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**FACTORS INFLUENCING THE COST OF TENDERING FOR
WORK BY CONTRACTORS IN GHANA**

BY

**A Dissertation Presented to the Department of Building Technology,
in Partial Fulfillment of the Requirement for the Master of Science
Degree in the Construction Management Programme**

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DECLARATION

This work or any part thereof has not previously been submitted in any form to the University or to any other body whether for the purpose of assessment, publication or for any other purpose. Put aside any expression, acknowledgements, reference and/or bibliographies cited in the work, I confirm that the intellectual content of this work is the result of my own efforts and no other person.

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ABSTRACT

Throughout the world tendering in the construction industry tendering is acknowledged to be complicated, adding considerable cost to construction. Efforts to understand the cost of tendering are confounded by issues that are both visible and invisible to formal accounting of the construction process. Even in those cases where there are genuine intentions to capture costs of tendering there is a failure to do so. While there is currently awareness of the cost of tendering and that effort should be taken to minimise this cost, there is little precise understanding of it in terms of value or how it happens. This research was conducted with the aim of investigating factors that influence the cost of tendering incurred by construction companies through selective competitive tendering method in Ghana. The objectives of the study were to identify significant factors that influence the cost of tendering for construction works in Ghana and identify appropriate strategies to address these factors. A survey approach using questionnaire was adopted for the study. Data from the survey was largely analyzed using descriptive statistics. Fifty-four questionnaires were distributed to contractors, quantity surveyor, architect, engineers and project managers. Fortythree were retrieved. Three out of the forty-three were found to be too badly completed to be useful for the analysis and were therefore discarded. This brought the responses effectively to forty, representing a response rate of 74%. The study confirmed „bid security“, „Tax clearance certificate“, „auditor“s report“, „SSNIT clearance certificate“, „quality of tendering and bidding documents“, inability to quickly and reliably assess the birds“, „labour certificate“, „source of funding“ and „price of tender document“ as the most significant factors that influence cost of tendering.

Findings from the study points to „implementation of an e-GP system“, „blacklisting of non-performing contractors“ and „early notification to non-responsive tenderers; as the most significant strategies which should be adopted to address these factors. The study also provides the much needed insight into the problem and makes recommendations to include in the tendering processes to reduce their cost. It is also recommended that contractors should be mindful of the cost associated with tendering in the Ghanaian construction industry in their decision making process concerning whether to tender or not to tender for a project. For this reason especially, it is concluded that tendering and associated costs need to be understood in greater detail. It is recommended that further studies should be carried out to extend the scope to solicit the views of other contracting firms and co-operate bodies responsible for tendering in the country. This will give a much wider perspective of the issue and how to address it.

Keywords: Tendering, Cost of tendering, Tendering process.

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DEDICATION

This project is dedicated to my wife Mrs. Eva Sam, my son Stanley K. T. Sam, my mother Madam Janet Amoakoh, my sisters Eva Sam, Hannah Sam and niece Rosemary Ofori.



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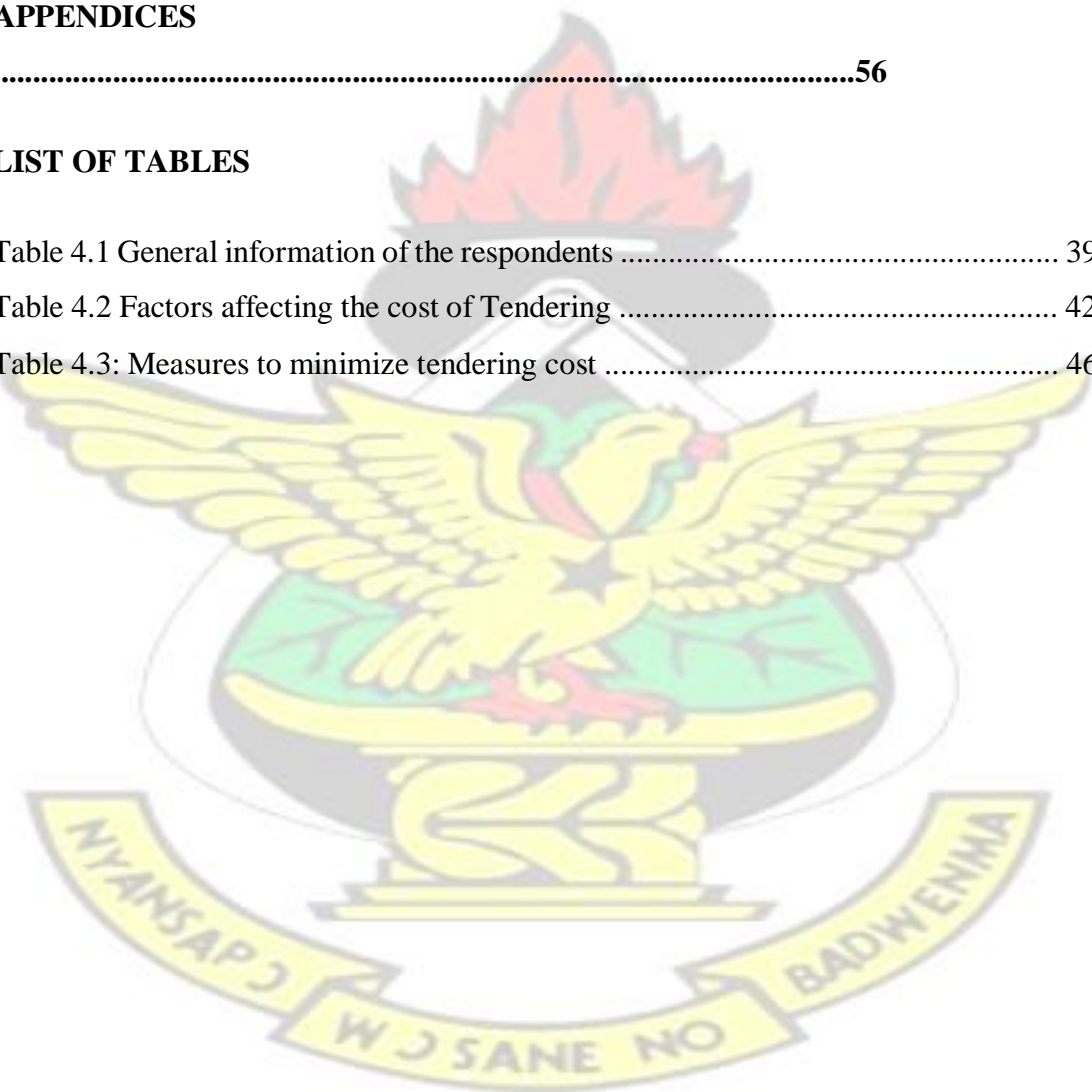
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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The construction industry has a great impact on the economy of all countries and it is one of the sectors that provide essential or crucial ingredients for the development of any economy (Anaman and Osei-Amponsah, 2007). It is a vital element of the economy and has a significant effect on the efficiency and productivity of other sectors (Danso, 2010). One cannot think of widespread investment in education, manufacturing, agriculture or service sectors unless the results of construction infrastructure facilities are in place (Dalrymple et al., 2006). It is in this regard that clients take on projects for targeted objectives. Essential to these objectives is the attainment of value for money (i.e. time, cost, quality and safety). More prominently, to obtain value for money, it is the public client who must be answerable and accountable for the tax payers' money. For construction projects, clients undergo a procurement process to select a consultant and contractor to carry out the construction work using predetermined selection variables.

Throughout the world construction industry tendering is acknowledged to be complicated, adding considerable cost to construction (Dalrymple et al., 2006). Consultants and Contractors selection are two of the main activities and decisions made by the Client for any project. Without a proper and accurate method for selecting the most appropriate personnel, the performance of the project will be affected (Cheng and Heng, 2004) thereby denying the client value for money. In order to ensure that the project can be completed successfully, the client must select the most appropriate contractor through tendering. In Ghana, the Public Procurement Act (ACT 663, 2003)

was enacted in 2003 with one objective of providing the best value for money to secure judicious, economic and efficient use of state resources

(ACT 663, 2003). The act provided for public procurement, establish the Public Procurement Authority, make administrative and institutional arrangements for procurement, stipulate tendering procedures and provide for purposes connected with these (ACT 663, 2003). Nevertheless, the Act has not taken into account the costs linked with participation in the tender processes due to the varied activities undertaken by Client/Consultants as well as Contractors and limitations of accounting categories expenses associated with tendering are therefore difficult to capture and quantify (Costantino et al., 2008). Procurement is complex and therefore requires that its complicated series of interactions be completed in a logical and pre-determined sequence (ACT 663, 2003). While in the private sector the client chooses the number of potential contractors to involve in an exchange, in the public sector the procedures to follow usually obliges the purchasing manager (consultant) to behave in a different way (Costantino et al., 2008). From the procurement law used in Ghana, the Public Administration has to consider all the bids belonging to all the bidders willing and able, to take part in the bidding process (ACT 663, 2003).

The main purpose of the law is to increase competitiveness among several bidders in order to reduce public spending, thereby avoiding monopolistic behaviors. Without a precise understanding of how contractors price a bid and take account of cost and risks in reality, it would be hard to conceptualize analytical models for approaching cost response in the way that it normally happens in practice. Clearly, cost assessment ought to have a serious influence on a contractor's pricing strategy (Dalrymple et al., 2006).

1.2 PROBLEM STATEMENT

Over the years, the Ghanaian construction industry has been engaged in competitive tendering. However, there is no scientific data or precise understanding of tendering in terms of cost or how it happens. This implies that clients/consultants and contractors or bidders are unaware of the cost of tendering for projects and its implications on the final contract sum (Dalrymple et al., 2006). Bidders only purchase tender document and focus on winning, and pay no attention to the cost incurred during the tendering process. Notwithstanding, estimators concern themselves with several approximate cost at the pre-contract and post- contract stage of construction process but no particular attention has been given to the cost incurred by the contractors at the earliest stage of all construction projects. This cost is usually incurred at the initial procuring stage for contractor to oversee the effective delivery of project.

Again, in circumstances where there are authentic intent to capture costs of tendering there is a failure to do so. It seems that implementation difficulties are so overwhelming that either people do not bother or management redirects effort from collecting data on the cost of tendering. It is also shown that the expense of tendering and uncertainty of outcomes lead tenderers to engage in concealed behaviour to reduce the uncertainty and cost associated with tendering (Dalrymple et al., 2006).

This study seeks to determine the factors that influence the cost of tendering for work by contractors in Ghana by defining the tendering process in the Ghanaian construction industry in terms of measurable components and collecting sufficient data to understand the costs incurred in each component (Dalrymple et al., 2006).

1.3 AIM

This study is aimed at investigating the factors that influence the cost of tendering incurred by contractors through selective competitive tendering method in Ghana.

1.4 SPECIFIC OBJECTIVES

The objectives of the study are;

1. To identify the significant factors that influence the cost of tendering for construction works in Ghana.
2. To identify appropriate strategies to minimise tendering costs.

1.5 RESEARCH QUESTIONS

1. What are the factors that influence cost when tendering for works?
2. What are the strategies or measures in place to mitigate those factors?

1.6 SCOPE

This study focused on Sixty-Two (62) contractors who are members of Association of Building and Civil Engineering Contractors of Ghana (ABCECG) Ashanti Region, construction professional bodies like the Ghana Institution of Surveyors, the academia and other relevant identified institutions and professionals in the Kumasi Metropolis. The choice of Kumasi Metropolis as the study area is due to the fact that Kumasi is the second largest and briskest commercial and industrial city of Ghana after Accra (the national capital) and also to reduce the financial burden of the researcher.

1.7 RESEARCH METHODOLOGY

The research employed a range of complementary research methods over three phases. In the preliminary phase, background information on significant factors that influence cost of tendering was gathered from literature. This helped in developing a theoretical

framework capturing the key issues relevant to the industry. This was followed by ended questionnaires developed to collect data from the fieldwork. The third phase of the research focused on analysis, using Statistical Package for Social Sciences (SPSS), which helped to collate and interrogate the large volume of data collected during the research. Relative Important Index (RII) was used to rank the variables to determine their importance. Findings will be expressed in figures, tables, charts, graph and the like, directed at developing a deeper understanding of cost associated with tendering.

1.8 JUSTIFICATION / SIGNIFICANCE

Apart from a study undertaken at the University of Reading on cost of tendering as referred to in Hughes et al (2001) by Dalrymple (2006), there appears to be little research into the subject matter. The Commonwealth of Australia (1994) conducted cost of tendering study that looked at the cost to tenderers of Department of Defence contracts (Dalrymple et al., 2006).

Clients are unacquainted with the cost implications of tendering process and its effect on the successful delivery of the propose project. Tender document are prepared with the hope that contractors will purchase, submit and focus on winning but not much attention to the cost incurred during the tendering process is considered as a factor contributing to the quantum of funds spent on a project.

The purpose of this study is to identify the factors that influence cost when tendering for works in the Ghanaian construction industry in terms of measurable components and collecting sufficient data to understand the costs incurred in each component.

The cost of tendering would inform clients and other stakeholders to develop measures to reduce those high spending. It would also create more awareness to contractors and consultants on cost incurred during tendering.

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CHAPTER TWO LITERATURE REVIEW

2.1 INTRODUCTION

This chapter of the research work explores the tendering process and where costs occur in that process. By doing so, understanding of the cost of tendering for any project becomes a matter of overlaying such an occurrences on the project plan and extracting understanding of where costs can be expected to occur and their magnitude. Because of the diverse activities undertaken by contractors and limitations of some accounting systems to report, expenses associated with tendering are difficult to capture and quantify. The costs of procurement are transaction costs which are separate from the direct costs of a project (Hillebrandt & Hughes, 2000).

According to Dalrymple et al. (2006), even in those cases where there are genuine intentions to capture costs of tendering there is a failure to do so. It appears that implementation difficulties are so insurmountable that either people do not bother or management redirects effort from collecting data on the cost of tendering. It is also shown that the expense of tendering and uncertainty of outcomes lead tenderers to engage in concealed behaviour to reduce the uncertainty and cost associated with tendering. For this reason especially, it is suggested that tendering and associated costs need to be understood in greater detail.

Apart from some study undertaken at the University of Reading (Hughes et al., 2001) as cited by Dalrymple et al, (2006), there appears to be little research into the cost of tendering hence the factors that influence them. The Commonwealth of Australia (1994) conducted a cost of tendering study that looked at the cost to tenderers of Department of Defence Contracts (Dalrymple et al., 2006). The survey is not conclusive about the costs of tendering, but does indicate some superficial supplier data and anecdotal opinions. Being a survey conducted by a market research company, it relied on the diligence of those providing answers to questions and assumed that they understood the questions and were qualified to provide meaningful responses. The survey does present some ideas about how to structure a more detailed inquiry.”

Clients have various strategies for tendering and selecting a suitable contractor, at a time appropriate to the circumstances, and to obtain from him at a proper time an acceptable tender or offer upon which a contract can be awarded (Hackett et al., 2007).

2.2 DEFINITION OF TENDERING

Tendering is defined by Brett (1997) as „the production and submission of a tender price for carrying out certain stated building works based on a study of the contract documents“. CIOB (2009) defined tendering as „the process of preparing and submitting for acceptance a conforming offer to carry out work for a price, thus converting the estimate to a bid.“

Tendering can also be described as a process by which a supplier, contractor or consultant is selected in an objective and transparent manner leading to the selection of the lowest evaluated responsive tenderer to carry out a particular assignment or an offer of money; the act by which one individual offers someone who is holding a claim or demand against him or her the amount of money that the offeror regards and admits is due, in order to satisfy the claim or demand, in the absence of any contingency or stipulation attached to the offer. ([http://legaldictionary. The freedictionary.com/tendering](http://legaldictionary.thefreedictionary.com/tendering)). Again, tendering or bidding can be defined as a common basis for selecting a contractor to execute a construction project. Although „negotiation“ can also be used to select a contractor, either on its own or in conjunction with competition, the prevalence of regulations on compulsory competitive tendering entails the wider use of bidding in construction works (Chinyio, 2011).

According to Connaughton (1994) and Hoxley (2000), tendering is a means to an end: usually a means for a contractor to win the right to deliver a construction project. However, tendering could also happen between the interface of contractor and subcontractor; contractor and supplier, client and consultant, etc. Notwithstanding these definitions, tendering can be defined as a process by which sealed bid or offer document submitted in response to a request for tenders and containing detailed information on requirements and terms associated with a potential contract. <http://www.businessdictionary.com/definition/tender.html#ixzz295E4P5Ge> visited 12/10/14.

The tender is treated as an offer to do the work for a certain amount of money (firm price), or a certain amount of profit (cost reimbursement or cost plus). The tender which is submitted by the competing firms is generally based on a bill of quantities, a bill of approximate quantities or other specifications which enable the tenders attain higher levels of accuracy, the statement of work. (http://en.wikipedia.org/wiki/Construction_bidding)

2.3 METHODS OF TENDERING

The four main methods of tendering in Ghana are: (Public Procurement Act. ACT 663, 2003)

- i. Open Competitive tendering (clause 35-37)
- ii. Restricted tendering (Clause 38 – 39) iii.
Single-source procurement (Clause 40- 41)
- iv. Request for quotations (Clause 42- 43)

2.3.1 Open competition tendering

In this method, tendering is open to all contractors who may be interested in the contract. When this approach is adopted many unknown organisations could tender which may pose a high risk to the client (Smith et al., 2006). This approach is generally used for public projects which allow a fair accountability of public funds to avoid possible accusations of favouritism. Open tendering can attract many tenders. This method of tendering seems to be fair as any contractor can submit a bid for the job. New contractors and those willing to expand in size or diversify into new sectors can find open tendering a useful avenue for achieving their objectives (Kwakye, 1994). Consequently the prices therein tend to be very competitive as each bidder would want to submit a lower price that is better than the other contenders.

The shortcoming of this method of tendering is that all bids have to be analyzed for technical and financial accuracy and this can be daunting. The significant amount of time and effort involved in this exercise is unnecessarily wasteful to the construction industry (Tang et al., 2003). Here the invitation to tender is usually placed in the newspapers and interested contractors who discover the advertisement participate in the tender. This is the most common method of tendering and does not require any prior approval from the Public Procurement Authority. In an open competitive tendering, „National Competitive Tendering“ (NCT) or „International Competitive Tendering“ (ICT) may be used. The ICT system is normally used for high value and complex procurement, particularly when the nature of procurement is such that it is unlikely to attract enough competition locally and the value is also above the threshold stated in Schedule 3 of Act 663. The NCT, on the other hand is applicable when the value of procurement is relatively low and the nature of procurement is unlikely to attract foreign competition. It is also suitable for goods, works and services whose values are within the thresholds stated in the Schedule 3 of the Act.

The most common tendering procedure for competitive tendering is the National Competitive Tendering.

2.3.2 Restricted/selective tendering

The Chartered Institute of Building (2009) defined selective tendering as *‘a method of selecting tenderers and obtaining tenders whereby a limited number of contractors are invited to tender. The tender list is made up of contractors who are considered suitable and able to carry out the work. This suitability is usually determined by pre- selection procedures’*.

Selective tendering involves selecting a few bidders and asking them to tender for the works. It thus tends to operate by invitation but it means that those selected would have been screened through a predetermined process. The selected firms are usually chosen for their capabilities and in theory each is capable of delivering the project.

Thus the contract can be awarded on the basis of lowest price/bid. This approach is still accountable, even to the public sector, as competition is involved (Kwakye, 1994).

Selective tendering is much more reliable as only a few selected tenderers are invited to tender which allows the client to choose the lowest tender without being risky (Smith et al., 2006). The client is also likely to obtain the best value for money. A weakness of selective tendering to a client is that cover pricing could still be employed by some bidders thereby reducing the amount of serious bids (Ofori, 1990). Cover-pricing can be overcome through the preliminary inquiry; where potential bidders are asked to indicate if they would be interested in bidding before an invitation is sent to them. In theory, that should work fine, but in practice, some contractors often find it difficult to decline an invitation. Such contractors would find it easier to submit a cover price than decline an invitation, because they could think that saying no now will deny them a future opportunity with the client. However, if clients can demonstrate that contractors will not be penalised for declining to tender, then it is possible to get all genuine offers from contractors.

The Act allows the use of restricted tendering on a very limited basis. An entity can use this method only upon approval of the Public Procurement Authority. The Act therefore spells out the conditions under which this method of procurement may be employed.

The method may be used for reasons of economy and efficiency. The conditions under which they may be used may include:

- a. If the goods/ services/works are available from a limited number of Firms
- b. If the time and cost required for examining and evaluating a large number of tenders is irrational compared to the value of the goods/works/services.

2.3.3 Single-source procurement

This method of procurement also requires approval from the Public Procurement Authority to restrict the abuse, since it could seriously violate the ideals of fairness. This method involves the engagement of a single firm to execute the contract without any competition. It may however be necessary to prove beyond reasonable doubt the need for use of this method, also the competence of the firm and achievement of value for money when the contract is awarded. The single firm considered will therefore have to prepare a tender just as if it is in competition.

The tendering process involves a client approaching a single contractor and engaging this company to carry out works for them. The contractor is usually chosen in this manner on the basis of their reputation. Instead of competition, the contract is negotiated between the prospective parties. On face value it is straightforward but in reality it is a very time consuming procedure (Smith et al., 2006).

Some of the reasons for which this method of tendering may be engaged include:

- Where a particular firm has the exclusive rights in respect of the Goods/Works/Services and there is no reasonable alternative or substitute.
- There is a situation of urgency and competitive tendering proceedings may cause an unacceptable delay.

- In instances of catastrophe etc.
- Has effect on national security and competition may not be desirable.

A final agreement is negotiated while the relationship between the client and contractor develops (Tang et al., 2003). For the client familiarity is a key criterion as the relationship builds. A client will likely feel more comfortable with a contractor that has done a previous job for them successfully and would therefore be more inclined to use the same contractor again for another project hence the negotiated procedure has an attraction (Murdoch, 2008).

Negotiation offers the following advantages (Kwakye, 1994).

- Early involvement of the contractor
- Less cost and evaluation for the client
- Client able to obtain what they want via negotiation
- Expertise of the contractor can be exploited

The disadvantages of procurement include (Kwakye, 1994).

- Initial pricing may be unreliable, being based on often incomplete information and this can affect the ability to control the cost.
- Final pricing may not necessarily be competitive.
- The approach may not be fully accountable.

2.3.4 Request for quotations

This method does not allow the invitation of tenders, but rather quotations are invited from firms that are well known. The act requires that as many quotations as possible should be obtained for the purpose of this method of procurement. However only goods

or technical services that are not specially produced to a particular specification of the procurement entity (i.e. they are off the shelf) may be procured using this method. Secondly, procurement of goods that have an established market and the value is expected to be less than Twenty Thousand Ghana Cedis (GH¢20,000.00) may also benefit from the use of this procurement method.

2.4 TENDERING COSTS

Definition

Tendering cost is the total charges associated with the delivery and certification of commodities underlying a future contract. (<http://www.investopedia.com/terms/c/costoftender.asp>) visited, 12/10/2014.

According to Brozowaki, (2001) major equipment manufacturers have calculated that it costs them up to Seventy Five Thousand United State Dollars (US\$75,000) to bid on a complex tender. These costs are eventually passed on to the customer although be it indirectly. Project engineers and tender managers are generally highly paid, skilled people that end up spending much of their time doing secretarial and administrative work managing the tender process rather than adding value to it.

The activities involved in the course of tendering warrant expenditure. Each organization will spend to tender for a project. The client's side too will spend to initiate and run a tendering process. Once competition is used, then the cost of abortive tendering becomes significant; for organizations that fail to win the project will either have to bear the cost of tendering or find a way of recouping. The more organisations are involved in a bidding exercise the more this abortive cost gets higher. The cost of tendering will usually be subsumed in an organisation's overheads (Chinyio, 2011).

2.5 THE COMPONENTS OF TENDERING COSTS

Tendering is a process that takes place to provide a transparent selection process that is based on objective criteria. It is most important in organisations that are exposed to a degree of public scrutiny from stakeholders. These stakeholders could be the general public in the case of government departments, or shareholders in the case of businesses. Indeed, there are benefits to the tendering process, but there are also costs. More to the point, if these costs are not managed effectively then they can be quite significant and not provide proportionate returns (Dalrymple et al., 2006; Laryea, 2008).

Tendering costs occur during three phases of any tendering process (Dalrymple et al., 2006; Laryea, 2008). These are:

- Preparation of tender documents by contractors
- Preparation of response to tender by prospective contractors
- Assessment of submitted tenders and selection of contractor

2.5.1 Preparation of tender documents

Contractors incur costs associated with the preparation of documents that are issued to tenderers. These include specifications and instructions specific to some items being procured. They also incur costs to assemble a list of prospective tenderers to whom tender documents will be sent. These documents may be posted to tenderers, but more complicated purchases may require face-to-face meetings with individual tenderers or collective briefings for all tenderers to attend (Dalrymple et al., 2006; Laryea, 2008).

2.5.2 Preparation of response to tender

On receiving tender documents, prospective contractors are required to make several levels of assessment. There is generally a time constraint to do so. In the first case, they need to understand the good or service being tendered and determine whether or not they have the capability to construct/supply. Where they decide to proceed with submitting a tender, they then need to engage in an appropriate degree of pre-design work to demonstrate to the client that they are aware of the implications of the tender and that their solution is the most appropriate. Reply to tender may take the form of a document or include physical models or involve presentations. There appears to be a concern that, once being invited to tender, refusing to do so will remove the prospective tenderer from future tender invitations. This may be leading to wasted effort preparing tenders that relate to work outside the capabilities of organizations that would be better declining the invitation to tender (Dalrymple et al., 2006; Laryea, 2008).

2.5.3 Assessment and selection

When tenderers submit their responses to tender, the client undertakes assessment and selection. As with the preparation of responses to tender, clients are under an obligation to complete assessment and selection within specified time constraints. Especially in cases of complicated tenders, where there is a two stage assessment, clients are under an obligation to complete their assessments within a reasonable time and reply to tenderers (Dalrymple et al., 2006; Laryea, 2008).

2.5.4 Generic tender cost model

In their work Dalrymple et al (2006) demonstrated that it is likely that cost of tendering data will be distorted (if collected at all). It is suggested that a tender cost model will provide some guideline to categorise and verify cost of tendering data that is collected. Having such guidelines is viewed to provide a catalyst to collect data and a framework to categorise the information collected. The model in Figure 2.1, (Australian Constructors Association, 2001), could provide a foundation for such a framework.

Phases	Steps
Tender Preparation	Project definition and scoping
	Selection process for tenderers
	Tender documentation
	Establishment of criteria for selection
Tendering	Call for tenders
	Responding to invitations to tender and developing commercial offer
	Tender meetings and enquiries
	Amendments to tender documents
	Submission and closing of tenders
Tender Evaluation	Tender analysis
	Tender clarifications
	Tender selection and awards

Figure 2.1. Generic Tender Cost Model.

*Courtesy: Australian Constructors Association Guidelines for Tendering –
10/08/2006*

It is suggested that each of the proposed steps could provide demarcation of categories to which human and material resources could be allocated. It is envisioned that these categories need further development and refining. The reason for advocating the further development of such a model is that tendering costs seem to have escalated to an extent that they can be seen as a factor in contractor's risk assessment (Dalrymple et al., 2006).

2.6 SOME CONTRIBUTING FACTORS TO TENDERING COST

2.6.1 Long lead-time of the process

Tendering involves a lot of activities and time. The process can be rigorous. Meanwhile, resources are utilized by organizations while tendering which contributes to the transaction cost element of their overheads are not accountable to warrants that organization to monitor and control their expenditure subheads which include tendering.

There are many time consuming tasks that contribute to the long lead-time of tendering including: internal collaboration within a multi-disciplinary group of people within a single organization (but often geographically distributed), obtaining approvals (both financial and technical), preparing the tender specifications and documents, interfacing between customers and suppliers, interfacing with other companies, third party consultants, partners in a consortium and sub-contractors, assembling accurate bidding documents and calculating prices and time estimations (Brozowaki, 2001).

2.6.2 The quality of tendering and bidding documents

This is a crucial element for successful and efficient tendering and involves criteria such as the clarity of requirements and specifications, compliance with quality certification standards, clarity of the bid, exhaustiveness, adequate structure, nice presentation, compliance with specific requirements set-out in the tender, completeness of the information provided (Brozowaki, 2001).

2.6.3 Inability to quickly and reliably assess the bids

Differences and inconsistencies in the bid formats make it very difficult to assess the bids and compare apples with apples. A large amount of time is often spent collating data from the various bidders into a format that allows for proper comparison and evaluation (Brozowaki, 2001).

2.6.4 Reliability of the cost and time estimate

Ultimately companies who are consistently accurate in their pricing and delivery estimates will win in the long run. The ability to provide reliable estimates depends both upon the capability of the bidders and the clarity and unambiguousness of the tenders. Clear, complete and non-ambiguous tenders will also naturally lead to lower bidding prices. As uncertainty diminishes so does the “safety price” or padding added to the actual estimate (Brozowaki, 2001).

2.6.5 Monitoring delivery of the works

The ability of the customer to continuously and transparently monitor the current status of the works is a definite advantage in that it reduces delays and ensures delivery in compliance with the contract (Brozowaki, 2001).

2.6.6 Project information is scattered on computers throughout the organization

As many parties are involved on both sides (client and contractors) and typically cover multidisciplinary groups, the information and expertise is often geographically distributed and located on computers throughout the organization. This leads both to wasted time and incomplete or out-of-date information (Brozowaki, 2001).

2.6.7 Unavailability of tender documents

According to Baffour (2014), another associated challenge to Act 663 is the availability of tender documents to be purchased by prospective suppliers at the time promised. Experiences have been shared about prospective suppliers who travel from one part of the country to another to purchase tender documents only to be told that the documents are not ready. The frustrations arising from this make prospective and interested parties abandon their plans of participation.

2.6.8 Bid submission requirements

The invitation letter specified the documents that should be included in the bid submission as follows:

1. A valid tax clearance certificate
2. A valid social security and national insurance trust (SSNIT) clearance certificate.

3. A valid labour certificate.
4. A bid security to the value of 2% of the total contract sum.
5. A bid summary page containing price of the Tender
6. A confidential contract report (Auditors Report).
7. An outline programme of works.
8. Current bank statement covering a period of six months immediately preceding the date bid documents are collected.
9. Site inspection/assessment report. The contractor is expected to visit the site and submit a written report.
10. Health, Safety and Environmental Report.
11. Line of Credit facility. Assurance from creditors or supplies
12. A valid company registration certificate.
13. A valid certificate of financial classification from the government Ministry of Water Resources, Works and Housing.
14. Any other information deemed relevant to the bidder (signed and stamped) (Laryea, 2008).

In all instances, the collaboration of third parties whose consent in the provision of one form of certificate or the other can jeopardize a supplier's desire to participate in a tender. Recently a contractor was forced to pull out of a tender because a body that was supposed to provide them a certificate had its computer system and power down for weeks. Can an answer be found to this with the acceptance of a letter from the issuing authority rather than penalizing an innocent supplier who has nothing to do with the power supply or computer systems of a public organization? (Baffour, 2014).

Delays in evaluation of tenders and its associated cost of participation in tenders are seriously impacting on the number of companies which subject themselves to the frustrations and disappointments in tender participation (Baffour, 2014).

2.7 THE TENDERING PROCESS

Tendering process may be summarized as follows;

- Discovering an invitation to tender;
- Taking a „tender“ or „no tender“ decision;
- Acquisition and study of tender documents;
- Tender preparation;
- Tender submission and opening;
- Post-Tender Opening stage;
- Tender Award and acceptance (Hillebrandt & Hughes, 2000).

2.7.1 Discovering an invitation for tender

The Procurement Act has provided that all open competitive tendering must be published in newspapers of wide circulation. In the case of „National Competitive Tendering“, it must be in at least two newspapers of wide national circulation. However „international Competitive Tendering“ requires publication in a newspaper of wide international circulation among others (ACT 663, 2003) Clause 47.

2.7.2 Taking a ‘tender’ or ‘no tender’ decision

Usually the management of the organization shall meet at this stage and decide whether resources should be committed to the tender. It is useful to have at the meeting a brief report containing analysis of the potential benefits of the project to the

Firm. The report must also have an assessment of the Firm's chances of winning the contract.

2.7.3 Acquisition and study of tender documents

Most tender documents are usually purchased. The Act makes provision for selling tender documents (Act 663 Clause 49(3)). The price usually reflects the cost of printing and making the documents available to interested firms. The tender documents contains various sections including Instructions To Tenderers (ITT) and tender data; which is relevant, and must be thoroughly read and understood for the purpose of preparing the tender. Other sections of the tender document must also be read carefully since they all have effect on the tender offer by the firm. A checklist prepared at this stage may be useful in preventing omissions of relevant requirements that may jeopardize the success of the tender. A site visit may also be useful at this time to assess the conditions and identify factors that can influence the tender.

2.7.4 Tender preparation

This stage involves putting together the various documentary requirements and the estimate to obtain the final tender for presentation. This may involve several activities including market survey to obtain prices of materials, search for utility rates of materials, output rates for plants and human labour among other. Further site visits may be considered at this stage and visits to Income Tax Office, SSNIT office, labour office, etc may be made to acquire the relevant statutory documents. The bankers may also be contacted to provide documents such as bid security, lines of credit, bank statements, etc while the accounts section of the firm may provide the audited account. Other requirements with regard to the firm's capacity may also be reviewed and the current document prepared for submission with the tender.

2.7.5 Tender submission and opening

The tender opening is usually the climax of the tendering activity. Mostly, tenders are opened in public and in the presence of contractors who chose to attend. It is advisable for the firm to have a representative at the tender opening, so he can take records, observe the proceedings and satisfy himself and the firm that the procedure is fair. The representative must fill-in the tender submission form, attendance sheet and other forms that must be provided in order to establish the presence of the firm and submission of tender. It is also necessary the firm's representation assures him or herself of the accuracy of the designation location of submission before he deposits his tender.

2.7.6 Post-tender opening stage

This is usually a quiet period. However, the firm's representative needs to keep eye on the evaluation and award process from afar, while awaiting the completion of this exercise and award. It is necessary to be alert so as to respond in good time to all letters of correspondence between the firm and the Entity in regard of clarification, concurrence etc. in some instance tender evaluation may take unnecessarily long period beyond the validity period; in such instances, the firm may be required to extend the validity of the tender and/or the bid security.

2.7.7 Tender award and acceptance

This is usually the final stages of the tendering and most competing firms may be waiting anxiously to know the winner. The entity usually writes to the firm with the successful tender and requests for confirmation of the accepted offer and provision of performance security. The successful firm's tender security is usually released upon

submission of this performance security. The firm may submit other documents as well as prescribed by the award letter and also in the tender documents. Upon submission of these documents, the contract may be signed and the other contractors notified of the award of the contract.

2.8 STRATEGIES TO MINIMISE COST OF TENDERING

In view of the fact that the client ultimately carries the cost of tendering, it is in the client's interests to seek to mitigate these costs to ensure that a business enterprise client returns value to its shareholders and that a public sector client obtains the triumvirate of efficiency, effectiveness and value for money. In the case of the business enterprise client, the choice is more straightforward since, if the cost of tendering is perceived to be excessive, it is open to the business to adopt another approach that is more cost effective (Dalrymple et al, 2006).

Below are some strategies that can be adopted to reduce the cost of tendering in the Ghanaian construction industry;

2.8.1 One package deal

Is it possible that purchasing entities can have procurement plans at the commencement of a procurement year, and based on that negotiate a one package deal with a supplier through competitive tendering, rather than advertising for every single item at different times of the year. The duplicated publications, sale and purchase, the processes of preparation of the tender document, securing bid securities, Tax and SSNIT Certificates, Registrar Generals Certificates, evaluation and notifications all make the cost of participating in tenders not attractive, thus keeping some potential suppliers out of the race (Baffour, 2014).

2.8.2 Early notification to non-responsive Tenderers

Evaluation of Tenders is also over delayed by some institutions and where a respondent has not been responsive or loses the tender, it takes forever to be notified. (Though, Section 29(5) of ACT 663 requires that Tenderers should be notified soon after the contract has been awarded and the securities retired). This notification in most cases is not done and the securities are held by the procurement body till the supplier goes to demand the retirement of the security. The charges and interest accruing from the delay in notifying suppliers is not just acceptable, but what can the supplier do? The whole scenario is like the supplier is always at the mercy of the purchaser (Baffour, 2014).

2.8.3 Black listing and the circulation of the names of non-performing companies

The two percent (2%) Bid Security requested is too high: *“I have a friend who has participated in a tender whose value was way above Thirteen Million Dollars (\$13,000,000.00) and he was, as part of the conditions for submission, to provide 2% bid security which amounted to \$260,000. His problem was not with the \$13 million, because his principals could supply him with the equipment on a 60 days credit terms basis but the \$260,000 bid security and the associated cost which could arise, if the evaluation and offer of the tender was unnecessarily delayed. I wish I could offer a solution to this particular problem because much as bid securities are essential in Tendering, the percentage is too much on the high side. Can we consider black listing and the circulation of the names of non-performing companies for a period of time as an option to the current two percent bid security? (Baffour, 2014).”*

2.8.4 Implementation of an Electronic Government Procurement (e-GP) System

Electronic Government Procurement (e-GP) is using the internet and other electronic means to conduct the procurement process. Due to the enormous benefits that an e-GP system offers, Public Procurement Authority (PPA) with support from the World Bank is pursuing the establishment of e-GP in Ghana. (Nortey, 2013) This project will be the major project to use Information Communication Technology (ICT) to regulate and achieve good governance in the areas of transparency and accountability.

Some benefits an e-GP system covers;

- Available Information on Public Procurement Function
- Available Information on Procurement Transactions
- Higher compliance levels
- Reduced Corruption
- Audit Trails on Procurement Transactions
- Improved quality of public procurement reporting, monitoring and management
- Online disclosure of procurement notices
- Online disclosure of awarded contracts
- Open and fair competition
- Increased compliance with procurement policy
- Public access to procurement information
- Less opportunity for corruptive, collusive, fraudulent and coercive practices
- Increased Price Transparency
- Increased Competition
- Lower Transaction Cost for Suppliers
- Private Business Activation
- Infrastructural Development
- Capacity Building

- Shorter order cycle time
- Lower inventories

The implementation of this system will bring a great transformation to the public procurement environment. As a nationwide system, it will involve both the training of back and front end staff, procurement officers, service providers and other interested parties such as civil societies. It will also involve change management in all public institutions as this system will bring a different approach in handling procurement activities (Nortey, 2013).

2.8.5 FRAMEWORK CONTRACTING/AGREEMENTS

Framework Agreements (FWAs as acronym), also known as “blanket purchase agreement”, is one that establishes the general terms governing contracts to be awarded during a given period, in particular with regard to price and, where appropriate, the quantity envisaged. It is not a contract but an instrument of understanding that contains terms and conditions (clauses) applicable to Calloffs/Purchase Orders (contracts) issued under the Agreement. It is usually between one or more buyers and one or more suppliers. It is used for filling anticipated repetitive needs for supplies, services, or works. Framework contract on the other hand is where a formal document which places an obligation, in writing, to purchase goods, works or services for mutual consideration (Nortey, 2013).

2.8.5.1 Stages of framework contracting/ agreements

The process for framework contracting is in two stages;

Stage 1 involves pre-qualifying contractors / suppliers and entering into the framework agreement, and;

In Stage 2, specific contracts (termed Call-offs) are issued to the framework contractors/suppliers based on the terms established in stage 1 of the framework arrangement, as calls for supplies are made. The terms and conditions in the Framework Agreement become binding on both purchaser and contractor/supplier only for requisitions from the framework agreement (Nortey, 2013).

2.8.5.2 Rationale for framework agreements (FWA)

The following factors, among others, are bases for applying framework agreements:

- Framework contracting becomes the vehicle for rationalizing a public procurement system that is characterized by fragmentation of purchase actions and help minimize administrative costs involved in „repeat“ tendering.
- Some agencies of government, lacking the capacity to undertake procurement, can make use of the existing framework agreement, if their requirements fall within the agreement.
- To facilitate sustainable social and economic development, framework agreement with local suppliers, would stabilize their operations, increase their profit margins, and so may result in more investment and growth in a sustainable manner; thereby increasing community wealth.

Through framework contracting, the need to reduce the number and cost of individual tendering processes becomes a legitimate way of streamlining the procurement process and help to ensure value for money (VFM). Where there is uncertainty about the actual usage (demand) of the product; there is the flexibility of increasing or decreasing quantities (Nortey, 2013).

2.8.5.3 Types of framework agreements (FWA)

FWAs can be between;

- One or more entities and one supplier,
- One entity and more than one supplier, or
- More than one entity and more than one supplier, over agreed periods.

All the options can be applied within the public sector. Economy is the major determining factor.

2.8.5.4 Framework agreement the anti-dote to bulk breaking

In Public Procurement, the term **breaking bulk** occurs when an entity decides to procure a particular item in bits instead of a whole package in a single procurement process. There are several reasons why entities engage in bulk breaking. Some of which are;

- **Finance:** Entities may not have enough funds to purchase items in bulk
- **Approval Systems:** Entities may want to avoid perceived prolonged approval processes from Entity Tender Review Boards like Central Tender Review Board (CTRB), Ministerial Tender Review Board (TRB) etc.
- **Procurement Method:** Entities may also want to avoid certain procurement methods like National Competitive Tendering (NCT) and therefore resort to bulk breaking by using Price Quotation (PQ) method (Nortey, 2013).

Currently Ghana's Procurement Act, as stipulated in section 21(5), frowns on bulk breaking of requirements. PPA's Procurement Planning Software will not take on any package number which deals with an item description already captured by an earlier

package number. The tendency therefore is that Entities are forced to collate their annual requirements of individual items and procure them in one process whether all those items are immediately required or not. Bulk deliveries will amount to holding large stocks and huge sums of state resources would have to be made available to pay for these seemingly large deliveries, some of which may end up becoming obsolescent. This is why entities are tempted to break bulk. Use of FWAs can prevent both high stock holding and bulk breaking. Framework Agreements covers the bulk quantity which forms basis for the supplier's price. The Buyer has the comfort and flexibility of calling off the quantities required to meet its immediate requirements thereby saving it from holding stock of the full FWA quantity. The Supplier therefore acts like a Stockiest/Stockholder over the period of the Agreement. This will bring about significant savings in transaction cost (cost of procurement) as a result of reduction in repetitive tendering processes which as the result of bulk breaking. Ultimately, this arrangement will bring about significant cost savings on the overall procurement expenditure as a result of the benefits of Economies of Scale. FWA is therefore a panacea for bulk breaking.

2.8.5.5 Benefits to be derived from framework contracting

The following benefits, among others, will be realized:

- **Economies of Scale:** this system will involve aggregation of all the small quantities of common items currently put on tender, for purchase from one or a few suppliers, thereby obtaining better terms and lower prices due to higher volumes.
- **Time Saving:** Reduction in administrative time in handling tenders since only one tendering exercise will replace those numerous ones.

- **Uniformity of prices:** Entities benefiting from the FWA obtain similar prices.
- **Reduction of Delivery Lead Times:** The time frame between order placing and delivery will be reduced and the requirement to hold excess stock will be minimized, since it is the supplier who will hold stocks.
- **Development of Local Industries:** Framework contracting with local industry, due to the stability it offers suppliers, will foster profitable businesses and so may result in more investment and growth in a sustainable manner; hence community wealth can be enhanced.
- **Assured Quality:** where appropriate quality assurance has been taken into consideration entities would be satisfied with the quality of their purchases.
- **Standardization:** It affords the opportunity to standardize common user items.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Following the review presented in chapter two, this chapter focused on how the data required from stakeholders in the construction industry was gathered and analyzed. It focuses on how the questionnaires were developed and distributed, how the sample size were determined and also the constraints and limitations which were encountered during the data collection process. The proposed methodology also provides an understanding of how the study was conducted and organized in order to obtain information that could be useful.

3.2 RESEARCH APPROACH

In order to achieve the aim and objectives of the study, structured questionnaires were designed based on information obtained from literature review of the study. The questions were designed to gather information covering relevant issues to the objectives of the study. The questionnaire comprises of close ended multi-choice type of questions to facilitate categorization and analysis. Questionnaires consisted of three sections. The first section consisted of questions which covered the name of the organization, status, years of experience and the nature of works the organization undertakes etc. The second and third section contains well-structured questions which addressed factors affecting the cost of tendering and strategies to address these factors in the Ghanaian construction industry using a Likert scale of 1-5. Data obtained was analyzed using the statistical tool (Relative Importance Index) to get the needed results. Seek attempt

3.3 SAMPLE SIZE AND SAMPLING TECHNIQUE

Sampling is the act, process, or technique of selecting a suitable sample, or a representative part of a population for the purpose of determining parameters or characteristics of the whole population (Fugar, 2009). In order to evaluate and assess the significant factors that influence cost of tendering, members of Association of Building and Civil Engineering Contractors of Ghana (ABCECG) Kumasi Branch were targeted. To determine the appropriate sample size for the study, a calculation was made based on the simplified formula to calculate sample sizes by Yamane (1967) with a confidence level of 95 percent assumed to an acceptable margin of error

was used. The formula is
$$n = \frac{N}{1+N(e)^2}$$

Where:

n = the sample size

**N = the size of working population e =
confidence interval, expressed as decimal**

The number of registered members of the association is sixty-two (Appendix 2). This yielded a sample size of 54 respondents as shown below.

$$\text{Sample size} = \frac{62}{1+62(0.05)^2} = 53.68 = \text{sample size of } \underline{54}$$

The 54 respondent were randomly selected and a face-to-face approach of administering questionnaires was adopted.

3.4 DATA COLLECTION

Data collection is a term used to describe a process of preparing and collecting data. The purpose of this process is to obtain information to keep on record, to make discussions about important issues and to pass information to others. The questionnaires was distributed to and retrieved from various construction sites and offices in person. The process of distribution and retrieving questionnaires in person was taken for two reasons as suggested by Ahadzie (2007). First, to make sure that the questionnaires get to the intended recipients and secondly, to help improve the response rate.

The major designed data collection method was applied:

➤ Primary Data Collection

The primary data for the study was obtained through distribution of questionnaire as well as direct personal interviews with people involved in construction projects. This type of interviews explored the topic and explains other findings about factors that influence cost of tendering.

➤ Secondary Data Collection

In order to enrich the questionnaire for the research, a review of text books and journals were used to identify the various efforts that have been made in the past to identify factors which influence cost of tendering in Kumasi Metropolis as well as the tendering processes that exist in Ghanaian construction industry. Secondary sources of data were obtained from relevant literature that covered research and publication on the subject matter.

3.5 DATA ANALYSIS

The results was analyzed in percentages and figures using descriptive statistics and presented in the form of pie charts and tables. The Importance Index was also used to rank the factors affecting cost of tendering. In order to generate the result, the researcher used the Statistical Package for Social Science (SPSS), version 16.0 for the analysis.

The Relative Importance Indices (RII) of determination of significance of factors was adopted because Danso (2010) asserted that to analyse data on ordinal scale (eg. Likert scale 1 – 5), the application of Relative Importance Index is also suitable. The Index is computed in Adnan et al (2007) as cited in Danso (2010) as:

$$\text{Importance Index} = \frac{5n_5 + 4n_4 + 3n_3 + 2n_2 + n_1}{5(n_5 + n_4 + n_3 + n_2 + n_1)} \times 100$$

Where:

n₁ - number of respondents who answered “strongly disagree”

n₂ - number of respondents who answered “disagree” n₃ -

number of respondents who answered “neutral” n₄- number of

respondents who answered “agree” n5- number of
respondents who answered “strongly agree”

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CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the results and discussions of the questionnaire received. The respondents were basically contractors who are members of Association of Building and Civil Engineering Contractors of Ghana (ABCECG) in Ashanti Region, construction professional bodies like the Ghana Institution of Surveyors, the academia and other relevant institutions and professionals in the Kumasi Metropolis. The study aimed at investigating the factors that influence the cost of tendering incurred by construction firms through selective competitive tendering method in Ghana. The chapter is organized into three sections: The first section deals with the demographic characteristics of respondents. The second section seeks to find out the factors which affect the cost of tendering to contractors. The last section deals with measures that can be put in place to address the increasing cost of tendering.

Table 4.1 General information of the respondents

GENERAL INFORMATION OF RESPONDENTS			
No	Item Description	Frequency	Percentage
1	Are you a Registered Contractor?		
a	Yes	40	100
2	Class of the contractor		

a	D1/K1	18	45.0
b	D2/K2	18	45.0
c	D3/K3	4	10.0
	Total	40	100.0
3	Years of being in existence		
a	1-5yrs	2	5.0
b	6-10yrs	16	40.0
c	11-15yrs	14	35.0
d	16-20yrs	8	20.0
	Total	40	100.0
4	Type of client the firms are currently working with		
a	Government	24	60.0
b	Cooperate body	8	20.0
c	Private	8	20.0
	Total	40	100.0
5	The positions respondents hold in their firms		
a	Quantity Surveyor	16	40.0
b	Project Manager	16	40.0
c	Managing Director	8	20.0
	Total	40	100.0
6	Professional affiliation of respondents		
a	GHIS	16	40.0
b	GIE	8	20.0
c	GIA	6	15.0
d	Others	10	25.0
	Total	40	100.0
7	Years of working experience		
a	1-5yrs	10	25.0
b	6-10yrs	10	25.0
c	11-15yrs	10	25.0
d	16-20yrs	10	25.0
	Total	40	100.0

4.2. Response Rate

Out of the fifty-four (54) questionnaires distributed, forty-three (43) were retrieved. Three (3) were found to be badly completed to be useful for the analysis and were therefore discarded. This brought the responses effectively to forty (40) respondents representing 74% of the sample size.

4.3 General characteristics of the respondents and their firms

The first section of the questionnaire sought to draw information about the respondents and their firms. The object of this exercise was to assess the credibility of the respondents who have been selected for the study. Some of the variables studied were the professional qualification, years of working experience, and the role of the respondents as shown on Table 4.1. With regards to the firms, it was observed that all of them were registered contracting firms and besides belong to D2K2 classification and above (90% were in the D1K1 and D2K2 Financial Classification). All things being equal, firms in these classes work on bigger project which are normally highly competitive. Moreover, bigger project usually require tenderers to submit a number of securities to guarantee the success of the bidding process and the proper execution of the project as a whole. In addition to the above, majority of the firms (95%) had working experience in construction and for that matter it is reasonable to assume that they have also been involved in a number of tendering processes. The above credentials are good for the study.

It is always important to have a fair idea of the type of project the respondents are currently working on because most of the statutory requirement normally comes from Government or cooperate bodies projects like KAMA Health Services, MTN, Electricity Company of Ghana. The results in table 4.1 indicate that Eighty (80) percent of the respondents are currently working on Ghana Government Projects and corporate bodies while twenty (20) percent were working on private projects. These points to large extent that reliable and accurate information was gathered from the right source.

The private clients on the other hand weaved some these factors or normally negotiate the contract in order to reduce cost of the project hence tendering procedures.

The profile of the respondents on the other hand was very good. A majority (80%) of them were Quantity Surveyors and Project Managers. These professionals were most often responsible for the pricing and other activities associated with the tendering process. This means that the researcher dealt with the right people. Finally, most of them were highly experienced in their professional field. Again the results in table 4.1 indicate that all the respondents had affiliation with professional bodies. 40 percent of the respondents were members of Ghana Institution of Surveyors (GhIS), 20 percent were Ghana Institution of Engineers (GIE) members, 15 percent were members of Ghana Institution of Architect (GIA) and 25 percent were members of Ghana Institute of Construction (GIOC) and Ghana Institution of Engineering and Technology (GIET).

The result shows that the working experience of respondents was evenly distributed. Most of the respondents (95%) had been in the construction industry for more than five years and were conversant with the practices and knowledge in the construction industry. This also suggests that quite a large number of projects might have been handled by them for a long time.

Table 4.2 Factors affecting the cost of Tendering

FACTORS AFFECTING THE COST OF TENDERING											
		RATING									
	Factors affecting the cost of tendering	1	2	3	4	5	Total	ΣW	Mean	RII	Rank
1	Bid Security	0	6	0	8	26	40	174	4.350	0.870	1
2	Ghana Revenue Authority Certificate (GRA) Tax Clearance	0	6	2	10	22	40	168	4.200	0.840	2

3	Auditors Report	0	0	8	18	14	40	166	4.150	0.830	3
4	Social Security and national insurance Trust Certificate SSNIT	0	8	2	10	20	40	162	4.050	0.810	4
5	Quality of tendering and bidding documents	0	0	12	22	6	40	154	3.850	0.770	5
6	Inability to quickly and reliably assess the bids	0	0	10	26	4	40	154	3.850	0.770	5
7	Labour Certificate	2	4	2	24	8	40	152	3.800	0.760	7
8	Source of Funding	0	2	10	22	6	40	152	3.800	0.760	7
9	Price of Tender Document	2	2	4	26	6	40	152	3.800	0.760	7
10	Discovering an invitation for tender (Newspaper, mail, etc.)	0	2	8	28	2	40	150	3.750	0.750	10
11	Location of the Project	2	0	10	22	6	40	150	3.750	0.750	10
12	Long lead-time of the process	0	2	10	24	4	40	150	3.750	0.750	10
13	Reliability of the cost and time estimate	0	2	8	28	2	40	150	3.750	0.750	10
14	Head Office Overhead	0	0	16	20	4	40	148	3.700	0.740	14
15	Bank Statement	2	2	8	22	6	40	148	3.700	0.740	14
16	Type of Client	0	2	10	28	0	40	146	3.650	0.730	16
17	Line of Credit facility	0	4	10	22	4	40	146	3.650	0.730	16
18	Type of Project	2	2	12	18	6	40	144	3.600	0.720	18
19	Health, Safety and Environmental Report	0	4	12	22	2	40	142	3.550	0.710	19
20	Personnel Remuneration	0	2	18	16	4	40	142	3.550	0.710	19
21	Site inspection/Assessment Report	0	0	22	16	2	40	140	3.500	0.700	21
22	Monitoring delivery of the works	0	4	14	22	0	40	138	3.450	0.690	22
23	Unavailability of tender documents	2	0	18	18	2	40	138	3.450	0.690	22
24	Tender opening	2	6	14	18	0	40	128	3.200	0.640	24
25	Preparation of tender	0	10	16	12	2	40	126	3.150	0.630	25
26	Post tender opening stage	2	8	14	16	0	40	124	3.100	0.620	26
27	Submission of Tender	4	10	12	14	0	40	116	2.900	0.580	27
28	Programme of works	4	8	18	8	2	40	116	2.900	0.580	27
29	Scattered Project information on computers throughout the organization	6	16	0	16	2	40	112	2.800	0.560	29

4.4 Factors affecting Cost of Tendering

The second part of the questionnaire sought to find out from the respondents the factors which influence the rising cost of tendering. Twenty-nine (29) factors were gathered from literature from which the participants were asked to indicate their level of

agreement as to how important each of the factors contributes to tendering cost. From the analysis carried out using Relative Importance index (RII) values it was found that all the 29 factors contribute directly or indirectly to the cost of tendering (Table 4.2). Each of the variables had RII value above average (i.e. 0.5).

4.4.1 Bid Security

Most of the respondents agreed that the most significant influence factor of cost of tendering is bid security. With RII of 0.87 bid security was the highest ranked cause proposed by the respondents. The influence of bid security on the cost of tendering can be seen from the work of Laryea, (2008) where it was explicitly stated that the two percent (2%) Bid Security requested is too high. As Laryea, (2008) stated *“I have a friend who has participated in a tender whose value was way above Thirteen Million Dollars (\$13,000,000.00) and he was, as part of the conditions for submission, to provide 2% bid security which amounted to \$260,000. His problem was not with the \$13 million, because his principals could supply him with the equipment on a 60 days credit terms basis but the \$260,000 bid security and the associated cost which could arise, if the evaluation and offer of the tender was unnecessarily delayed. I wish I could offer a solution to this particular problem because much as bid securities are essential in Tendering, the percentage is too much on the high side”*. Commercial banks charge between 1.2 percent to 2 percent when render such services to contractors. Using an average of 1.5 percent, this contractor would have paid \$3,900 on that project alone. The question is who pays for such cost should he fail to win the contract?

4.4.2 Ghana Revenue Authority (GRA) Clearance Certificate

It is not surprising that the next significant factor of cost of tendering is Ghana Revenue Authority Certificate (GRA) Tax Clearance Certificate with RII of 0.84. This cause can easily be linked with the fact that, in some cases those contractors who have not fully paid their tax assessment are forced to do so before the certificate is issued to them when tendering for projects.

4.4.3 Auditor's Report, Social Security and National Insurance Trust Certificate, Labour etc.

Auditor's report was ranked the third most important contributing factor (RII of 0.83) that influenced contractor's tendering cost. Respondents ranked Social Security and National Insurance Trust clearance Certificate (SSNIT) 4th, Quality of tendering and bidding documents 5th, Inability to quickly and reliably assess the bids 6th, Labour Certificate 7th, Source of Funding 8th and Price of Tender document 9th. With RII of 0.81, 0.77, 0.77, 0.76, 0.76, 0.76 respectively as they contribute immensely to the cost incurred during tender preparation. (Table 4.2).

As reported earlier on by Laryea, (2008) bid submission requirements such as Bid security, SSNIT certificates, Tax clearance certificates etc. increase the cost incurred by contractors during tendering. Some of the respondents explained the difficulties they had to go through before they are given those certificates. In some cases those contractors who have not fully paid their tax assessment are forced to do so before the certificate is issued to them. All these cost when put together swell their cost of tendering.

4.4.4 Discovering an invitation to tender, project location etc.

In addition to the above, the “Discovering an invitation for tender”, “Location of the Project were also found to influence cost of tendering with RII of 0.75. In the course of tender evaluation, differences and inconsistencies in the bid formats make it very difficult to assess the bids and compare them. A large amount of time is often spent collating data from the various bidders into a format that allows for proper comparison and evaluation. The above finding perfectly agrees with Brozowaki (2001). The high price of tender documents was also another key cost elements reported by the respondents with RII of 0.76.

4.4.5 Monitoring delivery and unreliability of tender document

It was observed that “Monitoring delivery of the works and Unavailability of tender documents” were some of the least important influencing factors when it comes to cost of tendering with RII of 0.69. Dalrymple et al., (2006) reinforced this idea that the expense of tendering and uncertainty of outcomes leads tenderers to engage in concealed behaviour to reduce the cost associated with tendering.

4.4.6 Scattered project information on computers

The respondents indicated that Scattered Project information on computers throughout the organization is the least important cause of tendering cost. This was evident with a RII of 0.56 which ranks 29th among the factors that were outlined in part 2 of the questionnaire that was administered. This is because the project information is normally carried out by client and not the contractors.

Table 4.3: Measures to minimize tendering cost

MEASURES TO MINIMIZE TENDERING COST							
		RATING					

N o	Strategies to address these factors	1	2	3	4	5	Total	Σ W	Mean	RII	Rank
1	Implementation of an e-GP System	0	6	4	20	10	40	154	3.850	0.770	1s
2	Black listing and the circulation of the names of non-performing companies	2	0	12	18	8	40	150	3.750	0.750	2nd
3	Early notification to nonresponsive Tenders	0	2	12	22	4	40	148	3.700	0.740	3rd
4	One package deal	2	2	8	26	2	40	144	3.600	0.720	7th
5	Framework Contracting/Agreements	2	2	14	14	8	40	144	3.600	0.720	7th
Avoid requesting for											
6	Ghana Revenue Authority Certificate (GRA) Tax Clearance	2	8	4	14	12	40	146	3.650	0.730	4th
7	Social Security and national insurance Trust Certificate (SSNIT)	0	10	6	12	12	40	146	3.650	0.730	4th
8	Bank Statement	0	4	12	18	6	40	146	3.650	0.730	4th
9	Auditors Report	2	2	10	22	4	40	144	3.600	0.720	7th
10	Labour	0	10	4	22	4	40	140	3.500	0.700	10th
11	Bid Security	2	8	6	16	8	40	140	3.500	0.700	10th
12	Health, Safety and Environmental Report	0	0	24	14	2	40	138	3.450	0.690	12th
13	Site inspection/Assessment Report	2	2	20	12	4	40	134	3.350	0.670	13th
14	Line of Credit facility	4	0	16	20	0	40	132	3.300	0.660	14th
15	Programme of works	2	8	14	10	6	40	130	3.250	0.650	15th

4.5 Strategies to minimize the cost of Tendering

The opinions of the respondents were solicited on strategies/measures required to minimize the cost of tendering. Analysis of the responses revealed that all the 15

strategies in Table 4.3 have the potential of reducing tendering cost. As observed in section 4.4, the submission of statutory requirement such as bid security, SSNIT certificate, Tax clearance certificates, Bank statements, labour certificate increase tendering cost. Thus, it is not surprising to find out that the respondents in unison endorsed that client should avoid requesting for those statutory requirement. Table 4.3.

4.5.1 Implementation of an e-GP System

The respondents were in high agreement with the use of Electronic Government Procurement (e-GP) System which was ranked 1st with RII of 0.77 as a cost reduction measure. This is where the internet and other electronic means are used to conduct procurement process. This system as explained by Nortey, (2013) has the benefits of reducing corruption, improved quality of public procurement reporting, monitoring and management; online disclosure of procurement notices; online disclosure of awarded contracts; Increased Price Transparency; Increased Competition; Lower Transaction Cost for Suppliers; Less opportunity for corruptive, collusive, fraudulent and coercive practices among others. The implementation of this system will bring a great transformation to the public procurement environment.

4.5.2 Black listing and the circulation of the names of non-performing companies

Black listing and the circulation of the names of non-performing companies for a period of time were also found to be key measures. It recorded RII of 0.75 and was the second most measure or strategy if adopted will reduce cost of tendering. The study does not differ from (researches) that of Brozowaki (2001), Laryea (2008), Nortey (2013) and Baffour (2014). As a measure to reduce cost of tendering when dealing with for example

bid security, Baffour (2014) reaffirm this by posing a question as “Can we consider black listing and the circulation of the names of nonperforming companies for a period of time as an option to the current two percent bid security?.”

4.5.3 Early notification to non-responsive Tenderers

This was also another key recommendation by the respondents. In explaining this, some of the respondents indicated that in most cases evaluation of tenders is over delayed by some institutions and where a respondent has not been responsive or loses the tender, it takes a long time to be notified; Though, this is contrary to Section 29(5) of the Procurement Act (ACT, 663) which requires that Tenderers should be notified soon after the contract has been awarded and the securities retired. This notification in most cases are not done and the securities are held by the procurement body till the contractor goes to demand the retirement of the security. The charges and interest accrued from the delay, results in an increase in the financial burden of the contractor. This finding confirms the finding of Baffour (2014). It is no wonder that it became the third most influencing factor to reduce tendering cost with RII of 0.74.

4.5.4 Package deal and framework contracting/agreement

Other forms of contracting like one package deal and framework contracting /agreement were considered as some of the major strategies if adopted will reduce cost of tendering drastically. The following benefits, among others, will be realized if framework contracting is adopted by client Economies of Scale; Time Saving; (Reduction in administrative time in handling tenders) Uniformity of prices; Reduction of Delivery Lead Times; (The time frame between order placing and delivery will be reduced) Development of Local Industries; Assured Quality;

Standardization as explained by Baffour (2014).

4.5.5 Avoid request for some requirement

Most of the respondents agreed that when client avoid requesting for some of these requirement, the cost incurred by contractors will reduce drastically. The most significant among them were; Ghana Revenue Authority Clearance Certificate (GRA), SSNIT Clearance certificate and bank statement which recorded RII of 0.73 and were 4th, 5th and 6th on the rankings. The influence of factors to reduce cost of tendering can be seen from the work of Nortey, (2013) where it was explicitly stated that the cost of participating in tenders with all these requirement were not attractive, thus keeping some potential contractors out of the race. The least among these were labour certificate and bid security which recoded RII 0.70 and placed 10th and 11th positions respectively. They were least not because they were not important but respondents were of the view that they wish they do not provide them when tendering for project but rather if possible after the winning the contract.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings and Conclusion

The aim of the study was to investigate the factors that influence the cost of tendering incurred by construction companies through selective competitive tendering method in Ghana. In line with this, questionnaire survey was conducted among 40 construction professionals who are usually involved with the tendering process. From the analysis of the results the following conclusions were drawn:

Objective 1: To identify the significant factors that influences the cost of Tendering

It was found that all the twenty-nine (29) variables listed on Table 4.2 contribute directly or indirectly to the cost of tendering. The key elements which usually bring about increasing cost are the cost accrued from acquiring *Bid Security, Ghana Revenue Authority Certificate (GRA) Tax Clearance Certificate, Auditors Report, Social Security and National Insurance Trust Certificate (SSNIT)*. Besides the cost, it was revealed that most of the contractors go through some difficulties to get those documents prepared for them. The above report confirmed the earlier work by Laryea, (2008) where he reported that bid submission requirements such as Bid security, Auditors Report, SSNIT certificates, Tax clearance certificates etc. increase the cost incurred by contractors during tendering.

Objective 2: To identify appropriate measures/strategies to minimize tendering cost

With regards to this, some of the measures include the following:

- i. Client should avoid requesting for documents such as *Bid Security, Auditors Report, SSNIT certificate, etc.*
- ii. Electronic Government Procurement (e-GP) System should be used. This will not only reduce cost but also have other benefits such as Reducing Corruption,

Improved quality of public procurement reporting, monitoring and management;
online disclosure of procurement notices; awarded contracts; Increased Price
Transparency; Increased Competition etc.

- iii. The price of tender documents should be reduced.
- iv. Other equally important measures have been outlined in Table 4.3

5.2 Recommendation

Based on the findings from the study, it is recommended that the above measures proposed in section 4.3 should be put in place to minimize the cost of tendering. Again, Contractors should be mindful of the cost associated with tendering in the Ghanaian construction industry in their decision making process concerning whether to tender or not to tender for a project.

5.3 Further Studies

It is recommended that further studies should be carried out to extend the scope to solicit the views of other contracting firms and co-operate bodies responsible for tendering in the country. This will give us a much wide perspective of the issue and how to address it.

KNUST



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APPENDICES Appendix

1

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY
COLLEGE OF ARCHITECTURE AND PLANNING
DEPARTMENT OF BUILDING TECHNOLOGY

SURVEY QUESTIONNAIRES

FACTORS THAT INFLUENCING THE COST OF TENDERING FOR WORK BY CONTRACTORS IN GHANA

Dear Sir/Madam

This questionnaire forms part of an MSc. research project which aims to examine the **factors influencing the cost of tendering for work by contractors in Ghana**. Over the years, the Ghanaian construction industry has been engaged in competitive tendering, but sadly, there is no scientific data or precise understanding of tendering in terms of cost. The results of this study will identify significant factors that influence the cost of tendering for construction works in Ghana and identify appropriate strategies to address these factors.

I would like to invite you to participate in the above project. Completion of the questionnaire is completely voluntary and returning the completed questionnaire will be considered as your consent to participate in the survey. The questionnaire will take you about 10 minutes to complete.

I appreciate that you are already busy and that participating in this survey will be another task to add to your busy schedule, but by contributing you will be providing important information. **All data held are purely for research purposes and will be treated as strictly confidential.**

In the event of questions or queries, please do not hesitate to contact me. Thank you for your time and valid contribution in advance.

Yours faithfully,

ALOYSIUS SAM

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KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY
COLLEGE OF ARCHITECTURE AND PLANNING (KNUST)

MSC CONSTRUCTION MANAGEMENT

**PROJECT TOPIC – FACTORS INFLUENCING THE COST OF TENDERING
FOR WORK BY CONTRACTORS IN GHANA**

QUESTIONNAIRE

Section 1. General

1. Are you a Registered Contractor? a) Yes ☐ b) No ☐

2. Which Class do you belong to as a Contractor?
a) D1/K1 ☐ b) D2/K2 ☐ c) D3/K3 ☐ e) others state ☐

3. How many years have you been working as a Contractor in Ghana?
a) 1 – 5yrs ☐ b) 6 – 10yrs ☐ c) 11 – 15yrs ☐ e) 16 – 20yrs ☐ e)
above 20yrs ☐

4. Which type of Client are you currently working with?
a) Government ☐ b) Cooperate body ☐ c) Private ☐ ☐

5. What position do you hold in the company?
a) Quantity Surveyor ☐ b) Project Manager ☐ c) Managing
Director ☐ d) Engineer ☐ ☐

6. What is your professional affiliation?
a) GHIS ☐ b) GIE ☐ c) GIA ☐ d) State others..... ☐

7. How many years have you been practicing your profession?
a) 1 – 5yrs ☐ b) 6 – 10yrs ☐ c) 11 – 15yrs ☐ e) 16 – 20yrs ☐ e)
above 20yrs ☐

Section 2: factors affecting the cost of tendering

8. Rank on the Likert scale of 1 to 5 the order of importance of these factors in contributing to the cost of tendering of construction projects.

1	2	3	4	5
Highly Unimportant	Unimportant	Neither Unimportant nor Important	Important	Highly Important

Factors	1	2	3	4	5
Price of Tender Document					
Discovering an invitation for tender (Newspaper, mail etc)					
Ghana Revenue Authority Certificate (GRA) Tax Clearance					
Social Security and national Insurance Trust Certificate SSNIT					
Labour Certificate					
Bid Security					
Auditors Report					
Programme of Works					
Bank Statement					
Site Inspection/Assessment Report					
Health, Safety and Environmental Report					
Line of Credit facility					
Preparation of tender					
Submission of Tender					
Tender opening					
Post tender opening stage					
Personnel Remuneration					
Type of Client					
Type of Project					
Source of Funding					
Location of the Project					
Long lead-time of the process					
Quality of tendering and bidding documents					
Inability to quickly and reliably assess the bids					
Reliability of the cost and time estimate					
Monitoring delivery of the works					

Scattered Project information on computers throughout the organization					
Head Office Overhead					
Unavailability of tender documents					

Section 3: strategies to address these factors

9. Below are lists of strategies for minimizing the cost of construction projects. Rank on the Likert scale of 1 to 5 the level of significance of these factors to the minimization of tender costs.

1	2	3	4	5
Highly Insignificant	Insignificant	Neither Significant nor Insignificant	Significant	Highly Significant

Strategies	1	2	3	4	5
One package deal					
Early notification to non-responsive Tenderers					
Black listing and the circulation of the names of non performing companies					
Implementation of an e-GP System					
Framework Contracting/Agreements					
<u>Avoid requesting for:</u>					
Ghana Revenue Authority Certificate (GRA) Tax Clearance					
Social Security and national Insurance Trust Certificate SSNIT					
Labour					
Bid Security					
Auditors Report					
Programme of Works					
Bank Statement					
Site Inspection/Assessment Report					
Health, Safety and Environmental Report					
Line of Credit facility					
Others					

Thank you.

Appendix 2

ASSOCIATION OF BUILDING & CIVIL ENGINEERING CONTRACTORS OF GHANA (ABCECG) MEMBERS OF GOOD STANDING ASHANTI REGION

NO	COMPANY NAME	POSTAL ADDRESS
1	REKFAS LTD	P.O. BOX 10905 KSI
2	DE-CAPO LTD	P.O. BOX 8625 AHINSAN KSI
3	GASCON LTD	P.O. BOX 9187 KSI
4	NANA J.E NSIAH LTD	P.O. BOX M 396SUAME KSI
5	ATENA CONST LTD	P.O. BOX 3489 KSI
6	FINE CONST LTD	P.O. BOX 2252 ASHTOWN KSI
7	SAK-COMP LTD	P.O.BOX SS 149 KSI
8	LAKAYANA LTD	P.O.BOX SE 359 SUAME KSI
9	G & A LTD	P.O.BOX SE 635 SUAME KSI
10	AGYEI CONST LTD	P.O. BOX BP 51 HYEN KSI
11	JAMK CO LTD	P.O.BOX 1992 KSI
12	DUAKUMA CON WRKS	P.O.BOX 6625 KSI
13	MAPO CONST & ENG LTD	P.O.BOX 2145 KSI
14	S.K. ADJEI & SON LTD	P.O.BOX SE 11561 SUAME KSI
15	SAMFORI CONST LTD	P.O. BOX 9384 KSI
16	ANIGLO CONST LTD	P.O. BOX 24 KSI
17	MAKODOMA CONST LTD	P.O.BOX 1833 KSI
18	BERGYA CONST ENT	P.O.BOX 33 ABUAKWA KSI
19	BOAKYE BA SAKA LTD	P.O.BOX 4568 KSI
20	KUBOMAKO ENT LTD	P.O.BOX 4568 KSI
21	F.O. AHINKRO WRKS	P.O. BOX 1181 KSI
22	NAKWATEX CONST LTD	P.O. BOX 1804 KSI
23	EKUOBA C/WRKS	P.O.BOX 955 KSI
24	DAMPO ENT	P.O.BOX 1181 KSI
25	FRAN OSBON ENT	P.O.BOX NT 36 NEW TAFO KSI
26	AGGIE OFORI LTD	P.O.BOX M 1759 SUAME KSI
27	GYANGICO LTD	P.O. BOX ST 300 STADIUM KSI
28	JAMEL CONST WRKS	P.O.BOX 8489 AHINSAN KSI
29	ADUUS CONST WRKS	P.O. BOX 2023 KSI
30	PROFCON LTD	P.O. BOX 8407
31	INTERCITYCONST LTD	P.O. BOX 5256 KSI
32	KRISTACON LTD	P.O.BOX KS 7454 KSI
33	NO JESUS NO LIFE C/WKS	P.O.BOX KJ 622 KEJETIA KSI
34	SUMMER OAK LTD	P.O.BOX A. K. 200 KSI
35	BOAKYE BRONI LTD	C/O P.O.BOX 9187 KSI
36	MRIKISI-BOAFO CO. LTD	C/O P.O.BOX 9187 KSI
37	GUY-ANA-FI ENT	P.O. BOX SE 1349 KSI
38	ADWOA AFRAKOMA ENT	C/O P.O. BOX 1833

39	MICHAEL NYANFUL ENT	C/O P.O.BOX 9187 KSI
40	CIVIL MASTERS CO LTD	C/O P.O BOX 9187 KSI
41	NABUK CONST	C/O P.O. BOX 9187 KSI
42	RICH HOUSE CONST	C/O P.O. BOX 9187 KSI
43	ABESUA ENT	P.O. BOX 1181 KSI
44	NANA KWAKU GYAME ENT	P.O. BOX 17 STADIUM KSI
45	KUSAP VENTURES	P.O. BOX 4568 KSI
46	MELISA ENT	C/O P.O. BOX 9187 KSI
47	EKOO AGYEIWAA	C/O P.O. BOX 9187 KSI
48	K.D.E. KAIZER CO. LTD	P.O.BOX 12016 KSI
49	ERNO GYAN CO. LTD	
50	ADOM SUPER BLOCKS LTD	C/O P.O. BOX 1987 KSI
51	NANA ABREFI MENSAH C/WRKS	P.O. BOX 2928 ASHTOWN KSI
52	AMAKYEREWAA WNT	C/O/P.O. BOX 1987 KSI
53	ABRAFI SUPPLY	C/O/P.O.BOX 1987 KSI
54	WALAS CON WRKS	C/O/P.O.BOX 1987 KSI
55	GYASKOURS LTD	C/O/P.O.BOX 1987 KSI
56	MAY BOCVEN	C/O/P.O.BOX 1987 KSI
57	GRASET LTD	P.O. BOX 1328 KSI
58	YAMOAK POKU C/WKS	P.O.BOX 3627 KSI
59	KUFRAK ENT LTD	C/O/P.O. BOX 1987 KSI
60	LIMPO LTD	C/O/P.O. BOX 8625 KSI
61	OBINIM DAAKYE ENT	C/O/P.O.BOX 8625 KSI
62	FLOGINA	C/O/P.O. BOX 8625 KSI

