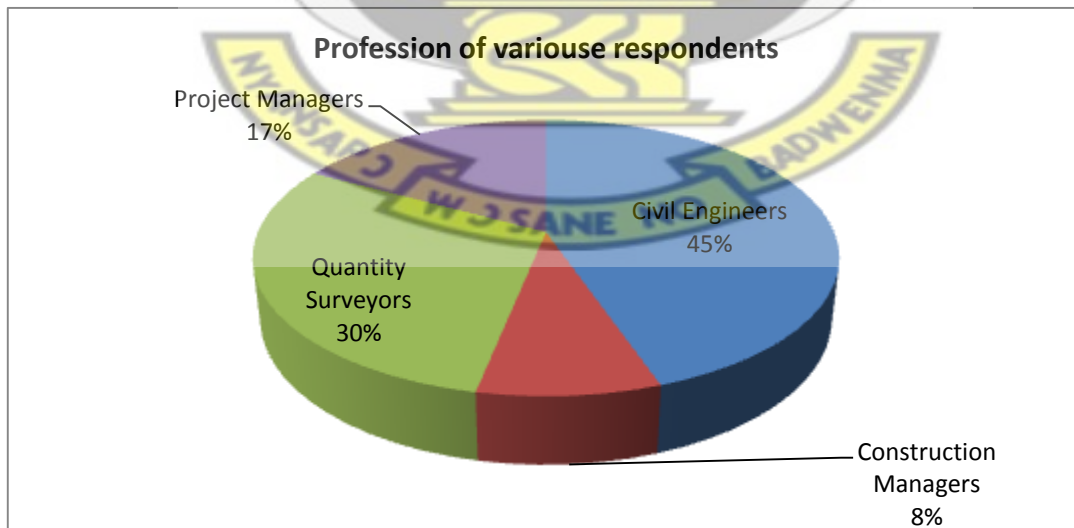


Figure 4.1 Categories of Respondent's Professions.

Considering experience of respondents' in their relevant professional carriers in terms of years, Figure 4.2 below could further be interpreted that, majority of the respondents have substantial amount of experience in the industry ranging, with 56% (n=53) out 94 respondents having spent 6-10 years, followed by 19% (n=18) out of the 94 who have 21years and above, followed by 16% (n=15) out of the 94 have 11-15years and followed by 9%(n=8) out of the 94 having spent 0-5years in the industry. This shows that more than half of the respondents have experience in the industry which is good for LDs enforcement in the industry.

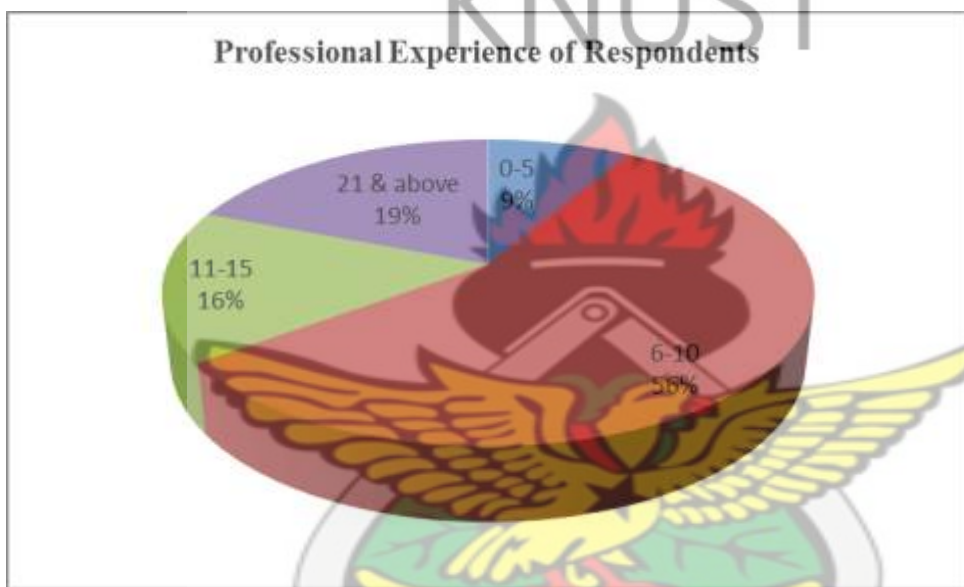


Figure 4.2 Professional Experience of respondents

4.4 General Understanding of LD's

Respondents unanimously said there were provisions of both LD and EOT and it is necessary. Respondents were asked questions like;

Figure 4.3 shows the responses of the respondents to the percentage of the contract sum range of LD amount and 89.36% of the respondents says the percentage of LD amount rangers from 0.05% - 0.08% of the contract sum for road contracts.

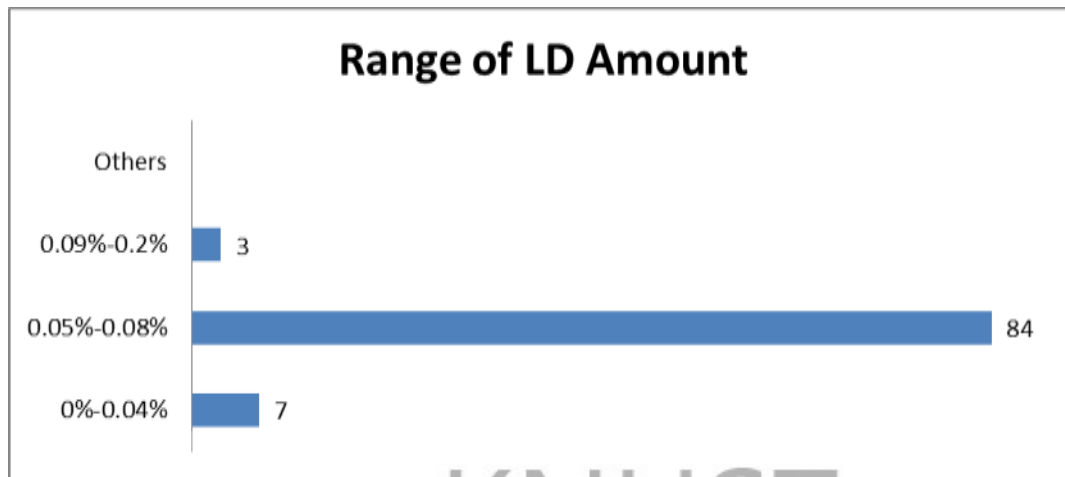


Figure 4.3: Range of LD amount in road construction contracts

4.5 The Extent of Enforcement of LD Clause in Road Construction Contracts

The progress report of the various agencies were critically analysed to access the extent of delay in road construction contracts in the two regions. A total of 113 road construction contracts were executed by the various supervision agencies between 2005 and 2012. It was noticed that, 55% of these contracts were delayed beyond the anticipated completion dates. The various actions taken for delayed contracts were assessed. The results indicated that 31% received extension of time (EOT) from the client with reasons based on climatic conditions and variation orders issued by the client. Figure 4.4 and Table 4.2 shows distribution of delayed contracts and actions taking on delayed contracts respectively. There is evidence from Table 4.2 that the LD clauses were not enforced.

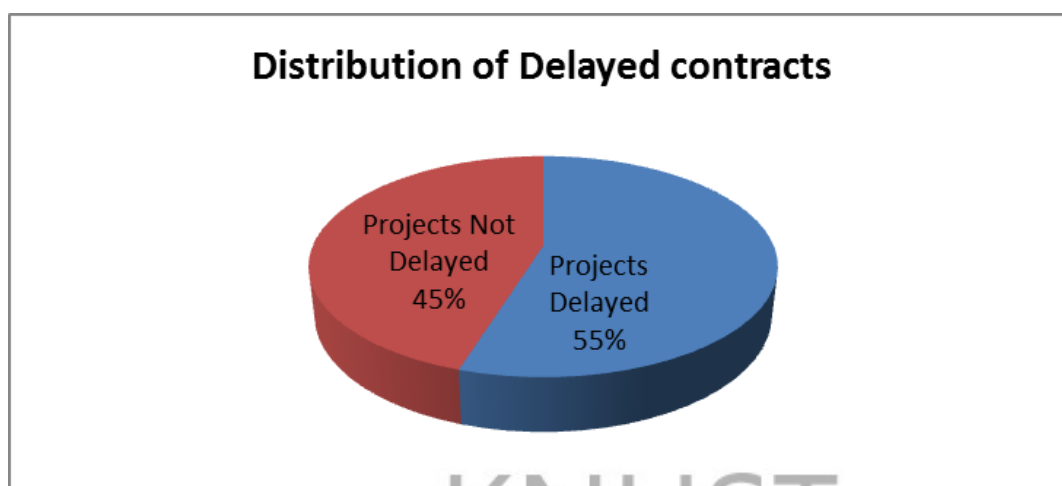


Figure 4.4 Distribution of delayed contracts

Table 4.2 Actions taken on the delayed contracts

PROJECTS	% Delayed	(EOT)	(LD)	Determined / Terminated	(No LD)
Delayed Projects (55% of the 113 projects)	54%	31%	0%	27%	42%

4.5.1 Difficulties in the Enforcement of the LD clause.

The progress report of the various supervision agencies or client's organisations indicates that LD clause was not enforced and the reasons were sought from the respondents. Respondents from contractor organisations were also asked if their organisations have been affected by LDs, and they responded unanimously negative to that. All the respondents were also asked if they consider LDs as necessary in Ghana or not, and about 80% of the respondents say is necessary. The respondents from the supervision agencies or client's organisation were asked whether they considered enforcement of LD clause as problematic, and the result is shown in Table 4.3 below.

Table 4.3 Problematic Nature of the enforcement of LD clause

Scale	Supervision Agencies		Contractors	
	Nr.	%	Nr.	%
Strongly agree	9	35	56	82
Agree	11	42	12	18
Quite agree	3	12	0	0
Disagree	3	12	0	0
Total	26	100	68	100

Although enforcement of LD clause is perceived to be problematic yet no responding contractor ever went to court to contest their enforcement and nor any responding client sought the help of the courts in their enforcement. The literature reviewed that there is no record on such, at least within the last fifteen years, of any cases regarding enforcement of LDs that have come before the courts. The absence of court cases especially from contractors may be attributed to the fact that contractors are mindful of being blacklisted as litigants by clients and excluded from future contracts. Indeed, construction reviews on Ghana reveal the fear of losing tendering opportunities as the primary reason claims are not pursued in court. The recent setting up of the Ghana Arbitration Centre to promote the use of alternative dispute resolution mechanisms may enhance the use of arbitration and mediation to resolve such problematic issues in the construction industry in an amicable manner.

4.5.1.1 Possible Factors that restrict the application of LDs in the road construction industry.

The literature again shows a list of five possible factors that restrict the application of LDs or LADs in construction contract as such respondents were asked to rank these possible factors by the following scale; Least affected, Merely affected, Affected and More affected.

Table 4.4 shows the respondents responses to the ranking of the factors by the RII test, three of the factors have RII values more than 50% and two of the factors have RII values less than 50% and these shows how truly the factors restrict the application of LDs in RCI.

Table 4.4 Relative Importance Index for Factors that prevent the application of LD clause

No.	Factors that prevent the application of LDs	Relative Importance Index (RII)
1	LDs are generally overlook or ignored in by sympathetic clients	86.17
2	None payment of contractors on time for work done	76.06
3	Sum being a penalty	71.01
4	Inability of contractors to study the contract documents very well	38.56
5	Introduction of Fluctuation Clause in Contracts	33.78

4.5.2 Enforcement of LD amount in road contraction contract.

The literature shows that before LD or LAD can be enforced it needs to satisfy three basic test; (1) The parties must intend to liquidate in damages in advance, (2) The damages anticipated as a result of the contract breach must be uncertain in amount or difficult to prove and (3) The amount stipulated must be reasonable, that is to say, not greatly disproportionate to the anticipated loss or injury, and respondents' were asked to rank the above-mentioned tests from Most easy, Easy, Fairly easy and Not easy.

The RII for the first, second and the third tests of LD were 92.02%, 73.67% and 63.86% respectively, as shown in Table 4.5 below. This shows that the respondents believe that the first test is the most easy, followed by the second and the third text.

Table 4.5 Relative Important Index for the Texts of LD amount

No.	Factors that prevent the application of LDs	Relative Importance Index (RII)
1	The parties must intend to liquidate (i.e. stipulate to the amount) the damages in advance	92.02
2	The damages anticipated as a result of the contract breach (such as a contractor's delay_ must be uncertain in amount or difficult to prove	73.67
3	The amount stipulated must be reasonable, that is to say, not greatly disproportionate to the anticipated loss or injury (Estimates)	63.83

4.5.3 Alternatives to enhance the enforcement of LD clause.

The study shows possible alternatives that can enhance and address the difficulties associated with the application of LDs in the Ghanaian road construction industry. The respondents were asked to rank those alternatives with the following scale; Least recommended, Merely recommended, Recommended and More recommended and Below shows the responses from the respondents that can address the deficiencies and difficulties associated with the application of LDs in the road construction industry or interventions to enhance its application. The following were the suggested interventions most recurrent in the responses and all the interventions with RII values of more than 50% is seen or regarded as good intervention visa via those that are lower than 50%. As shown in Table 4.6 below.

Table 4.6 Relative Important Index for Alternative to enhance the enforcement of LD Clause

Nr.	Alternatives to enhance the enforcement of LD clause.	(%)
1	Insurance against losses	88.03
2	Liquidated and Ascertained Damages	85.64
3	Bonus clause for early completion	76.06
4	Suing the contractor for the damages suffered	71.54
5	Determination / Termination of contracts and retender	48.19
6	Granting of Extension of time by	31.65
7	No action taken	25.00

LDs are only due clients if delays in completion are attributable to contractors and are non-excusable. As long as clients continue to fail woefully in their contractual duty of paying contractors on time they will not be due any LADs for delays under the Pink Form (1988) contract. In Ghana, it is commonplace to find projects funded by the Central Government in payment arrears of several years and the possibility of the affected contractors receiving interests on those payments is unlikely (c.f. Owusu, 1987; Seidu, 2001; Stiedl and Tajgman, 2003). But there is expressed provision in the PPA 2003, Act 663's CoC that allows for interest on delay payment, which is enforced in the industry currently as such it will be justifiable for such clients to deduct LDs from contractors who delay projects.

With Determination / Termination of contracts as Alternative to revoke performance bond, it is argued that merely completing works late or the possibility of delay occurring may not be sufficient grounds to invoke the performance bond. This is because performance bond is

based on the broader picture of performance in terms of executing the contract according to plans and specifications, within the time allowed and at the agreed sum (Russell, 2000). Many clients are also not comfortable with the process of invoking the performance bond which may include determining the contract and re-awarding to another contractor. The use of performance bond in place of the LD clause is thus considered unsuitable.

Inclusiveness of Bonus clause for early completion as alternative to the LD is an issue that need to be carefully looked at to see how best it is to the interest of the client or client's organisations. A contractor who completes on time receives a reward for completing before time and the question is what happens to those that complete beyond the anticipated completion date? So therefore the use of Bonus clause as LD may face difficulties with those that will complete beyond the anticipated completion date as shown by the RII is considered unsuitable.

4.6 Impact of LD Application on Road Construction Contract

When LD is enforced effectively the following results would be achieved;

- i. There will be timely completion of road projects,
- ii. The rampant unapproved delays of projects would be reduced,
- iii. Project performance with respect to time will be improved,

RII values for other impacts are below 50% which as shown in Table 4.7 below.

Table 4.7 Impact of LD Application on road construction contract

No.	Possible impacts of the application of LD	Extent of Recommendation						Total	Relative Importance Index (RII)		
		Not at all	Slightly	Moderately	Very	Extremely	No Idea		SW	AN	SW/AN
1	Promote timely project completion	0	0	0	13	81	0	94	457	470	97.23
2	Reduce rampant unapproved delays of projects	0	0	0	23	71	0	94	448	470	95.11
3	Improve project performance with respect to time	0	0	0	61	33	0	94	409	470	48.09
4	Lead to intimidated and apprehension of road contractors prior to entering into contract agreements	28	21	24	21	0	0	94	226	470	48.09
5	Reading and understanding of contract conditions before signing	38	27	19	10	0	0	94	189	470	40.21

4.7 Effective Contract Management Principles

The literature reveals that certain contract management principles concerning LD or LAD need to be enforced. As such the respondents were asked to respond to whether these principles are practiced in their contracts, and Table 4.8 shows the responses.

Table 4.8 Contract management principles concerning LD.

No.		Yes (%)	No (%)
1	Inclusion of LD clause in road construction contracts	97	3
2	Issuing of non-completion certificate to the contractor when he delays	67	33
3	Deduction of LDs when there is a delay by the contractor	19	79
4	Granting of EOT when there is a delay not due to the client's organisation	100	0
5	Repayment of LD, when EOT is granted subsequently	100	0

The literature shows that client normally creates situations that render the LDs unenforceable.

Respondents were asked to rank the situations by the following scale; Least influential,

Merely influential, Influential and More influential. Figures 4.5, 4.6, 4.7 and 4.8 indicate how they were responded to.

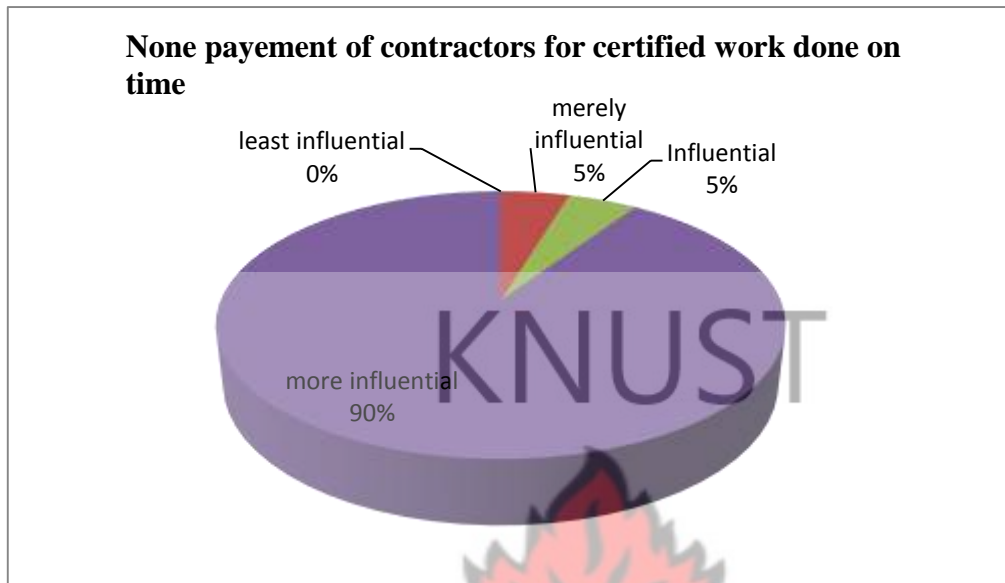


Figure 4.5: The influence of non-payment of Contractors on the Unenforceability of LDs in road construction contract.

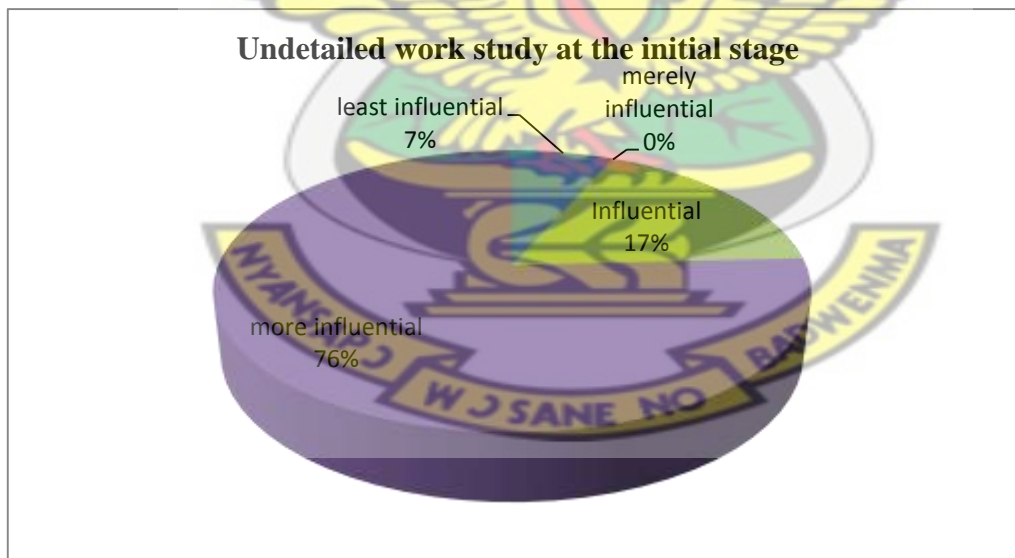


Figure 4.6: The influence of lack of detailed work study on the Unenforceability of LDs in road construction contract.

LD amount not realistic pre-estimation of the

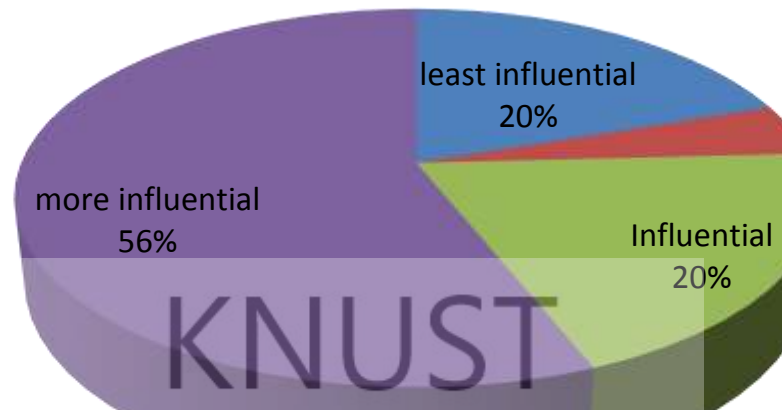


Figure 4.7: The influence of realistic pre-estimate of loss on the Unenforceability of LDs in road construction contract.

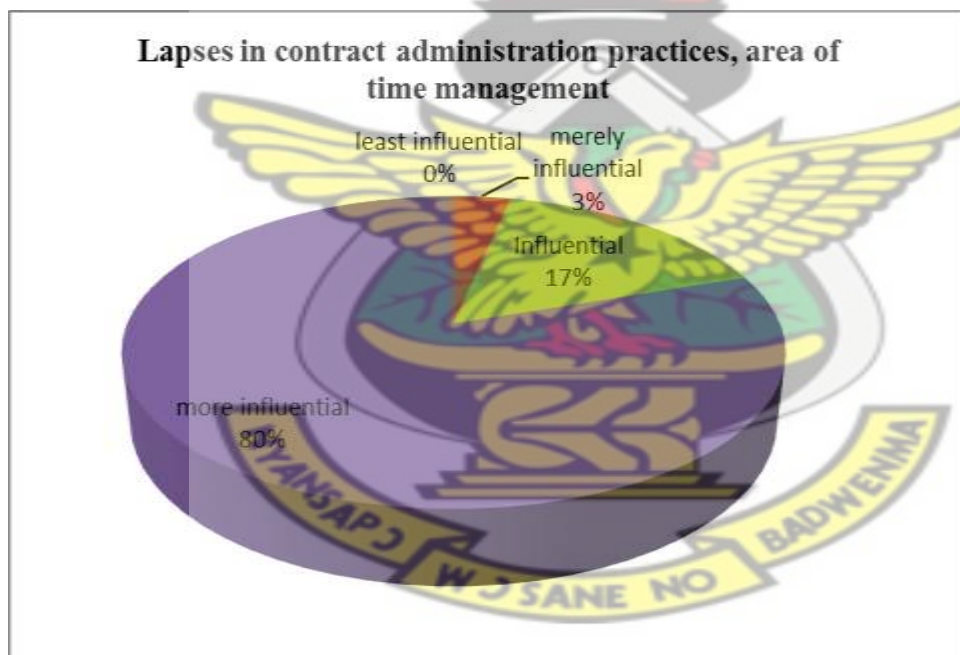


Figure 4.8: Influence of Time Management on Unenforceability of LDs in road construction contract.

4.8 Measures Required to Enhance the Enforceability of LDs.

This section of the questionnaire tries to find out recommendations that would address the issue of LD enforcement and the literature came out with a set of recommendations that would in addressing the issue of enforcement of LDs or LADs, as such the respondents were asked to rank the recommendations from; Highly un-recommended, Un-recommended, Neutral, Recommended, and Highly recommended and figures 4.9 shows how respondents responded to the recommendations.

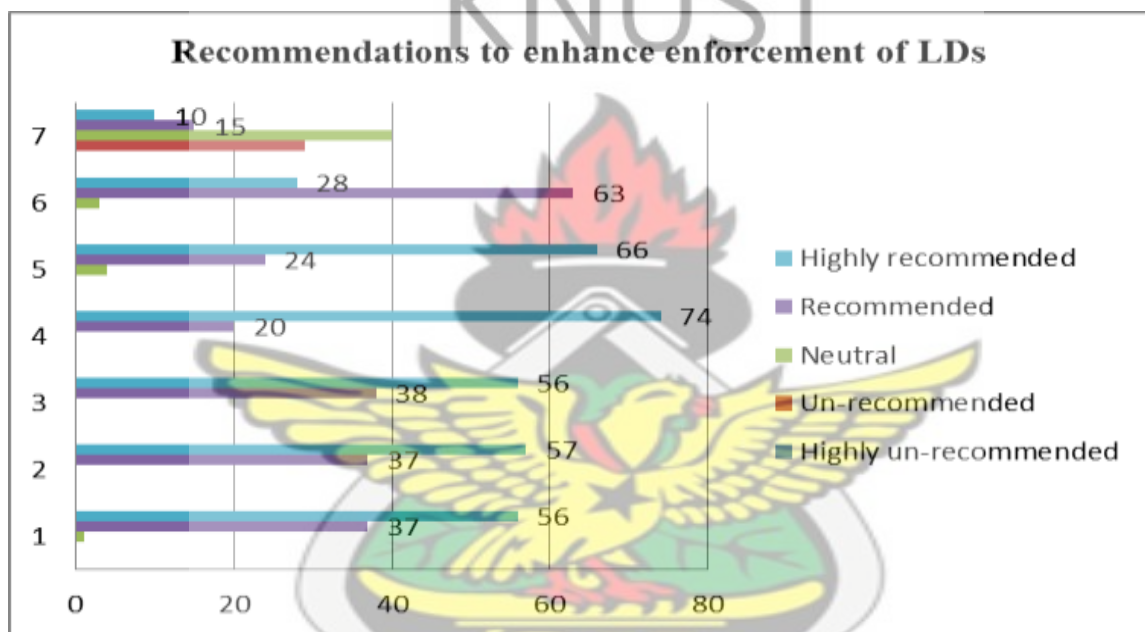


Figure 4.9: Recommendations to enhance enforcement of LDs in road construction contract.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This study entailed investigation into the Restrictions in the enforcement of liquidated damages (LDs) in road construction contract, the case of Upper East and Upper West Regions of Ghana. The objectives of the study were spelt out in Chapter 1 of this report. Extensive literature research, both within Ghana and abroad. It was found that this area (road construction) of study has not enjoyed extensive research, especially in Ghana. A similar study had been undertaken in Ghana but under construction under pink form conditions of contract. This proved useful in the formulation of the research methodology. It was also found that the client has a duty to mitigate his losses and cannot sit back and watch while the losses accumulate. The literature research also showed that enforcement of the LD clause could therefore be another way of mitigating the potential loss in subsequent contracts.

The achievement of the aim was made possible through the progressive resolution of each of the three objectives. The relevant data were collected from road construction industry professionals who handle public road construction contracts in the two regions (Upper East and Upper West). Data were then analysed through descriptive statistical procedures and then interpreted.

Findings were made for each of the three objectives. The findings and recommendations can be summarised as shown below.

5.2 Summary of Findings and Recommendation

There is the need for legislation such as Conventional Penalties Act. This legislation would provide the legal framework upon which penalties for non-enforcement of LDs can be formulated and enforced. The content of the legislation will make provisions for the avoidance of contractors finding much sympathy with clients organisations in the enforcement of LDs that are due clients. This should serve as a major encouragement to clients' organisations that are eager to enforce the LD provisions, since there are no such legislations.

There is general agreement amongst the parties that the enforcement of LDs would enhance the effectiveness of road construction and that is what clients want. The clients' sympathy is not good enough a reason for lack of enforcement of LDs clause.

The study also showed that there is a need to re-look at the methods used to determine the LD quantum, and that there needs to be a relationship between the LD and the likely prejudice. The literature research could not yield any scientific method that takes into account the main factors that should be used. In the RCI in Ghana clients organisations tend to consider a factor of the contract value. This appears to be an "easy way out" approach because the value of the contract normally bears no relationship to the prejudice that the client will later suffer not even to talk of the economic factors of the road, the source of funding and the interest rate on capital invested appears to be an also be looked at. Even worse, the LD clause has been found not to even compensate the client in the event of late completion.

The objectives of the study have been achieved. The benefits of the proper assessment and enforcement of LD provisions cannot be over-emphasised. However, because of the method used to obtain the samples for this study for upper east and west regions of Ghana, i.e. purposive sampling, the findings of this study can be generalised as reflection of what

happens in the RCI in the country. It is believed that this study will provide the necessary basis for a more intense study on one or more elements of the recommendations.

5.3 Conclusions

Liquidated Damages are unable to be enforced due to situations created by clients / client's organisations, in particular the issue of delayed payments. There are clauses that support contractors to claim for interest on delayed payment, client's organisation feel reluctant in claiming LD as such has become ineffective in their traditional role of protecting the clients / client's organisations from inexcusable delays by contractors since clients / client's organisations are reluctant to deducting the LD when they are due on the bases of impartiality or compassionate. LDs can be successfully enforced if clients / client's organisations become more diligent in their procurement, contractual, financial obligations. There is the need to have modalities for deductions of LD by Clients / client's organisations and for them to make every effort to enforce LD provisions. A more scientific / workable method also needs to be developed to determine the quantum of the LD, in line with the likely prejudice. The GhIS, GhIE, the Ministry Roads and Highways and road Construction Contractors Associations like ASROC, PROCA, should be tasked with the development of such a method.

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APPENDICES

APPENDIX A: SAMPLE SURVEY QUESTIONNAIRE FOR CONTRACTORS

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF BUILDING TECHNOLOGY

MSc. PROCUREMENT MANAGEMENT

QUESTIONNAIRE FOR: CONTRACTORS

Topic:

Restrictions of the Enforcements of Liquidated Damages in Road Construction, the case of Upper East and Upper West Regions of Ghana.

Introduction:

The Conditions of Contracts are very important so much that any breach of it may result to losses. There are contracting parties that have suffered in one way or the other through misapplication of Liquidated Damage Clause, what is clear is that only those provisions that reflect a genuine pre-estimate of damages to be suffered by the owner on breach by the contractor are enforceable. This may lead to loss of capital as well as loss of capital recovery to the client. The contractor may also be faced with the difficulty of maintaining workforce, repaying of bank loans and collateral and others. In this light, it will be necessary to find out the reasons behind enforceability of the liquidated damages in road construction in the Upper East and Upper West Regions of Ghana.

Objectives of the Study

The objectives of the study are as follows;

- (i) To identify the level of understanding of LDs in road construction contract.
- (ii) To identify the restrictions to the enforcement of LDs for road construction contract.
- (iii) To determine the measures required to enhance the efficient enforcement of LDs.

Student : Mr. Adu-Amoako, Kingsley (0208842749)
Supervisor : Dr. Gabriel Nani of KNUST
Internal Examiner : Dr. T. Adjei-Kumi of KNUST

NB: Please the research is conducting for academic purposes, your assistance in answering the questions set out below would be very much welcome and all information would be handled with maximum confidentiality.

Thank you.

SECTION I: GENERAL PARTICULARS OF RESPONDENTS

Agency / Organisation / Name of the Firm

.....

Address

.....

*Please, tick one **box**; fill in the blank space if you select others (where **applicable**).*

1. Which of the following profession do you belong?

☐ Civil Engineer

☐ Construction Manager

☐ Quantity Surveyor

☐ Procurement Manager

☐ Project Manager

☐ Managing Director

☐ Others (*Please Specify*).....

2. What is your highest educational qualification

☐ CTC / HND

☐ BSc

☐ MSc

☐ PhD

☐ Others (*Please Specify*).....

3. Is your firm a Road construction firm?

☐ Yes

☐ No

☐ No idea

4. Which of the following classification of Ministry of Roads and Highways class is your firm working with?

☐ A1B1 – A2B2

☐ A3B3 – A4BA

☐ Other (Please specify)

☐ No Idea

5. How long have you worked in the road construction industry?

☐ 0 – 5 Years

☐ 6 – 10 Years

☐ 11 – 15 Years

☐ 16 – 20 Years

☐ 21 – and above

6. How long have you worked in your present / current organisation / firm?

☐ 0 – 5 Years

☐ 6 – 10 Years

☐ 11 – 15 Years

☐ 16 – 20 Years

☐ 21 – and above

SECTION II: GENERAL ASPECTS OF PENALTIES / LDs

7. What type of Conditions of Contract do you use?

☐ Standard Conditions of Contract under the Act 663

☐ FIDIC

☐ ICE

☐ ICemhE

☐ Others (*Please specify*).....

8. LD is a clause basically serves to protect the interest of the Client in question in terms of losses to be incurred if a contractor fails to deliver on time as agreed upon in the construction contract.

Please, in your opinion how true and important is the above statement? (Please tick one)

	Very important	Just important	Fairly important	Not important	Others	No idea
Strongly true						
True						
Partially true						
Not true						
Others						
No idea						

Others (*Please specify*).....

9. Is there provision for Liquidated Damages in the contracts you normally undertakes and is it necessary? (*Please tick one*)

	Is there Provision of LD in the contracts you undertake?
--	--

Is it Necessary?	Yes	No	Others	No idea
Yes				
No				
Others				
No idea				

☐ Others (*Please specify*).....

10. If yes, what is the range?

☐ 0% - 0.04% of the project cost per day

☐ 0.05% - 0.08% of the project cost per day

☐ 0.09% - 0.20% of the project cost per day

☐ Others (*Please specify*).....

11. Is there Extension of Time (EOT) clause provisions in road construction contract?

☐ Yes

☐ No

12. A contractor is under a strict duty to complete on time except to the extent that he is prevented from doing so by the employer or is given relief by the express provisions of the contract.

Please to what extent do you agree to the above statement?

☐ Strongly agree

☐ Agree

☐ Quite agree

☐ Disagree

- ☐ Others (Please specify).....
13. What happens when the said delay is due to the client?
- ☐ Entitle to Extension of Time
- ☐ Free from LDs Clause
- ☐ No action is taking
- ☐ No ideal
- ☐ Others (Please specify).....
14. Who granted the Extension of Time in road construction contract?
- ☐ Court
- ☐ Clients
- ☐ Project Manager
- ☐ Others (Please specify).....
- ☐ No ideal
15. What happens when there is no anticipated completion date?
- ☐ It makes enforcement of LD Clause difficult to implement
- ☐ In event of delay, it is difficult to know the party who breached
- ☐ There is no delay
- ☐ Others (Please specify).....
- ☐ No ideal

SECTION III: THE LEVEL OF ENFORCEMENT OF LD CLAUSE

16. How many road projects have your firm won over the past five (5) years?
- ☐ 1 - 5 Projects
- ☐ 6 - 10 Projects
- ☐ 11 - 15 Projects

- ☐ 16 - 20 Projects
- ☐ Other action (*Please state*).....
17. What many of the projects where completed beyond the anticipated completion date?
- ☐ None of the projects
- ☐ 1 - 5 of the projects
- ☐ 6 - 10 of the projects
- ☐ 11 - 15 of the projects
- ☐ 16 - 20 of the projects
- ☐ 21 - and more
18. What action was taken by the client/consultant to the project with regards to the delay caused by your firm?
- ☐ No action taken
- ☐ Validation of delay by granting extension
- ☐ Application of the Liquidated Damages Clause in the Contract document
- ☐ Determination/Termination of the contract
- ☐ Other action (*Please state*).....
19. And why that action. (*Please state*)
20. All clients want a project to be completed successfully that is on time, within budget and according to specification,

Please to what extent do you agree to the above statement?

- ☐ Strongly agree
- ☐ Agree
- ☐ Quite agree
- ☐ Disagree

21. The enforcement of LD clause in road construction is problematic since parties are generally reluctant to seek redress in court on the issue of delay payment.

Please to what extent do you agree to the above statement?

☐ Strongly agree

☐ Agree

☐ Quite agree

☐ Disagree

22. Which of the following test of LD is easy to satisfy;

(Please rank them using the scale from; 1- Most easy, 2- Easy, 3- Fairly easy and 4- Not easy)

No	Statement	1	2	3	4
1	The parties must intend to liquidate (i.e., stipulate to the amount) the damages in advance.				
2	The damages anticipated as a result of the contract breach (such as a contractor's delay) must be uncertain in amount or difficult to prove.				
3	The amount stipulated must be reasonable, that is to say, not greatly disproportionate to the anticipated loss or injury (Estimates)				
4	Other, (Please specify).....				

23. Which of the following factors prevent the application of Liquidated Damages:

(Please rank them using the scale from; 1-least affected, 2-Merly affected, 3-Affected and 4-More affected)

No	Statement	Ranking
1	LD are generally overlooked or ignored in by sympathetic	

	clients	
2	Introduction of Fluctuation Clause in Contracts	
3	Inability of contractor to study the contract documents very well before signing	
4	Sum being a penalty	
5	None payment of contractors on time	
6	Other, <i>(Please specify)</i>	

24. As an alternative to Liquidated Damages, what would you recommend for parties to a contract in the event of delays?

(Please rank them using the scale from; 1-Least recommended, 2- Merely recommended, 3- recommended, 4 – More recommended)

No	Statement	Ranking
1	No action taken	
2	Grant of extension by client or consultant	
3	Insurance against losses	
4	Determination/Termination of contract and awarding it to a new contractor	
5	Suing the contractor for the damages suffered	
6	Liquidated and Ascertained Damages	
7	Bonus clause for early completion	
8	Other, <i>(Please specify)</i>	

25. How would liquidated damages clauses in road construction contracts impact on road construction in Ghana?

(Please rank them using the scale from; 1-Not at all, 2- Slightly, 3- Moderately, 4- Very and 5- Extremely).

No.	Statement	1	2	3	4	5
1	Promote timely project completion					
2	Reduce rampant unapproved delays of projects					
3	Improve project performance with respect to time					
4	Lead to intimidation and apprehension of road contractors prior to entering into contract agreements					
5	Reading and understanding contract conditions before signing					
6	Other					

26. Other possible impact(s): Please State

27. How is the following contract management principle concerning LDs is practiced in road construction contracts by your project manager?

No	Statements	Yes	No
1	Inclusion of LD clause in road construction contracts		
2	Issue of non-completion certificate to the contractor when there is delay due to the contractor		
3	Deductions of LDs when there is delay by the contractor		

4	Granting of Extension of Time to contractors when there is a delay due to client.		
5	If LDs were deducted, and an EOT is granted subsequently, the LDs must be repaid to the extent of the EOT, within a reasonable time		
6	Other		

28. Rank the following situations by clients, which render LDs unenforceable. *(Please rank them using the scale from; 1-Least influential, 2- Merely influential, 3-Influential, 4 – More influential)*

No	Situations	1	2	3	4
1	None Payment of contractors for certified work on time				
2	Undetailed work study at the initial stage				
3	LD amount not genuine pre-estimate of the loss				
4	Lapses in contract administration practices				
5	Other				

SECTION IV: RECOMMENDATION / MEASURES OF THE ENFORCEMENT OF LDs

29. Kindly rank the following recommendations which would help address issues concerning LDs

No	RECOMMENDED SOLUTIONS	1	2	3	4	5
----	-----------------------	---	---	---	---	---

1	Enactment and enforcement of National Legislation / law on compulsory inclusion and application of Liquidated Damages clause.					
2	Enactment and enforcement of National Legislation on limits to Liquidated Damages amounts for road construction contracts					
3	Enforcement of MRH adding as part of requirements for registration of all contractors the provision of a Contracts Professional during project implementation					
4	Compulsory periodic Contract Documentation and Interpretation Training requirement for Management Personnel in all Contractors					
5	Formulation of standard procedure for the application of Liquidated Damages clauses in Construction contracts inclusion in Act 663					
6	Arriving at a lump sum value payable by Contractors in case of project delays					
7	Quotation of percentage of contract value payable periodically by Contractors in case of project delays					
8	Other(s).....					

(Please rank them using the scale from; 1-Highly Un-recommended, 2- Un-Recommended, 3- Neutral, 4- Recommended & 5- Highly Recommended)

**APPENDIX B: SAMPLE SURVEY QUESTIONNAIRE FOR SUPERVISING
AGENCIES / CONSULTANTS**

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF BUILDING TECHNOLOGY

MSc. PROCUREMENT MANAGEMENT

QUESTIONNAIRE FOR: SUPERVISING AGENCIES / CONSULTANTS

Topic:

Restrictions of the Enforcements of Liquidated Damages in Road Construction, the case of Upper East and Upper West Regions of Ghana.

Introduction:

The Conditions of Contracts are very important so much that any breach of it may result to losses. There are contracting parties that have suffered in one way or the other through misapplication of Liquidated Damage Clause, what is clear is that only those provisions that reflect a genuine pre-estimate of damages to be suffered by the owner on breach by the contractor are enforceable. This may lead to loss of capital as well as loss of capital recovery to the client. The contractor may also be faced with the difficulty of maintaining workforce, repaying of bank loans and collateral and others. In this light, it will be necessary to find out the reasons behind enforceability of the liquidated damages in road construction in the Upper East and Upper West Regions of Ghana.

Objectives of the Study

The objectives of the study are as follows;

- (i) To identify the level of understanding of LDs in road construction contract.
- (ii) To identify the restrictions to the enforcement of LDs for road construction contract.
- (iii) To determine the measures required to enhance the efficient enforcement of LDs.

Student : Mr. Adu-Amoako, Kingsley (0208842749)

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Internal Examiner : Dr. T. Adjei-Kumi of KNUST

NB: Please the research is conducting for academic purposes, your assistance in answering the questions set out below would be very much welcome and all information would be handled with maximum confidentiality.

Thank you.

SECTION I: GENERAL PARTICULARS OF RESPONDENTS

Agency / Organisation / Name of the Firm

.....

Address

.....

NB: Please, tick one box; fill in the blank space if you select others (where applicable).

1. Which of the following profession do you belong?

☐ Civil Engineer

☐ Construction Manager

☐ Quantity Surveyor

☐ Procurement Manager

☐ Others (Please Specify).....

2. What is your highest educational qualification

☐ CTC / HND

☐ BSc

☐ MSc

☐ PhD

☐ Others (Please Specify).....

3. How long have you worked in the road construction industry?
- ☐ 0 – 5 Years
- ☐ 6 – 10 Years
- ☐ 11 – 15 Years
- ☐ 16 – 20 Years
- ☐ 21 – and above
4. How long have you worked in your present / current organisation / firm?
- ☐ 0 – 5 Years
- ☐ 6 – 10 Years
- ☐ 11 – 15 Years
- ☐ 16 – 20 Years
- ☐ 21 – and above

SECTION II: GENERAL ASPECTS OF PENALTIES / LDs

5. What type of Conditions of Contract have you been using?
- ☐ Standard Conditions of Contract under the Act 663
- ☐ FIDIC
- ☐ ICE
- ☐ ICemhE
- ☐ Others (*Please specify*).....
6. LD is a clause basically serves to protect the interest of the Client in question in terms of losses to be incurred if a contractor fails to deliver on time as agreed upon in the construction contract.
- Please, in your opinion how true and important is the above statement? (Please tick one)*

	Very important	Just important	Fairly important	Not important	Others	No idea
Strongly true						
True						
Partially true						
Not true						
Others						
No idea						

Others (*Please specify*).....

7. Is there provision for Liquidated Damages in the contracts you normally undertakes and is it necessary? (*Please tick one*)

Is it Necessary?	Is there Provision of LD in the contracts you undertake?			
	Yes	No	Others	No idea
Yes				
No				
Others				
No idea				

[] Others (*Please specify*).....

8. If yes, what is the range?

[] 0% - 0.04% of the project cost per day

[] 0.05% - 0.08% of the project cost per day

[] 0.09% - 0.20% of the project cost per day

[] Others (*Please specify*).....

9. Is there Extension of Time (EOT) clause provisions in road construction contract?
- ☐ Yes
- ☐ No
10. A contractor is under a strict duty to complete on time except to the extent that he is prevented from doing so by the employer or is given relief by the express provisions of the contract.
- Please to what extent do you agree to the above statement?
- ☐ Strongly agree
- ☐ Agree
- ☐ Quite agree
- ☐ Disagree
- ☐ Others (Please specify).....
11. What happens when the said delay is due to the client?
- ☐ Entitle to Extension of Time
- ☐ Free from LDs Clause
- ☐ No action is taking
- ☐ No ideal
- ☐ Others (Please specify).....
12. Who granted the Extension of Time in road construction contract?
- ☐ Court
- ☐ Clients
- ☐ Project Manager
- ☐ Others (Please specify).....
- ☐ No ideal

13. What happens when there is no anticipated completion date?
- ☐ It makes enforcement of LD Clause difficult to implement
 - ☐ In event of delay, it is difficult to know the party who breached
 - ☐ There is no delay
 - ☐ Others (Please specify).....
 - ☐ No ideal

SECTION III: EXTENT OF ENFORCEMENT OF LD CLAUSE

14. How many projects have your agency supervised over the past five (5) years?
- ☐ 0 - 20 Projects
 - ☐ 21 - 40 Projects
 - ☐ 41 - 60 Projects
 - ☐ 61 - 81 Projects
 - ☐ Other action (*Please state*).....
15. What percentage of the projects were completed beyond the anticipated completion date?
- ☐ 0% - 5% of the projects
 - ☐ 6% - 10% of the projects
 - ☐ 11% - 15% of the projects
 - ☐ 16% - 20% of the projects
 - ☐ 21% - and more
16. What action was taken by the client/consultant to the project with regards to the delay?
- ☐ No action taken
 - ☐ Validation of delay by granting extension

☐ Application of the Liquidated Damages Clause in the Contract document

☐ Determination/Termination of the contract

☐ Other action (Please state).....

17. And why that action. (*Please state*)

18. The enforcement of LD clause in road construction is problematic since parties are generally reluctant to seek redress in court on the issue of delay payment.

Please to what extent do you agree to the above statement?

☐ Strongly agree

☐ Agree

☐ Quite agree

☐ Disagree

19. Which of the following test of LD is easy to satisfy;

(*Please rank them using the scale from; 1- Most easy, 2- Easy, 3- Fairly easy and 4- Not easy*)

No	Statement	1	2	3	4
1	The parties must intend to liquidate (i.e., stipulate to the amount) the damages in advance.				
2	The damages anticipated as a result of the contract breach (such as a contractor's delay) must be uncertain in amount or difficult to prove.				
3	The amount stipulated must be reasonable, that is to say, not greatly disproportionate to the anticipated loss or injury (Estimates)				
4	Other, (<i>Please specify</i>)				

20. Which of the following factors prevent the application of Liquidated Damages:

(Please rank using the scale from; 1-least affected, 2-Merely affected, 3-Affected and 4 – More affected)

No	Statement	Ranking
1	LD are generally overlooked or ignored in by sympathetic clients	
2	Introduction of Fluctuation Clause in Contracts	
3	Inability of clients to study the contract documents very well	
4	Sum being a penalty	
5	None payment of contractors on time	
6	Other, <i>(Please specify)</i>	

21. As an alternative to Liquidated Damages, what would you recommend for parties to a road contract in the event of delays? *(Please rank them using the scale from; 1-Least recommended, 2- Merely recommended, 3- recommended, 4 – More recommended)*

No	Statement	Ranking
1	No action taken	
2	Grant of extension by client or consultant	
3	Insurance against losses	
4	Determination/Termination of contract and awarding it to a new contractor	
5	Suing the contractor for the damages suffered	
6	Liquidated and Ascertained Damages	
7	Bonus clause for early completion	
8	Other, <i>(Please specify)</i>	

22. How would the application of liquidated damages clauses in road construction contracts impact on road construction in Ghana? *(Please rank them using the scale from; 1-Not at all, 2- Slightly, 3- Moderately, 4- Very and 5- Extremely).*

No.	Statement	1	2	3	4	5
1	Promote timely project completion					
2	Reduce rampant unapproved delays of projects					
3	Improve project performance with respect to time					
4	Lead to intimidation and apprehension of road contractors prior to entering into contract agreements					
5	Reading and understanding of contract conditions before signing					
6	Other					

23. Other possible impact(s): Please State

24. How the following contract management principle is practiced in road construction contracts by your organisation?

No	Statements	Yes	No
1	Inclusion of LD clause in road construction contracts		
2	Issue of non-completion certificate to the contractor when there is delay due to the contractor		
3	Deductions of LDs when there is delay by the contractor		

4	Granting of Extension of Time to contractors when there is a delay due to client.		
5	If LDs were deducted, and an EOT is granted subsequently, the LDs must be repaid to the extent of the EOT, within a reasonable time		
6	Other		

25. Rank the following situations by clients, which render LDs unenforceable. (*Please rank them using the scale from; 1-Least influential, 2- Merely influential, 3-Influential, 4 – More influential*)

No	Situations	1	2	3	4
1	None Payment of contractors for certified work				
2	Undetailed work study at the initial stage				
3	LD amount not genuine pre-estimate of the loss				
4	Lapses in contract administration practices				
5	Other				

SECTION IV: RECOMMENDATION / MEASURES OF THE ENFORCEMENT OF

LDs

26. Kindly rank the following recommendations which would help address issues concerning LDs.

(Please rank them using the scale from; 1-Highly Un-recommended, 2- Un-Recommended, 3- Neutral, 4- Recommended & 5- Highly Recommended)

No	RECOMMENDED SOLUTIONS	1	2	3	4	5
1	Enactment and enforcement of National Legislation / law on compulsory inclusion and application of Liquidated Damages clause.					
2	Enactment and enforcement of National Legislation on limits to Liquidated Damages amounts for road construction contracts					
3	Enforcement of MRH adding as part of requirements for registration of all contractors the provision of a Contracts Professional during project implementation					
4	Compulsory periodic Contract Documentation and Interpretation Training requirement for Management Personnel in all Contractors					
5	Formulation of standard procedure for the application of Liquidated Damages clauses in Construction contracts inclusion in Act 663					
6	Arriving at a lump sum value payable by Contractors in case of project delays					
7	Quotation of percentage of contract value payable periodically by Contractors in case of project delays					
8	Other(s).....					

APPENDIX C

Recommended Daily Penalty

Original Contract Amount (\$)	LAD per day (\$)
0-25,000	42.00
25,000-50,000	70.00
50,000-100,000	105.00
100,000-500,000	140.00
500,000-1,000,000	210.00
1,000,000-2,000,000	280.00
2,000,000	420.00

Source: Tyler (1994):



APPENDIX D

MRT/PRO

MINISTRY OF ROADS AND TRANSPORT
GUIDELINES FOR THE CLASSIFICATION OF CONTRACTORS FOR
ROAD AND BRIDGE WORKS

CLASSIFICATION TABLE FOR ROAD CONTRACTORS BY CATEGORY AND CLASS

CLASS	CATEGORY A ROADS AIRPORTS & RELATED STRUCTURES	CATEGORY B BRIDGES, CULVERTS & OTHER STRUCTURES	CATEGORY C LABOUR BASED ROADWORKS	CATEGORY D STEEL BRIDGES AND STRUCTURES; CONSTRUCTION, REHABILITATION AND MAINTENANCE
4	Spot improvement and reshaping, 80km and regraveling, 20km a. Tender figure up to cedi equivalent of US\$250,000 b. Total value of work on hand up to cedi equivalent of US\$400,000	Pipe culverts up to 1.2m diameters and non-reinforced concrete structures, drains 0.5km a. Tender figure up to cedi equivalent of US\$100,000 b. Total value of work on hand up to cedi equivalent of US\$150,000		This Class not applicable
3	Work in Class 4 plus resealing up to 20km and resurfacing up to 10km a. Tender figure up to cedi equivalent of US\$650,000 b. Total value of work on hand up to cedi equivalent of US\$1,000,000	Work in Class 4 plus single box culverts and other minor reinforced concrete structures including short retaining walls a. Tender figure up to cedi equivalent of US\$250,000 b. Total value of work on hand up to cedi equivalent of US\$400,000	ROAD CONSTRUCTION MAINTENANCE AND SPOT IMPROVEMENT USING LABOUR BASED METHODS AS TRAINED BY THE DEPARTMENT OF FEEDER ROADS	Sand blasting, cleaning, jacking, changing of members and parts, tightening of bolts and nuts, other repairs including painting. a. Tender figure up to cedi equivalent of US\$250,000 b. Total value of work on hand up to cedi equivalent of US\$400,000
2	Work in Class 3 plus improvements, rehabilitation and minor construction works a. Tender figure up to cedi equivalent of US\$1,250,000 b. Total value of work on hand up to cedi equivalent of US\$2,000,000	Work in Class 3 plus major box culverts on bridges and reinforced concrete, steel or composite reinforced structures a. Tender figure up to cedi equivalent of US\$500,000 b. Total value of work on hand up to cedi equivalent of US\$750,000		Work in Class 3 plus minor construction a. Tender figure up to cedi equivalent of US\$500,000 b. Total value of work on hand up to cedi equivalent of US\$750,000
1	Work in Class 2 plus major construction of roads and airports No limit on tender.	Work in Class 2 plus bridges and other major structures No limit on tender.		Work in Class 2 plus major steel construction No limit on tender.

GUIDELINES FOR CLASSIFICATION OF CONTRACTORS FOR ROAD AND BRIDGE WORKS, 2004 – MINISTRY OF ROADS AND TRANSPORT, GHANA.