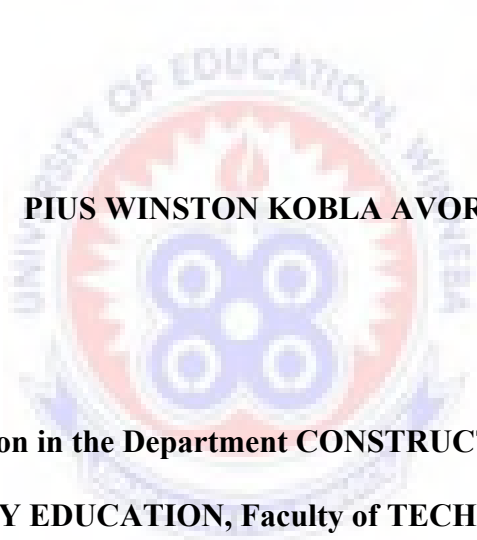


UNIVERSITY OF EDUCATION, WINNEBA

**AN INVESTIGATION INTO CHALLENGES FACING BUILDING
CONTRACTORS IN ACCRA METROPOLIS**

PIUS WINSTON KOBLA AVORNYO



**A Dissertation in the Department CONSTRUCTION AND WOOD
TECHNOLOGY EDUCATION, Faculty of TECHNICAL EDUCATION,
submitted to the School of Graduate Studies, University of Education, Winneba
in partial fulfilment of the requirements for the award of Master of Technology
(Construction) degree.**

AUGUST, 2014

DECLARATION

STUDENTS' DECLARATION

I, Pius Winston Kobla Avornyo, declare that this Dissertation, with the exception of quotations and references contained in the published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole for any another degree elsewhere.

SIGNATURE:

DATE:

SUPERVISOR'S DECLARATION

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of Dissertation as laid down by the University of Education, Winneba.

NAME: MR. M.K. TSORGALI

SIGNATURE:

DATE:

DEDICATION

This study is dedicated to my dear lovely wife Mercy Ampomah-Avornyo. It was through her fruitful advice, prayers and financial support that have seen me through this program. May Almighty God richly bless her.



ACKNOWLEDGEMENT

I would like to express my profound gratitude to my supervisor and the Vice Dean of Students, University of Education, Winneba, Kumasi Campus Mr. M. K. Tsorgali, for his encouragement, valuable guidance and pragmatic supervision provided throughout the period of the research work.

The next thanks go to Mr. Katako, the Manager of Estate and Housing Corporation.

I also wish to offer appreciation and gratitude to the following people for their immense contribution towards the success of this research; Mr. Addai Francis, Mercy Ampomah-Avornyo, Mr. Edoe and Mr. Attachy.



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ABSTRACT

The study sought to investigate the challenges facing building contractors in Accra Metropolis. The main aim of the study was to examine the challenges they face in the execution of building projects in Accra. The total sample targeted was ninety-five (95) construction workers made up of project managers, clients, trade foremen, artisans and labourers. Besides, a survey questionnaire and interview guide was used to investigate the challenges. The questionnaire was delivered personally to the respondents. A time lapse of one week was allowed to enable the respondents complete the questionnaires. However, seventy-five (75) questionnaires were distributed to twenty-five (25) project managers, twenty-five (25) clients and twenty five (25) trade foremen. Thereafter, the researcher went round to retrieve them. In addition, ten (10) artisans and then (10) labourers were interviewed. It was face to face interview. The study followed mixed method approach. The data collected were analysed with the aid of Statistical Package for Social Science (SPSS) using a variety of statistical methods including descriptive statistics analysis, one way analysis of variance and person chi-square. The following findings were made from the results of the analyse: lack of skilled human resources experts, lack of efficient project managers, lack of conducive working environment, lack of motivation to perform up to maximum potential and management not doing a good job at keeping sites workforce motivated. Based on these findings, it was therefore recommended that contractors should ensure that they employ skilled personnel in the organisation. It was also recommended the employees should be motivated. More importantly it was therefore recommended that policy makers should ensure that the contractors in the industry develop and therefore there should be organised programs for continuous assessment and grading of the building.



CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

A building contractor is a group or individual that contracts with another party or individual (the owner) for the construction or renovation of a building (Lehtonen, 2001). Navon (2005) defined building contractor as the signatory of the prime construction contract for the building project. They are responsible for the means and methods to be used in the construction of the building project in accordance with the documents. Contract documents usually include the contract agreement including budget, the general and special conditions and the plans and specification of the project that are prepared by a design professional. Then, contractor usually is responsible for the supplying of all material, labour, equipment and services necessary for the construction of the project. To do this it is common for the building contractor to subcontract part of the work to other persons that specialise in these types of work (Navon, 2005).

A contractor is someone who enters into a binding agreement to perform a certain service or provide a certain product in exchange for valuable consideration, monetary, goods, services. In the building trades, a contractor is one who is engaged in the construction or building related services for a client. The construction site is overseen by a "Prime", General, or Specialty contractor, who may perform the work with employees, subcontractors or any combination thereof (Nkado, 1995).

A professional contractor should also have an understanding of his or her limitations. The client works with an architect and financier long before the first shovel of dirt is removed by a contractor. During the bidding process, a contractor may have to work with the building's architect to discuss potential problems with a design element. If the

complexities of the building's design or the potential cost overruns threaten to overwhelm a contractor's skills, he or she needs to step back and allow other contractors to win the bid. A good contractor understands that the success of the project depends on his or her ability to hire the right independent subcontractors and follow the wishes of the client ((Lehtonen, 2001).

The building construction industry has unique characteristics that sharply distinguish it from other sectors of the economy. It is fragmented, very sensitive to the economic cycles and political environment, and has a significantly high rate of business failure (Enshassi, et al., 2006). The Accra building construction industry is an industry that is increasingly becoming more complex in terms of growth, which is caused by the amount of investments made by the public and the private sectors in building constructions projects. The industry's fortunes tend to fluctuate with the general economy, and it has a cyclical nature and quick response to the changes in the economy (Enshassi, et al., 2006).

Bolton (1990) stated that the building construction industry problems can be categorised into three areas: (1) problems of shortages or inadequacies in industry infrastructure, (2) problems caused by clients and consultants, and (3) problems caused by contractor's incompetence/inadequacies. Bolton (1990) further indicated that the major problems faced by building contractors in developing countries such as Ghana have been classified as problems imposed by the industry's infrastructure, problems of inaccurate information and frequent changes in instructions and failure to meet obligations on the part of clients and consultants, and problems imposed by their own shortcomings. Navon (2005) emphasised that liquidation is one indicator of poor sustainability in building construction. Any person who goes into business, their ultimate goal is to get maximum profit and it is no different to the building

contractors, which means that cutting their profit margins is making them run their business in difficult situations and having to cut costs in almost everything they do, and sometimes compromising quality of work (Clough, 1986).

Complexity, risks involved in the building construction industry have led to enormous failures especially in small contractors and those small emerging contractors harboring the wrong impression that there is quick money to be made are the mostly affected (Murdoch and Hughes, 1992). The aim of this study is to investigate the challenges facing building contractors that cause them to fail.

1.2 Problem Statement

A study into the challenges facing building contractors in the building industry at any given time reveals building construction companies liquidation. The media have been reporting on building construction companies liquidation. The researcher had also observed quite a number of uncompleted public and private buildings in the study area. This implies that there are challenges that the building contractors are facing that have resulted to this situation. A survey of some construction sites in the Accra Metropolis, revealed factors that contribute to the challenges and are numerated below;

- Lack of skilled human resources experts
- Lack of efficient project managers
- Lack of conducive working environment
- Lack of motivating workers to perform to their maximum potential

1.3. Purpose of the Study

The main purpose of the study is to investigate the challenges facing building contractors in Accra Metropolis

1.4 Objectives of the Study

The objectives to be achieved in this study, are to:

- identify the challenges facing building contractors in the Accra Metropolis that lead to the high failure rate.
- investigate strategies employed by building contractors in countering the challenges they are facing.
- make suggestions that could minimise the challenges faced by the building contractors.

1.5. Research Questions

The main research questions are:

1. What are the challenges facing building contractors in the Accra Metropolis that lead to the high failure rate?
2. What strategies are employed by building contractors in countering the challenges they are facing?
3. What suggestions could be put in place to minimise the challenges faced by the building contractors?

1.6. Significance of the Study

- This study features within the field of project. The study, therefore contributes to the research and practice communities, by addressing issues on which challenges occur and their causes in building projects in Accra Metropolis.
- It also contributes to the strategies and mechanisms for management and prevention of challenges in building projects in Accra Metropolis.
- The results of the study provide additional knowledge required by clients/financiers, project managers, architects, engineers, quantity, project managers, architects, engineers, quantity surveyors, contractors and other stakeholders in the management of building projects.
- It also helps in selection of contractor which is one of the main activities of clients, without a proper and accurate method for selecting the most appropriate contractor, the performance of the project will be affected.

1.7. Scope of the Study

The study is limited to local contractors in Accra Metropolis, the study area. This will include the client as part of the building team; the contractor as the undertaker of the work; architect as the designer; quantity surveyor as the estimator and engineers as the streamliners of the building project

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1. Introduction

This section reveals relevant and related literature to this study. In reviewing this literature, the following themes formed the sub-headings.

2.2 The Roles of Building Construction Actors in Construction cost

There are diverse interests in the construction industry. The principal interests or actors in the building construction industry are:

- The Client as part of the building team
- The Contractor as the undertaker of the work
- Architect as the designer
- Quantity surveyor as the estimator
- Engineers as the streamliners of building project

2.2.1. The Client as Part of the Building Team

The client is, by far, the single most important member of the construction team. He is the initiator and financier of all the projects. Koskela (1999) noted that the major contribution the client can make to the successful operations of the construction industry lies in his skill in specifying his needs prior to the preparation of the design. It is also important for the client to set cost limits of the project at the briefing. He should also ensure that adequate financial provisions are made prior to the commencement of any project.

The client in a building team is the owner or the developer of a building project, employs a contractor to undertake the works, and is also referred to as the employer. The key role of a client as a financier in a building project is to finance the project.

2.2.2. The Contractor as the Undertaker of the Work

Koskela (1999) further reveals that the major task of contractors is to assemble and allocate the resources of labour, equipment and materials to the project in order to achieve completion at maximum efficiency in terms of time, quality and cost.

The contractor is a member in a building project that carries out the actual physical construction works of the structure. Depending on the nature of project, there may be a general or main contractor who has a contract with the client. The contractor is fully responsible for undertaking the project works within time, cost and quality stipulated in the contract. However, depending on the complexity of the project, some parts of the work may require specialised skills, for instance electrical, plumbing and air conditioning installations that may demand involvement of a specialist or sub-contractor in a project. Two forms of subcontracting are mostly used: (i) Domestic sub-contracting: under this arrangement the main contractor engages a sub-contractor who is fully under his control, and the subcontractor has no contractual relationship with the client. (ii) Nominated sub-contractor whereby under this arrangement, the sub-contractor is nominated by the client through his consultants, and is approved by the contractor who enters into a contract with him. However, the nominated sub-contractor has some limited contractual links with the client. For instance under the East Africa standard form of building contract, 1991 edition, the client can intervene and make direct payments in case the main contractor has not paid the subcontractor his dues. (Koskela, 1999)

2.2.3. Architect as the Designer

According to Koskela (1999) every building should be designed and supervised by an architect. The architect is appointed by the client/employer and normally is the team leader of a building design team. The scope of the work undertaken by an architect may be divided into two phases, the pre-contract and post-contract phases. During the pre-contract phase, the architect based on the client's requirements often given in a project brief, formulates the project idea in terms of size, function and appearance then transforms these into plans that can be used for construction. During the post contract phase the architect is involved in supervision and administration of the project so as to provide the client with an acceptable and satisfactory building upon completion.

Depending on the nature, sophistication and specialist knowledge required in the design, supervision and administration of the project, the architect may require the assistance of consultants from other professional disciplines like engineers and quantity surveyors.

2.2.4. Quantity Surveyor as the Estimator

The quantity surveyor is another member in a building project team. The quantity surveyor's role mainly is of a building cost advisor that includes forecasting the cost of the project, preparation of tender and contract documents, preparation and control of financial expenditure of the project. According to Langford & Male (2001) a quantity surveyor may be employed directly by the client / employer of the project or by a design team leader to work on behalf of the client in a building project. However, on the other hand, quantity surveyors may also be employed by building contractors to work on project matters related to cost and contract (Langford and Male, 2001).

2.2.5. Engineers as the Streamliners of Building Project

There are different engineering disciplines required in building projects. The most common disciplines are civil, structural, mechanical and electrical engineering. The engineers in line with their areas of specialisation are responsible for design and supervision of their respective areas of expertise. Engineers as is the case of quantity surveyors may be directly employed by the client or may be employed by a design team leader to work on behalf of the client. However, engineers also are employed by building contractors to work on their behalf in particular for supervision and management of construction works (Kerzner, 2003).

2.3. The Construction Processes

The construction process involves a number of stages that are distinct or may overlap depending on the nature of construction (Ankrah and Langford, 2005). According to them, for a typical building project the construction process is divided into four main stages, namely: pre-design, design, construction and post-construction stages. Each stage involves a number of sub-stages under which a number of activities are performed.

2.3.1. Pre-design Stage of Construction Projects

This is the first stage in the construction process. It is the stage from the time when the client conceives an idea of undertaking a construction project to the time before the start of design work. This stage includes three sub-stages; the idea development, inception and feasibility study sub-stages.

The idea development is the sub-stage when the prospective project client comes up with ideas of building a structure. Such ideas may arise from the need and demand for

the facility or may arise from someone outside the client's setup who may advise the prospective client on the best way of utilising his resources by investing in construction. Interviews conducted revealed that, it is becoming common for architects, quantity surveyors and engineers to approach individuals and public institutions possessing land particular in prime areas or those with good financial capital base to advise them how best they can invest in building projects (Ankrah and Langford, 2005).

The inception is the next sub-stage that the prospective client considers his requirements and appoints an architect or the design team to prepare the general outline of requirements and plan future actions to come up with a project "brief". The feasibility sub-stage provides the client with an appraisal and recommendation in order to determine the form in which the project is to proceed, ensuring that it is feasible functionally, technically and financially. In order to accomplish this stage the design team has to carry out studies of user requirements, site condition, planning, design and cost etc. as necessary to reach such decisions. This sub-stage although is essential for building projects, often is not included in the terms of reference prepared by the procuring entity as one of the assignments to be done by consultants as was revealed by some interviewed consultants (Ankrah and Langford, 2005).

2.3.2. The Design Stage of the Projects

This is the second stage in the construction process after the pre-design stage. It covers all activities involving design work up to the time when the contractor starts the works on site. The key sub-stages or activities under this stage include: outline proposal design, when the design team determines the general layout, design and

construction in order to obtain approval of the client on the outline proposals and accompanying report (Ankrah and Langford, 2005).

The scheme and detailed design sub-stage is when the design team completes the brief and decides on particular proposals, including planning arrangement, appearance, constructional method, outline, specification, and cost plan in order to obtain all approvals from the client and statutory authorities including municipality / town council in which the building is to be constructed (Ankrah and Langford, 2005).

Preparation of production or working information sub-stage follows after getting the necessary approvals. At this sub-stage a full design of every part and component of the building is carried out and completed, every matter related to specifications, construction and cost checking of the design are also completed. This stage involves the preparation of final production or working information including schedules and specifications and making final detailed decisions to carry out work. Preparation of bills of quantities and tender action is the next sub-stage. This sub-stage involves preparation of all information and arrangements for obtaining tenders (Ankrah and Langford, 2005).

2.3.3. The Construction Stage of the Projects

This is the stage when the design is transformed into physical objects or structures by the contractor(s). At this stage the design team has a duty of visiting the site of works, provide further information required for the works, inspect the works to ensure they are done according to the design and give general advice on all matters related to the project (Ankrah and Langford, 2005).

2.3.4. Post-construction Stage

This is the stage after completion of construction works and the completed project is handed over to the client. A defects liability period is normally set in the contract during which if there are any defects noted after practical completion of the works, which are due to faults committed by the contractor, the contractor is liable to rectify them at his cost. This period depending on the nature of the project may range from six to twelve months. During this period, it is the duty of the design team to make final inspections, identify defects and final account for final payments to the contractor (Ankrah and Langford, 2005).

2.4. Management of Building Materials

Different researchers provide different definitions for material management. Therefore, different definitions can be found in different references. Basically, material management is concerned with the planning, identification, procuring, storage, receiving and distribution of materials. The purpose of material management is to ensure that the right materials are in the right place, in the right quantities when needed. The responsibility of one department (i.e. material management department) for the flow of materials from the time the materials are ordered, received, and stored until they are used is the basis of material management (Dlungwana and Rwelamila, 2003).

Ballot (1971) defines material management as the process of planning, acquiring, storing, moving, and controlling materials to effectively use facilities, personnel, resources and capital. Tersing and Campbell (1977) define material management as the process to provide the right materials at the right place at the right time in order to maintain a desired level of production at minimum cost. The purpose of material

management is to control the flow of materials effectively. Beekman-Love (1978) states that a material management structure should be organised in such a way that it allows for integral planning and coordination of the flow of materials, in order to use the resources in an optimal way and to minimise costs.

Chandler (1978) states that material management systems should be implemented to plan, order, check deliveries, warehousing, controlling the use of materials and paying for materials. He adds that these activities should be interrelated. Ammer (1980) defines material management as the process in which a company acquires the materials that it needs to achieve their objectives. This process usually begins with the requisition of materials from the supplier until the material is used or incorporated into a product. Bailey and Farmer (1982) define material management as a concept concerned with the management of materials until the materials have been used and converted into the final product. Activities include cooperation with designers, purchasing, receiving, storage, quality control, inventory control and material control. Gossom (1983) indicates that a material management system should have standard procedures for planning, expediting, transportation, receipt and storage to ensure an efficient system for materials control. Cavinato (1984) states that material management involves the control of the flow of goods in a firm. It is the combination of purchasing with production, distribution, marketing and finance. Arnold (1991) states that material management is a function responsible for planning and controlling of materials flow. He adds that a materials manager should maximise the use of resources of the company.

Materials management is an important element in project planning and control. Materials represent a major expense in construction, so minimising procurement or purchase costs presents important opportunities for reducing costs. Poor materials

management can also result in large and unavoidable costs during construction. First, if materials are purchased early, capital may be tied up and interest charges incurred on the excess inventory of materials. Even worse, materials may deteriorate during storage or be stolen unless special care is taken. For example, electrical equipment often must be stored in waterproof locations. Second, delays and extra expenses may be incurred if materials required for particular activities are not available (Milgon and Roberts, 1992).

Accordingly, insuring a timely flow of material is an important concern of project managers. Materials management is not just a concern during the monitoring stage in which construction is taking place. Decisions about material procurement may also be required during the initial planning and scheduling stages. For example, activities can be inserted in the project schedule to represent purchasing of major items such as elevators for buildings (Damodara, 1999)

The availability of materials may greatly influence the schedule in projects with a fast track or very tight time schedule. Sufficient time for obtaining the necessary materials must be allowed. In some cases, more expensive suppliers or shippers may be employed to save time. Materials management is also a problem at the organisation level if central purchasing and inventory control is used for standard items. In this case, the various projects undertaken by the organisation would present requests to the central purchasing group. In turn, this group would maintain inventories of standard items to reduce the delay in providing material or to obtain lower costs due to bulk purchasing (Cavinato, 1984).

This organisational materials management problem is analogous to inventory control in any organisation facing continuing demand for particular items. Materials ordering problems lend themselves particularly well to computer based systems to insure the

consistency and completeness of the purchasing process. In the manufacturing realm, the use of automated materials requirements planning systems is common. In these systems, the master production schedule, inventory records and product component lists are merged to determine what items must be ordered, when they should be ordered and how much of each item should be ordered in each time period. The heart of these calculations is simple arithmetic: the projected demand for each material item in each period is subtracted from the available inventory.

When the inventory becomes too low, a new order is recommended. For items that are non-standard or not kept in inventory, the calculation is even simpler since no inventory must be considered. With a materials requirement system, much of the detailed record keeping is automated and project managers are alerted to purchasing requirements (Stukhart, 1995).

The role that a materials manager plays in an organisation is strictly economical since the materials manager should keep the total cost of materials as low as possible. The person in charge of handling materials should keep in mind the goals of the company and insure that the company is not paying extra money for materials. The goal of every company is to make a profit. This is the basis for company survival, costs should not exceed income, but keeping in mind customer's expectations. According to Stukhart (1995) the typical tasks associated with a material management system are:

- Procurement and purchasing
- Expediting
- Materials planning
- Materials handling
- Distribution
- Cost control

- Inventory management / Receiving/ Warehousing
- Transportation

Purchasing and procurement deals with the acquisition of materials to be used in the operations. The primary function of purchasing and procurement is to get the materials at the lowest cost possible, but keeping in mind quality requirements.

Expediting is the continuous monitoring of suppliers to ensure on time deliveries of materials purchased. The purpose of materials planning is to procure the materials for the dates when they are needed, storage facilities and handling requirements. The primary function of materials handling is to manage the flow of materials in the organisation. The manager has to ensure that the costs associated with handling materials are kept to a minimum. In cost control, the manager has to insure that the costs to buy materials are kept to a minimum. In other words, the manager has to ensure that he is buying the products at the lowest possible price. The inventory management deals with the availability of materials. Transportation involves using the safest most economical means to transport the materials to the site where they are needed.

2.5. Challenges Facing Building Contractors

2.5.1. Effects of Weather

Weather is the most uncontrollable factor amongst the other variables considered. Temperature and humidity affect productivity of workers. If the temperature and humidity are high, workers feel lethargic and lose physical coordination (Frimpong et al., 2003)

2.5.2 Inadequate Production of Raw Materials by the Country

Ogunlana, et al., (1996) noted that the reason for shortage of materials could be the defective supply of materials occasioned by general shortages in the industry, poor communication amidst sites and head office, poor purchasing planning and materials coordination. Ghana still imports cement and the possibility for its shortage is positive.

2.5.3. Supplier Manipulation

The major reasons for this factor are monopoly control of the market by some suppliers, work stoppages in factories, lack of industrialised materials, fluctuating demands forcing suppliers to wait for accumulation of orders and difficulty in importing raw materials from other countries.

2.5.4. Design Change

This problem arises from inadequate project planning and management of the design process. A quite distinctive example is the progress of West African Gas Pipeline (WAGP). Asamoah (2002) reported that WAGP project has suffered a number of setbacks, culminating in the escalation of its cost from an initial US \$500 million. One of the problems includes the changing of the initial plans to lay the pipeline offshore to an onshore configuration.

2.5.5. Political Interference

Asamoah (2002) reveals that 80 percent of the building contractors in Ghana are indigenous companies. The government agencies, in most cases are teleguided by the political heavy weight to award contract to party stalwarts at very high prices. The

consultants' estimates are disregarded in most cases when awarding contracts and where possible manipulated.

2.5.6. Relationship between Management and Labour

There is always a gap between the project management and labour. This gap should be kept as small as possible, so that the relationship between management and labour may be strengthened. They should work as a team to build a project with minimum cost. If the relationship between management and labour is bad the morale of the labourers will decrease and production will decrease leading to increased project cost.

2.5.7. Lack of Coordination between Designers and Contractors

Building contractors construct the project according to the project design. Normally, if the design has any mistakes, the contractors may apply the mistakes without knowing there are mistakes or without notifying and coordinating with the designer or the client. Implementing designs with mistakes obviously costs a lot of money.

2.5.8. Cost of Materials

Material price is subject to supply and demand and is affected by many other things, including quality, quantity, time, place, buyer and seller. Other factors affecting material cost include: currency exchange, low or high demand, material specification, inflation pressure and availability of new materials in the country.

2.5.9. Poor Financial Control on Site

Controlling the project financially on site is not an easy task. All resources need to be controlled: labour productivity, material availability, material waste, good and effective methods, using effective tools, equipment, good project planning and

scheduling. Project management should therefore be aware of all those factors in order to achieve better financial control on site.

2.5.10. Disputes on Site

Dispute is a major obstacle for any project. Normally disputes will exist if work does not match the contract document or if work is not included in the contract document. Any dispute will eventually delay the project and increase project cost.

2.5.11. Fluctuation of Prices of Materials

Asamoah (2002) surveyed contractors, consultants and public clients and revealed price fluctuation as the most severe cause of project cost escalation in Ghana. This could be attributed to the limitation in exchange rate which in turn affects construction materials prices and the general price level. Another factor is the unstable inflationary trend in Ghana which is a result of demand exceeding supply, creating a scarcity of goods which in turn leads to escalation of the goods.

2.5.12. Wrong Method of Estimation

This factor could be attributed to the unpredicted inflationary trend, lack of adequate training and experience at the senior management level, and fraudulent practices (Mansfield *et al*, 1994).

2.5.13. Transportation Cost

As the government increases the price of fuel, transportation companies raise the cost of their services to cover the fuel increase and that obviously translates to an increase in transportation cost.

2.5.14. Duration of Contract Period

Usually the longer the duration of the contract the more resources will be put into the project. Any delay to a project will lead to an increase in the project cost. If the delay comes from the contractors, the project owner will lose the opportunity to invest in the project earlier. Also, if the cause of the delay is the client, the contractor may lose the opportunity to win other projects or suffer from not utilising the full resources.

2.5.15. Contractors' Financial Difficulties

According to Zagorsky (2007), financial difficulty is defined as getting into a situation where a respondent's credit is adversely impacted, such as not paying bills. Contractor's financial difficulties are defined as the contractor not having sufficient funds to carry out the construction works. This includes payment for the materials, labourers' salaries and equipment to be used for the construction work.

Thornton (2007), in his survey, found that slow collection, low profit margins and insufficient capital or excessive debt are the three major causes of financial difficulties among contractors. Mansfield *et al.* (1994) found that delay in payment from the client would eventually cause financial difficulties to the contractor. Thus, most of the construction works cannot be carried out due to these financial difficulties.

Insufficient profit is the second highest factor contributing to the financial difficulties of the contractor. Coulter and Kelley (1992) also agree with this and they further explained that insufficient profit cannot be controlled because it is due to bad economic conditions. Coulter and Kelley (1992) and Thornton (2007) both postulated that insufficient capital is one of the major causes of financial difficulties among contractors. Poor financial control by the contractor can lead to insufficient capital

(Liu, 2010). Hence, the contractor will have excessive debt which causes them to face financial difficulties as they cannot pay back the debt.

2.5.16 Material Shortage on Construction Sites

According to Majid and McCaffer (1998), material shortages are due to poor materials planning, inefficient communication, unreliable suppliers and late delivery. Mochal (2003) stated that poor planning is mistake number one in project management. This is reflected in the scenario in which poor materials planning from the contractor could lead to material shortage because the materials needed for construction may not be available within a certain time frame. This is due to mistakes in the planning stage relating to when the materials are expected to be used in the construction phase. Hence, it will cause a delay to the project.

Inefficient communication is another factor that will lead to material shortage. Bockrath (2000) stressed that the success or failure of a business is directly related to the ability to communicate. Inefficient communication is, therefore, a significant problem because misunderstandings between contractors and suppliers will lead to either early or late delivery of materials to the site. Earlier delivery might affect the quality of the materials while on the other hand, late delivery will postpone the work to be carried out on the construction site. This will significantly delay the work and thus, delay the project.

Dada *et al.* (2007) defined “unreliable supplier” as a factor whereby the quantity of material delivered by the supplier is less than the quantity ordered. This clearly shows that unreliable suppliers will lead to material shortage because the quantity of materials ordered is not delivered to site. Hence, it will lead to material shortage and delay the work of the contractor.

According to Ruiz-Torres and Farzad (2006), supplier failure to deliver on time can disrupt operations and delay the completion of a project. Murray (2003) on the other hand found that delivery by supplier is one of the most significant factors in choosing supplier and it is very important for the supplier to deliver materials on time. They showed that late delivery by the supplier is an important factor because it will directly affect the completion time of a project.

This is further supported by Asamoah (2002) who conducted a study of causes of delay in Ghana construction projects in which they found that late delivery of materials is the main cause of delay. Arditi *et al.* (1985) ranked material shortages as the number one factor for delays in construction projects. They also found that cement, which is one of the most important materials to be used in the construction industry, cannot be kept for long periods of time. Thus, this may lead to shortages of cement. From all the studies mentioned above, it shows material shortage is a very significant factor that will contribute to delay in construction projects.

2.5.17. Labour Shortage

Bruce and Dulipovici (2001) defined labour shortages in simple terms as the difficulty in finding the right people to fill the available job. Labour shortage is a problem faced by many countries all over the world. There are several causes of labour shortages. As stated by Still (2000), a shortage of skilled labour can result from an increase in the demand for labour. This is due to the increase in demand for the goods or services provided. In the construction industry context, the buying power of the consumer increases and this will lead to higher quality buildings being produced to meet increasing demands. Thus, more labourers are required to produce high quality work.

2.5.18. Poor Site Management

Effective and efficient site management by contractors is very important to ensure projects are completed on time. Poor coordination contributes to delay from estimated completion time. Poor site management may occur when contractors do not have enough experience and suffer from a lack of knowledge in managing the project team. A project manager is the leader in a construction project in the sense that he is required to manage all the works on site from monitoring progress of construction works to managing all the administrative work in the project. It is of utmost importance for the project manager to manage the work and project teams effectively. Hence, poor site management from the project manager will affect the whole team and also the progress of works, resulting in the eventual outcome of project delay. This view is supported by studies conducted by Augustine and Mangwat (2001) and Arshi and Sameh (2006). Yang and Ou (2008) found out that poor site management is one of the factors that contribute to delay in construction projects.

2.5.19. Equipment and Tool Shortage

Chang *et al.* (1991) highlighted that the input of tools and equipment used in the construction site are either provided through direct investment by the contractor or acquired through leasing. Some contractors may acquire tools and equipment using both methods. The contractor has to plan the usage of equipment according to the construction work to be carried out during a particular period of time because equipment obtained by leasing has to be returned to the supplier by the due date at the end of the lease period. Bockrath (2000) added that the construction of high rise buildings is increasing and, as a result, the use of cranes is also increasing. However, this is contributing to equipment shortage as the crane suppliers do not have a

sufficient number of cranes to be leased out in order to meet this increasing demand. Hence, it is less likely that the contractor would be able to extend the lease period of cranes if it was necessary to do so. This shows that failures in effectively planning the usage of equipment will cause equipment and tool shortages.

2.5.20. Construction Mistakes and Defective Works

Gerskup (2010) claimed that poor workmanship, carelessness and shortcuts are the three key factors that will contribute to defective works. Bockrath (2000) also agrees that poor workmanship is the main contributor to defective works. She reported that poor qualities of building may be poor due to poor workmanship by the contractor. In addition, Gerskup (2010) mentioned that poor workmanship is the main factor that produces dysfunctional buildings. The use of poor quality materials is one example of poor workmanship.

Careless mistakes such as taking incorrect measurements from plans and specifications will lead to construction mistakes (Thomas, 1991). Additionally, incorrect units and measurements during construction will produce defective work. As a result, the contractors need to reconstruct those construction mistakes which result in taking additional time to complete the project.

A shortcut can be defined as the path that takes lesser time to complete compared to the usual path. Thomas (1991) emphasised that contractors usually use shortcuts to complete the construction work due to time and cost constraints. Shortcuts will, however, eventually produce defective works which need to be rectified later in the completion stage. This will subsequently delay the project.

2.5.21. Coordination Problems

In a construction project, there are many parties involved such as contractor, consultant, sub-contractor and client. Often, it may be difficult for these various separate parties to coordinate well in order to complete the project. In one study conducted by Assaf *et al.* (1995) it was found that difficulty in coordination between the parties is one of the factors that contribute to delay. In addition, Majid and McCaffer (1998) also agreed that coordination problems will contribute to delay.

According to Sambasivan and Yau (2007), most of the unskilled labourers are uneducated. Thus, coordination is very important to guide and instruct these labourers to perform their work correctly. Without coordination, the project will be delayed due to rectifying defective works and low productivity of labourers.

2.5.22. Late Payment

According to Gerskup (2010) late payment is a common problem especially during times of economic crisis. This is supported by Still (2000) who found that late payment is a major problem among building contractors. Odeh and Battaineh (2002) found that late payment was the second highest factor contributing to delay. Late payment may occur during the construction process and it is likely to be more severe during delay periods. The owner or client may use postponement of the project as a reason to delay the payment to the contractor.

2.6 Common Problem Faced by Contractor

Some of the problems unfortunately only surface after commencement of a project and if not expected, can pose real problems to unsuspecting employers and contractors. A few of the several potential problems are mentioned below (Tan, 1997).

The unsuspecting employer may find that he still has to engage his own consultants for technical guidance and preparation of material setting out the employer's requirements. The unsuspecting contractor may find that his costs and effort for tendering would be quite high especially if he is unsuccessful in the tender exercise. Also, a contractor's perception of liability assumed for design could be much wider than anticipated (Tan, 1997).

Tan(1997) listed the following as the common problems facing building contractors

- The problem of delays in the construction industry is a global phenomenon and the construction industry in Ghana is no exception
- Delays and disruption to contractor's progress are a major source of claims and disputes in the construction industry. The matters often in dispute concern the dichotomy in responsibility for delays (projects owner or his contractors) partly because of the multifarious nature of the potential sources of delays and disruption. With increased project complexity and requirements coupled with multiple parties all subject to their performance exigencies, the resolution of such claims and disputes has become a matter of the greatest difficulty
- The factor adversely affecting the cost performances of project are conflict among project participants, ignorance and lack of knowledge, presence of poor project specific attributes and non existence of cooperation, hostile socio economic and climatic condition, reluctance in timely decision , aggressive competition at tender stage and short bid preparation time
- Late and non-payment will cause severe cash flow problems especially to contractors.

- Delays or late deliveries, sub-standard workmanship and materials, poor safety management on sites and cost over-run of government's projects are some the issues that have been seriously discussed by the government.
- Failures to perform to the quality expectations
- Delays causes financing of and payment for completed works, poor contract management, changes in site condition and shortages in materials.
- financial constraints
- Late payment by clients
- relationships between emerging contractors and suppliers
- difficulties when running a business
- Some common types of problem faced by building contractors in construction industry are as follows:
 - i. Lack of expertise and experiences
 - ii. Over-optimistic estimation in tender bids
 - iii. Material price escalation
 - iv. Financial Problems
 - v. Materials supply networking
 - vi. Lack of skilled workers
 - vii. Lack of construction materials and machineries
 - viii. Inefficient and ineffective planning and management
 - ix. Communication problems (Tan, 1997)

2.7. Determinants of Building Contractors' Failure

Warszawski (1996) said that building contractors' failure is not only extremely disruptive to the company but may also cause significant rippling effects in an economy. Argenti (1976) concluded six main causes as a result of building contractors failure as follows; top management, accounting information, change, accounting manipulation, rapid expansion, economic cycle.

Al-Hallaq (2003) on the other hand listed seven main causes of building contractors failure are as follows;

- **Lack of capital** was indicated as the first cause of company failure and explained the difficulties companies go through before they can access funds to finance projects,
- **Under costing** as the second ranked factor of company failure; The study indicated that often there is no costing system put in place at all by the companies and even where there is, such things as interest on loans or depreciation are forgotten,
- **Thirdly, lack of control;** The research explained that most owners prefer to be active themselves rather than check up on other people's activities,
- **Fourthly, lack of advice;** it was indicated that owners are reluctant to ask for advice from bankers, accountants, solicitors and so on and therefore results in company failure,
- **Fifthly, the government;** a great many bankrupts blame the government whose fiscal and monetary policies affect the companies,
- **Trade fluctuations** were next in ranking; it was indicated that companies are often caught out by the business cycle, by mergers and by technological change,
- Finally, **fraud;** this cause by the study is increasing.

Influential factors to building contractors failure to the lack of business experience, difficulties with cash flow and poor relationship with the client drove the building contractors' failure. In addition, preparing an accurate and realistic bid proposal with the profit margin being carefully determined is highly critical. However, due to high competition, companies are usually forced to reduce their profit in order to win the bid and this would increase the default risk substantially.

2.8. Previous Findings Based on Contractor's Viewpoint

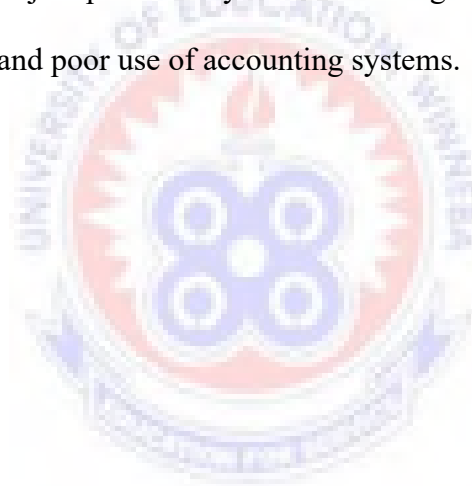
Further studies have been done based on the contractor's view point who is a key stakeholder in the industry. In the light of this, Enshassi, *et al* (2006) in their research on Palestine, also identified main factors that cause business failure based on contractors' view point. The research identified delay in collecting debt from clients (donors), border closure, heavy dependence on bank loans and payment of high interest on these loans, lack of capital, absence of industry regulations, low profit margin due to high competition, awarding contracts by client to the lowest bidder, and lack of experience in contract management.

Osama (1997) had previously presented a study of the factors that contribute to the failure of construction contractors in Saudi Arabia and found that the most important factors were: difficulty in acquiring work, bad judgment, lack of experience in the firm's line of work, difficulty with cash flow, lack of managerial experience, and low profit margins.

Other professionals have also undertaken studies of causes of failure in the industry. Davidson and Maguire (2003), based on their accountancy experience, identified ten most common causes for contractor failures as: (i) growing too fast; (ii) obtaining work in a new geographic region; (iii) dramatic increase in single job size; (iv)

obtaining new types of work; (v) high employee turnover; (vi) inadequate capitalisation; (vii) poor estimating and job costing; (viii) poor accounting system; (ix) poor cash flow; and (x) buying useless stuff.

Specialist firms in this industry also experience business failure as a result of various factors. Schaufelberger (2003) acknowledged this problem and therefore studied business failure at the subcontractor level and found that the primary causes of subcontractor business failure were insufficient capital to work with, excessive debt owed banks and suppliers, lack of managerial maturity in the execution of their work, lack of early warning measures, increase in project scope, poor billing procedures, failure to evaluate project profitability before entering into it, unfamiliarity with new geographical areas, and poor use of accounting systems.



CHAPTER THREE

METHODOLOGY

3.1. Introduction

This chapter includes a description of research design, the research context, the instrument used, research participants, and how the data were analysed.

3.2. Research Design

A research design guides the researcher in planning and implementing the study in a way that is likely to achieve the intended goals (Majumdar, 2005). The study used descriptive cross-sectional survey research design. The cross-sectional survey research design was used because the method gathers data from a relatively large number of different categories of respondents at a particular time. According to Gall (1996) this design is used when the study is aimed at collecting data from the respondents without the need to make a follow up of the same respondents.

The present study also used descriptive design because it enabled the researcher to determine and report accurately. Gall (1996) noted that descriptive survey research is intended to produce statistical information. Put differently, descriptive studies are an attempt to provide a complete and accurate description of a situation in its current status.

3.4. Population of the Study

The target population for the study is made up of contractors, clients, trade foremen, labourers and artisans in the study area.

3.5. Sampling Technique and Sampling Size

Convenience sampling was used to select the participants. Convenience sampling involves selecting cases or units for observation as they become available to the researcher (Leedy, 1993). A convenience sampling technique was most appropriate for this study as it would not be possible to get access to all the study participants. Punch(1998) acknowledges that it is not always feasible to collect data on every possible observation in the population.

According to Creswell (2003) a sample is a segment that consists of the same characteristics as the population on whom the study is conducted. It is a representative group drawn from the population. The total sample size for the study comprised 95 respondents comprised of 25 clients, 25 contractors (Project Managers), 25 Trade Foremen, 10 labourers and 10 Artisans.

3.6. Data Collection Technique

The data collection techniques use for the study involved; questionnaire and interview.

3.7.1. Questionnaire

Seventy-five (75) questionnaires were developed and administered to construction workers in ten (10) building industries. The questionnaires were given to twenty-five (25) project managers, twenty-five (25) individual private clients and twenty-five (25) trade men which include masons, carpenters and steel benders were calculated in percentages. The issues in the questionnaires focused on constraints regarding the challenges on site for instance:

- Personal information

- Challenges facing building contractors
- Strategies to reduce the challenges
- Suggestions to reduce the challenges

3.7.2. The Interview Schedule

Semi-structured interviews were developed and conducted for ten (10) artisans and ten (10) labourers in one building company. This strategy was adopted to create the atmosphere for the participation of people in the construction field.

The interview focussed on issues on challenges facing building construction management. It also allowed the respondents to give their own and more independent views and suggestions. This helped the researcher better to determine the challenges facing building contractors.

3.8. Procedure for Data Collection

The questionnaire was delivered personally to the respondents. A time lapse of one week was allowed to enable the respondents complete the questionnaires. Thereafter, the researcher went round to retrieve them. In addition, the researcher used interview guide to measure the opinion of 10 artisans and 10 labourers on their perception on the challenges facing building contractors. It was a face – to – face interview. This was useful for gathering in-depth information on the subject under investigation.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter discussed the results obtained from questionnaires and interviews.

4.2. Results and Discussion from the Questionnaire

4.2.1. Results and Discussion of Questionnaire from Clients

The sex distribution of the clients indicated differences with 21 male representing 84% and 4 females representing 4%. Figure 1 illustrates this relationship.



Figure 4.1: Sex of the Clients

Source: Field Work, 2014

The researcher wanted to determine the type of client the respondents belong to and their responses were presented in Table 4.1. As showed in Table 4.1 Responses from respondents indicated that all the twenty-five (25) clients representing hundred percent (100%) are operative in their respective companies and sites that they operate. Besides, most of them are noted to be an association of government. Results about the type of client indicated that eight (8) of them representing thirty-two percent (32%) belong to the company, while four (4) of them representing sixteen percent (16%) belong to institution, whilst fifty-two percent (52%) belong to an association of government.

Table 4.1: Type of client do you belong to

Type of Client	Frequency	Percentage
Company	8	32.0
Institution	4	16.0
An association of government	13	52.0
Total	25	100.0

Source: Field Work, 2014

Other information the researcher wanted to determine was the duration the clients have been as clients and their responses were presented in Table 4.2. Results about employment duration revealed that four (4) of respondents representing sixteen percent (16%) worked less than three (3) years, while five (5) of them representing twenty percent (20%) worked between 3 and 6 years. However, seven (7) of them representing twenty-eight percent (28%) worked between 7 and 10 years, while the rest made up of nine (9) representing sixty-four percent (64%) worked 11 years and above.

Table 4.2: Duration of being a Client

Client Experience	Frequency	Percentage
Less than 3 years	4	16.0
Between 3 and 6 years	5	20.0
Between 7 and 10 years	7	28.0
11 years and above	9	64.0
Total	25	100.00

Source: Field Work, 2014

The researcher further wanted to determine the kind of job the clients offer to consultants and their responses were presented in figure 4.2.

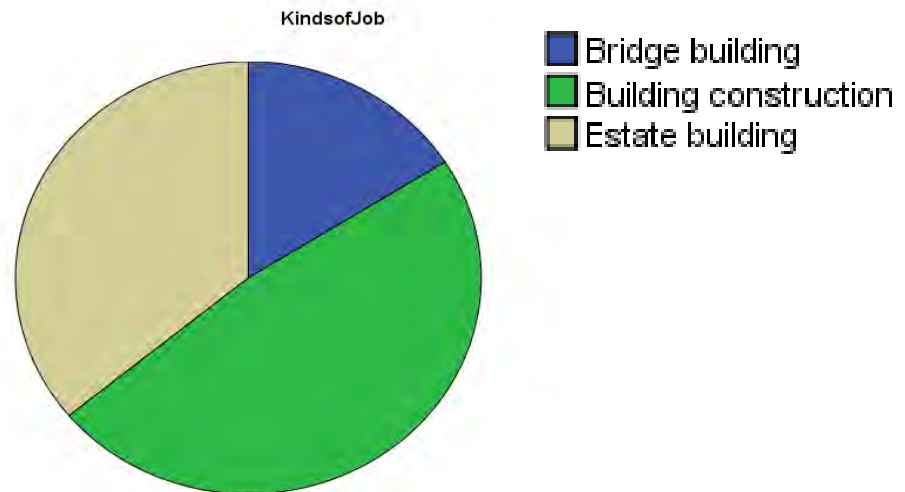


Figure 4.2: Kind of Clients Job

Source: Field Work, 2014

Four of the clients representing 16% indicated that they deal with bridge building, 12 of them representing 48% also claimed that they deal with building construction, while 9 of them representing 36% showed that they deal with estate buildings.

This showed that clients offered the greatest part of work for building construction which is representing forty-eight percent (48%), the next is for estate building which is representing thirty-six percent (36%) while the least is for bridge building representing sixteen percent (16%).

Table 4.3: Kind of Job Offered to Consultants

Kind of Job	Frequency	Percentage
Bridge building	4	16.0
Building construction	12	48.0
Estate building	9	36.0
Total	25	100

Source: Field Work, 2014

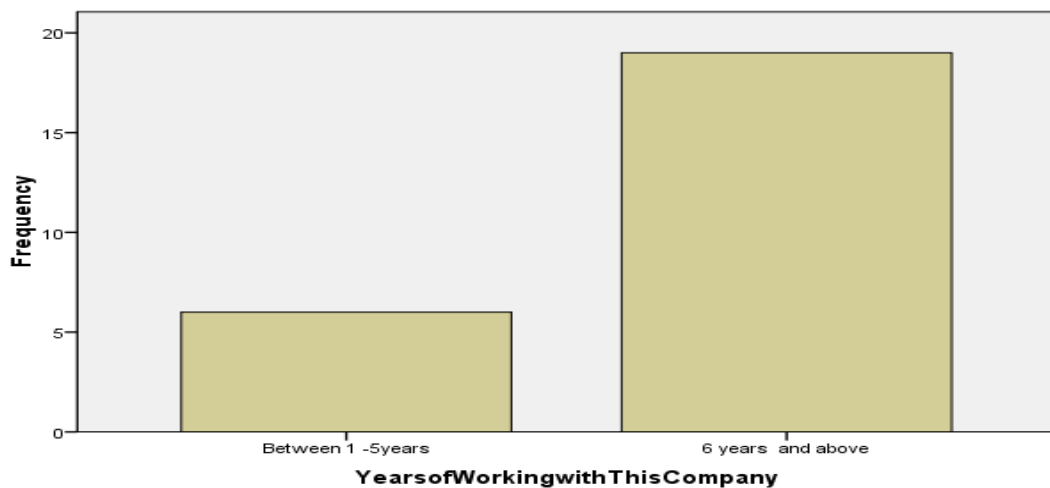
The researcher further wanted to determine the number of jobs the clients offered to consultants in a year and their responses were presented in Table 4.4. Three (3) of the clients representing twelve percent (12%) revealed that they have been offered less than 8 jobs, while nine (9) of them representing thirty-six percent (36%) were offered between 8 to 12 jobs. Lastly, thirteen of them representing fifty-two percent (52%) were offered 13 jobs and more.

Table 4.4: Number of Jobs Offered to Consultants

Number of jobs offered to consultant	Frequency	Percentage
Less than 8	3	12.0
Between 8 to 12	9	36.0
13 jobs and above	13	52.0
Total	25	100.0

Source: Field Work, 2014

The researcher further wanted to determine the years the clients had worked with their company and their responses were presented in figure 4.3.

**Figure 4.3: Years the Clients Had Worked with their Company**

Source: Field Work, 2014

As indicated on figure 3, 6 of the clients representing 24% indicated that they have worked with the company between 1 to 5 year, while 19 of them representing 76% indicated that they have worked with the company between 6 to 10 years.

Table 4.5: Length of Working Period

Duration with this company	Frequency	Percentage
1 -5 years	6	24.0
6-10 years	19	76.0
Total	25	100.0

Source: Field Work, 2014

As revealed in Table 4.6 the mean and standard deviation scores of the clients' perception on challenges facing building contractors. This indicated that providing a safe and decent working environment for workmen had mean score of 2.44 and standard deviation of 0.92, while ensuring safe access to and from the working place had mean score of 1.92 standard deviation of 0.86. Again, lack of conducive working environment had mean score of 2.72 and standard deviation of 0.74, lack of skilled human resources experts mean score 3.60 and standard deviation of 0.65 and poor employees' perceptions of work mean score 1.92 and standard deviation of 0.86. Similarly, poor application of technology had mean score 2.88 and standard deviation 0.67, while inadequate of work facilities mean score 2.80 and standard deviation of 0.87. The overall mean score was 2.61 and standard deviation of 0.80.

Table 4.6: Clients Perception on the Challenges Facing Building Contractors in the Accra

Statements	Mean	Standard Deviation
1. Providing a save and decent working environment for workmen	2.44	0.92
2. Ensuring safe access to and from the working place.	1.92	0.86
3. Lack of conducive working environment.	2.72	0.74
4. Lack of skilled human resources experts	3.60	0.65
5. Poor employees' perceptions of work	1.92	0.86
6. Poor application of technology	2.88	0.67
7. Inadequate work facilities	2.80	0.87
Grand Mean/Standard Deviation	2.61	0.80

Source: Field Work, 2014

The mean and standard deviation scores of the clients in Table 4.6 shows that the lack of skilled human resources experts was the major challenge that faced building contractors with highest mean score of 3.60 and standard deviation of 0.65. This was followed by poor application of technology that had the mean and standard deviation of 2.88 and 0.67 respectively.

Suggestions to minimise the challenges faced by the building contractors

This research question was intended to find out from the respondents the suggestions that could be put in place to minimise the challenges faced by the building contractors. The clients' perception in the issue at stake was categorised and presented in Table 4.7.

Table 4.7: Clients Perception on the suggestions to minimise the Challenges Faced by the Building Contractors

Statement	Frequency	Percentage
Having sufficient funds to carry out the construction works	7	28.0
Finding the right people to fill the available job	10	40.0
Efficient material management system	8	32.0
Total	25	100

Source: Field Work, 2014

It indicated that out of the 25 clients who participated in the study, 7 of them representing 28% showed that having sufficient funds to carry out the construction works was the best suggestion that could be put in place to minimise the challenges that building contractors faced, 10 of them representing 40% were of the view that it was about the right people to fill the available job, while 8 of them representing 32% claimed that it was efficient material management system.

As illustrated in Table 4.8, clients perception on the strategies employed by building contractors indicated that provision of job satisfaction had mean score 3.76 and standard deviation of 0.44, provision of job security mean score 2.96 and standard deviation of 1.02, while attractive remuneration had mean score 3.84 and standard deviation of 0.37. Added to this, desired working hours mean score 1.96 and standard deviation of 0.79, projects should be viable and rewarding mean score 2.76 and standard deviation of 0.83 while there should be suitable environment had the mean score and standard deviation of 2.76 and 0.97 respectively. The grand mean score and standard deviation were 3.01 and 0.74 respectively.

Table 4.8 Clients Perception on the Strategies Employed by Building Contractors

Statements	Mean	Standard Deviation
1. Provision of job satisfaction	3.76	0.44
2. Provision of job security	2.96	1.02
3. Attractive remuneration	3.84	0.37
4. Desired working hours	1.96	0.79
5. Projects should be viable and rewarding	2.76	0.83
6. There should be suitable environment	2.76	0.97
Grand Mean/Standard Deviation	3.01	0.74

Source: Field Work, 2014

The mean and standard deviation scores of the clients in Table 4.8 show that attractive remuneration was the most popular strategies employed by building contractors in countering the challenges they are facing with highest mean score of 3.84 and standard deviation of 0.37. This was followed by the provision of job satisfaction that had the mean and standard deviation of 3.76 and 0.44 respectively.

4.2.2. Results and Discussion of Questionnaire from Contractors

Demographic Characteristics of the Contractors

The sex distribution of the contractors indicated differences with 22 male representing 80% and 3 females representing 12%. Table 4.9 illustrates this relationship.

Table 4.9: Sex Distribution of Respondents

Sex	Frequency	Percentages
Male	22	88.0
Female	3	12.0
Total	25	100.0

Source: Field Work, 2014

Work Classification of the Contractors

The researcher further wanted to determine the work classification of the contractors and their responses as presented in Table 4.10.

As indicated in the table, 4.8 of the contractors representing 32% indicated that they deal with bridge building, 4 of them representing 16% also claimed that they deal with road construction, while 13 of them representing 52% showed that they deal with buildings construction. This revealed that building contractors had the highest number of people, while bridge contractors is the second higher and the road contractor had the least number of people.

Table 4.10: Contractors work Classification

Classification	Frequency	Percentage
Bridge Contractor	8	32.0
Road Contractors	4	16.0
Building Contractor	13	52.0
Total	25	100.0

Source: Field Work, 2014

Contractors Working Experience

The contractors working experience was solicited and their responses were presented in Table 4.11.

Table 4.11: Contractors Working Experience

Years	Frequency	Percentage
Between 1 – 5 years	7	28.0
Between 6 – 10 years	13	52.0
11 years above above	5	20.0
Total	25	100.0

Source: Field Work, 2014

With regard to their working experience of the contractors, the table indicates that out of 25 contractors who participated in the study, 7 representing 28% reported that they have worked between the years 1 and 5 years 13 them representing 52% indicated that they have worked for between 6 and 10 years, while 5 of them representing 20% indicated that they have worked for 11 years and above.

As shown in Table 4.12 contractors' perception on the challenges facing building contractors in Accra indicated that providing a safe and decent working environment for workmen had mean score of 2.80 and standard deviation of 0.91 while ensuring safe access to and from the working place had a mean score 2.00 and standard deviation of 0.91. Furthermore, lack of conducive working environment had mean score 1.88 and standard deviation of 0.73, lack of skilled human resources experts mean score 2.68 and standard deviation of 1.14 while poor employees perceptions of work had mean score 1.88 and standard deviation of 0.83. Poor application of technology had a mean score 3.36 and standard deviation of 0.70, and inadequate work facilities mean score 2.46 and standard deviation of 1.04.

Table 4.12: Contractors Perception on the Challenges Facing Building**Contractors in the Accra**

Statements	Mean	Standard Deviation
1. Providing a save and decent working environment for workmen	2.80	0.91
2. Ensuring safe access to and from the working place.	2.00	0.91
3. Lack of conducive working environment.	1.88	0.73
4. Lack of skilled human resources experts	2.68	1.14
5. Poor employees' perceptions of work	1.88	0.83
6. Poor application of technology	3.36	0.70
7. Inadequate work facilities	2.64	1.04
Grand Mean/Standard Deviation	2.46	0.89

Source: Field Work, 2014

Table 4.12 indicated that the most challenge facing the building contractors according to the contractors was the poor application of technology that had the highest mean score of 3.36 and standard deviation of 0.70 respectively. This was followed by providing a save and decent working environment for workmen that had the mean and standard deviation of 2.80 and 0.91 respectively. The grand mean score and standard deviation were 2.46 and 0.89 respectively. As revealed in Table 4.13 contractors perception on the strategies employed by building contractors, indicated that provision of job satisfaction had mean score of 3.68 and standard deviation of 0.48, and provision of job security mean score 3.04 and standard deviation of 0.73. Besides, attractive remuneration had mean score of 3.00 and standard deviation of 0.71,

desired working hours mean score 2.04 and standard deviation of 0.84, projects should be viable and rewarding had mean score 2.76 and standard deviation 1.09, while there should be suitable environment had mean score 2.88 and standard deviation of 0.67. However, the grand mean score of 2.90 and its standard deviation of 0.75.

Table 4.13: Contractors Perception on the Strategies Employed by Building

Contractors

Statements	Mean	Standard Deviation
1. Provision of job satisfaction	3.68	0.48
2. Provision of job security	3.04	0.73
3. Attractive remuneration	3.00	0.71
4. Desired working hours	2.04	0.84
5. Projects should be viable and rewarding	2.76	1.09
6. There should be suitable environment	2.88	0.67
Grand Mean/Standard Deviation	2.90	0.75

Source: Field Work, 2014

Thus the major strategies employed by building contractors in countering the challenges they face was the provision of job satisfaction that had the highest mean score of 3.68 and standard deviation of 0.48 respectively. This was followed by providing attractive remuneration that had the mean and standard deviation of 3.00 and 0.71 respectively.

Comparison of the suggestions to minimise the Challenges Faced by the Building Contractors

With regard to the perception of contractors on the issue of minimising challenges. Table 4.14 indicated that out 25 contractors (project managers) who participated in the study, 13 representing 52% showed that availability of funds to carry out the construction works was the best suggestion that could be put in place to minimise the challenges faced by the building contractors, 5 of them representing 20% said that it was effective and efficient site management skills, while 7 of them representing 28% claimed that there should be a well-defined training for employees.

Table 4.14: Contractors Perception on the suggestions to minimise the Challenges Faced by the Building Contractors

Responses	Frequency	Percentage
Availability funds to carry out the construction works	13	52.0
Effective and efficient site management skills	5	20.0
There should a well-defined training for employees	7	28.0
Total	25	100

4.2.3. Results and Discussion of Questionnaire from Trade Foremen

Demographic Characteristics of the Trade Foremen

The sex distribution of the Trade Foremen indicated differences with 20 male representing 80% and 5 females representing 20% as shown in Table 4.15.

Table 4.15: Sex Distribution of Trade Foremen

Sex	Frequency	Percentages
Male	20	80.0
Female	5	20.0
Total	25	100.0

Source: Field Work, 2014

In terms of the Trade Foremen work category, Table 4.16 indicates that 8 of them representing 32% indicated that they work as Bridge foremen, 5 of them representing 20% also reported that they are road foremen, while 12 of them representing 48% showed that they work as building foremen.

Table 4.16: Trade Foremen Work Category

Responses	Frequency	Percentages
Bridge Foremen	8	32.0
Road Foreman	5	20.0
Building Foreman	12	48.0
Total	25	100.0

Source: Field Work, 2014

In terms of trade foremen duration serving as trade foremen, Table 4.17 indicates that 5 of them representing 20% reported that they have been as trade foremen between 1 and 3 years, 8 of them representing 32% indicated that they have worked as trade foremen between 4 and 7 years, 7 them representing 28% also reported that they have worked as trade foremen between the years of 8 to 10 years, while 5 of them representing 20% indicated that they have worked as trade foremen for 11 years above.

Table 4.17: Length of Time serving as Trade Foremen

Years	Frequency	Percentage
Between 1 – 3 years	5	20.0
Between 4 – 7 years	8	32.0
Between 8 – 10 years	7	28.0
11 years and above	5	20.0
Total	25	100.0

Source: Field Work, 2014

With regard to their working experience, Table 4.18 indicates that 32% of the trade foremen reported that they have worked between 1 and 5 years, 48% indicated that they have worked between 6 and 10 years, while 20% indicated that they have worked for 11 years and above.

Table 4.18: Trade Foremen Working Experience since joining the company

Years	Frequency	Percentages
Between 1 – 5 years	8	32.0
Between 6 – 10 years	12	48.0
11 years and above	5	20.0
Total	25	100.0

Source: Field Work, 2014

With regard to trade foremen perception on the challenges facing building contractors in Accra in table 4.19 showed that providing a safe and decent working environment for workmen had mean score 2.80 and standard deviation of 0.71, ensuring safe access to and from the working place showed mean score of 2.00 and standard deviation of 0.82, while lack of conducive working environment had mean score of 3.36 and standard deviation of 0.64. In addition, lack of skilled human resources experts had mean score 2.96 and standard deviation of 0.84, poor employees perceptions of work had mean score of 2.24 and standard deviation of 0.97, while poor application of technology had mean score of 2.56 and standard deviation of 0.96. However, inadequate work facilities had mean score of 2.76 and standard deviation of 0.78. The grand mean score of 2.67 and its standard deviation of 0.82.

Table 4.19: Trade Foremen Perception on the Challenges Facing Building Contractors in the Accra

Statements	Mean	Standard Deviation
1. Providing a save and decent working environment for workmen	2.80	0.71
2. Ensuring safe access to and from the working place.	2.00	0.82
3. Lack of conducive working environment	3.36	0.64
4. Lack of skilled human resources experts	2.96	0.84
5. Poor employees' perceptions of work	2.24	0.97
6. Poor application of technology	2.56	0.96
7. Inadequate work facilities	2.76	0.78
Grand Mean/Standard Deviation	2.67	0.82

Source: Field Work, 2014

Concerning the perception of trade foremen on similar statement, Table 4.19 indicated that the greatest challenge facing the building contractors according to the trade foremen was the lack of conducive working environment that had the highest mean score of 3.36 and standard deviation of 0.64 respectively. This was followed by lack of skilled human resources experts that had the mean standard deviation of 2.96 and 0.84 respectively.

Moreover, the perception of Trade Foremen on the challenges faced by the building contractors was required. Table 4.20 indicated that out of 25 Trade Foremen who participated in the study, 9 of them representing 36% showed that improved employee-recognition was the best suggestion that could be put in place to minimise the challenges faced by the building contractors, 7 of them representing 28% considered that reduced contractor's financial difficulties, 5 of them representing 20% opted for finding the right people to fill the available job, while 4 of them representing 16% claimed that it was effective materials planning.

Table 4.20: Trade Foremen Perception on the suggestions to minimise the Challenges Faced by the Building Contractors

Statements	Frequency	Percentage
Improved employee-recognition	9	36.0
Reduced Contractors' Financial Difficulties	7	28.0
Finding the right people to fill the available job	5	20.0
Effective materials planning	4	16.0
Total	25	100.0

Source: Field Work, 2014

As revealed in Table 4.21 on the trade foremen perception about the strategies employed by building contractors, showed that provision of jobs satisfaction had mean score of 3.68 and standard deviation of 0.63, while provision of job security mean score of 3.36 and standard deviation of 0.70. Besides, attractive remuneration had mean score of 3.88 and standard deviation of 0.33, while desired working hours mean score 2.76 and standard deviation of 0.88. However, projects should be viable

and rewarding had the mean score and standard deviation of 2.44 and 1.00 respectively, while there should be suitable environment mean score of 2.96 and standard deviation of 0.84. The grand mean score and standard deviation of 3.18 and 0.73 respectively.

Table 4.21 Trade Foremen Perception on the Strategies Employed by Building Contractors

Statements	Mean	Standard Deviation
1. Provision of job satisfaction	3.68	0.63
2. Provision of job security	3.36	0.70
3. Attractive remuneration	3.88	0.33
4. Desired working hours	2.76	0.88
5. Projects should be viable and rewarding	2.44	1.00
6. There should be suitable environment	2.96	0.84
Grand Mean/Standard Deviation	3.18	0.73

Source: Field Work, 2014.

With regard to the perception of trade foremen on similar statement, Table 4.21 indicated that the major strategies employed by building contractors in countering the challenges they are facing was the provision of attractive remuneration that had the highest mean score of 3.88 and standard deviation of 0.33 respectively. This was followed by providing job satisfaction that had the mean and standard deviation of 3.68 and 0.63 respectively.

4.2.4. Results and Discussions from the Interview

4.2.4.1. Results and Discussions of Interview from Artisans

Ten (10) Artisans were interviewed about challenges facing building contractors in the Accra. Their responses were categorised and presented in Table 4.22. As indicated in the table, out of 10 Artisans who were interviewed, 5 of them representing 50% shared similar view that indicated that the challenges facing building contractors in Accra was the management not doing a good job at keeping its workforce motivated, 2 of them representing 20% claimed that it was due to the fact that the company does not recognise employees performance appropriately, while 3 of them representing 30% reported that it was due to poor financial management.

Table 4.22: Artisans Perception on the Challenges Facing Building Contractors in the Accra

Responses	Frequency	Percentage
Management is not doing a good job at keeping its workforce motivated.	5	50.0
Company is not recognises employees performance appropriately	2	20.0
Poor financial management	3	30.0
Total	10	100.0

Source: Field Work, 2014

In addition, 10 Artisans were interviewed on the challenges facing contractors. One of them representing 10% reported that the strategies employed by building contractors in countering the challenges they are facing was the reduction of late delivery of materials, 6 of them representing 60% indicated that reduction of poor supervision, while 3 of them representing 30% shared similar view that strategy employed by building contractors in countering the challenges they are facing was that of teamwork among the workers. Table 4.23 illustrates this relationship.

Table 4.23: Artisans Perception on the Strategies Employed by Building Contractors

Responses	Frequency	Percentage
Reduce late delivery of material	1	10.0
Reduce the poor supervision	6	60.0
Teamwork among workers	3	30.0
Total	10	100

Source: Field Work, 2014

The perception of 10 artisans on the strategies employed by building contractors was investigated. Table 4.24 indicated that out of 10 artisans who were interviewed, 3 of them representing 30% shared similar view that improved employees relations was the best suggestion that could be put in place to minimise the challenges faced by the building contractors, 3 of them representing 30% present that it was reducing the incidence of financial crisis when the work is ongoing, while 4 of them representing 40% claimed that it was rather the improved desired motivation for workforce.

Table 4.24: Artisans Perception on the suggestions to minimise the Challenges Faced by the Building Contractors

Responses	Frequency	Percentage
Improved Employee relations	3	30.0
Reducing the incidence of financial crisis when the work is ongoing	3	30.0
Improved desired motivation for workforce	4	40.0
Total	10	100.0

Source: Field Work, 2014

4.2.4.2 Results and Discussion of Interview from Labourers

Ten labourers were interviewed to come out with the strategies employed by building contractors in countering the challenges they are facing. Their responses were categorised and presented in Table 4.25.

Out of 10 labourers who were interviewed, 3 of them representing 30% shared similar views which indicated that the strategies employed by building contractors in countering the challenges they are facing was maximisation of employees' task efficiency, 5 of them representing 50% claimed that it was the improvement of quality performance and awareness, while 2 of them representing 20% reported that it was actualisation of employees with new methods.

Table 4.25: Labourers Perception on the Strategies Employed by Building**Contractors**

Responses	Frequency	Percentage
Maximises employees' task efficiency	3	30.0
Improves quality performance and awareness	5	50.0
Actualises employees with new methods	2	20.0
Total	10	100.0

Source: Field Work, 2014

Ten labourers were interviewed to come out with the challenges facing building contractors in the Accra. Their responses were categorised and presented in Table 4.26. Out of 10 labourers who were interviewed, 4 of them representing 40% shared similar view that indicated that the challenges facing building contractors in the Accra was the lack of motivation to perform up to maximum potential, 3 of them representing 30% claimed that it was the poor financial management and poor promotion of sufficiently motivating environment respectively.

Table 4.26: Labourers Perception on the Challenges Facing Building**Contractors in Accra**

Responses	Frequency	Percentage
Lack of motivation to perform up to maximum potential	4	40.0
Poor financial management	3	30.0
Poor promotion of sufficiently motivating environment	3	30.0
Total	10	100.0

Source: Field Work, 2014

Table 4.27, indicated that out of 10 labourers who were interviewed, 5 of them representing 50% shared similar view that improved motivation techniques was the best suggestion that could be put in place to minimise the challenges faced by the building contractors, 3 of them representing 30% showed that contractors and clients must ensure that funds are available or adequate before projects are started, while 2 of them representing 20% claimed that it was rather reducing the occurrence of financial crisis during the construction process.

Table 4.27: Labourers Perception on the suggestions to minimise the Challenges Faced by the Building Contractors

Responses	Frequency	Percentage
Improved motivation techniques	5	50.0
Constructors and clients must ensure that funds are available or adequate before projects are started.	3	30.0
Reducing the occurrence of financial crisis during the construction process	2	20.0
Total	10	100.0

Source: Field Work, 2014

Discussion of Interview from Labourers

The researcher during the interview gathered some information for discussion.

- The labourers indicated that the challenge facing building contractors was lack of motivation to perform up to maximum potential. Ogunlana and Olomolaiye (1989) on the other had argued that in an event the employees are well motivated, they become part of the company as they work with satisfaction.
- Improving motivation techniques and improving desired motivation for workforce serve to minimise the challenges faced by the building contractors.

Comparison of the suggestions to minimise the challenges faced by the building contractors

The participants namely clients, contractors, trade foremen, labourers and artisans indicated a lot of challenges facing the building contractors. Table 4.28 clearly compares their perception on the challenges.

Table 4.28: Summary of Challenges Facing Building Contractors in the Accra as perceived by Clients, Contractors, Trade Foremen, Labourers and Artisans

Participants	Major Perceived Challenges
Clients	Lack of skilled human resources experts
Contractors	Poor application of technology
Trade Foremen	Lack of conducive working environment
Labourers	Lack of motivation to perform up to maximum potential
Artisans	Management is not doing a good job at keeping its workforce motivated

Source: Field Work, 2014

Table 4.28 clearly depicts different perception on the challenges facing building contractors in the Accra as perceived by clients, contractors, trade foremen, labourers and artisans as perceived by the respondents. The clients who participated in the study indicated lack of skilled human resources experts, contractors on the other hand perceived poor application of technology. According to the Trade Foremen, it was the lack of conducive working environment, the labourers indicated that it was the lack of motivation to perform up to maximum potential, while the Artisans indicated it was due to the fact that the management is not doing a good job at keeping its workforce motivated.

Comparison of the suggestions to minimise the Challenges Faced by the Building Contractors

Even though, all the participants namely clients, contractors and trade foremen indicated lot of challenges facing the building contractors. Table 4.29 clearly compares the perception of respondents on the challenges.

Table 4.29: Summary of Strategies Employed by Building Contractors

Participants	Major Perceived Strategies
Clients	Attractive remuneration
Contractors	Provision of job satisfaction
Trade Foremen	Attractive remuneration
Labourers	Improves quality performance and awareness
Artisans	Reduce the poor supervision

Source: Field Work, 2014

It clearly depicted different perceptions on the strategies employed by building contractors in countering the challenges they face as perceived by the respondents. The clients who participated in the study indicated that of attractive remuneration and contractors on the other hand perceived that it was the provision of job satisfaction. According to the Trade Foremen, it was the attractive remuneration, the labourers indicated was the improved quality performance and awareness motivation techniques while the Artisans indicated it was the reduction of poor supervision.

Table 4.30: Summary of Suggestions to minimise the Challenges Faced by the Building Contractors

Participants	Major Perceived Suggestions
Clients	Discover the right people to fill the available job
Contractors	Availability of funds to carry out the constructional works
Trade Foremen	Improved employee-recognition
Labourers	Improved motivation techniques
Artisans	Improved desired motivation for workforce

Source: Field Work, 2014

Table 4.30 clearly depicts different perceptions of respondents on the challenges facing the building contractors. The clients who participated in the study indicated that right people should be discovered to fill the available job, contractors also perceived the availability of funds to carry out the constructional works. According to the Trade Foremen, it was the improved employee-recognition, the labourers indicated that it was the improved motivation techniques while the Artisans indicated it was the improved desired motivation for workforce.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

This chapter presents the summary of findings, conclusions and recommendations.

5.2. Summary of the Findings

The following are the summary of the findings:

- The respondents who participated in the study indicated that lack of skilled human resources experts is among the challenges facing building contractors in the Accra Metropolis. This was due to the fact that the contractors were not finding the right calibre of personnel to fill available job. Therefore, the contractors do not get efficient human resource in their construction sites this leads to low output and also lead to waste in material resources.
- The study once again revealed that poor application of technology is another challenge that contractors in Accra face. These findings of the study indicated that, the managers of construction sites were inefficient therefore could hardly apply technology well. As technology is the order of the day, the lack of it proper application produces low-grade products.
- It was also discovered from the study that, lack of conducive working environment was another challenge that the contractors in Accra face. From the analysis of the study, the working environment of the contractors was not favourable to the workers and as such the environment breeds work hazards that is uncomfortable for workers which makes workers to be dissatisfied and brings about lower production that add more time to the project completion.

- The study revealed that the contractors were not motivating their workers to perform up to their maximum potential; this has led to a decline in the contractors production and contractors operational costs is also increased as the employees do not work as expected, since motivation is a key to improving employees work output and their work commitment.
- Once again, the study indicated that, the contractors were lacking supervision skills. This has led to employees performing poorly and in haphazard way.
- It was also discovered from the study that, contractors were not having sufficient funds to carry out the construction works, this situation led to low margin, excessive debt and the construction works are not carried out at the right time.

5.3. Conclusion

Base on the study findings it could be concluded that lack of skilled human resources experts, poor application of technology, lack of conducive working environment, lack of motivation to perform up to maximum potential, management is not doing a good job at keeping its workforce motivated were the challenges facing building contractors. Also, attractive remuneration, provision of job satisfaction, improved quality performance and awareness motivation techniques and reduction the poor supervision were the strategies employed by building contractors in countering the challenges they are facing.

Therefore the right people to fill the available job, availability of funds to carry out the construction works, improved employee-recognition, improved motivation techniques and improved desired motivation for workforce were the suggestions which could be put in place to minimise the challenges faced by the building contractors.

5.4 Recommendations

The following recommendations are made to address the findings of the study:

- Contractors and clients should try to access funds from other sources other than banks where the cost of capital is low.
- Contractors should form partnerships and pull their resources together to be able to tender for large projects to help them grow and develop.
- Contractors should ensure that they put proper supervision and monitoring measures in place from the inception to completion in the execution of projects.
- Contractors should ensure that they employ skilled personnel in their organisation.
- Contractors should ensure that they employ attractive remuneration and also motivate her employees adequately.
- Policy makers should ensure that the contractors in the industry develop and therefore there should be organised programmes for continuous assessment and grading of contractors.

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APPENDICES

QUESTIONNAIRES FOR CLIENT

SECTION A - PERSONAL INFORMATION

Introduction: Please read and select by ticking (✓) the question below which in your own discretion the most appropriate answer to the question.

1. What type of client do you belong?

- (a) An individual [] (b) Company [] (c) An institution []
(d) family [] (e) An association of government []

2. How long have you been a client? (Please specify.....)

3. What kind of job do you offer to consultant?

- (a) Bridge building [] (b) Road contraction []
(c) Building construction [] (d) Stadium building []
(e) Railway building [] (f) Estate building []

4. For how long have you been working with this company?

- (a) 1 -5years [] (b) 6-10 years [] (c) 11-15 years []
(d) 16-20 years [] (e) 21 years and above []

5. How many jobs have you offered to consultant? (Please specify) -----

SECTION D - SUGGESTIONS TO REDUCE THE CHALLENGES

What suggestions could be put in place to minimise the challenges faced by the building contractors?.....

.....

.....



APPENDIX B

QUESTIONNAIRES FOR CONTRACTORS

SECTION A - PERSONAL INFORMATION

Please read and select by ticking (✓) the question below which in your own discretion the most appropriate answer to the questions.

1. What classification of contractor do you belong?
 - (a) Bridge contractor []
 - (b) Road contractor []
 - (c) Building contractor []
 - (d) Railway contractor []
 - (e) Timber contractor []
2. How long has the company being in existence? (Please specify).....
3. For how long have you been working with this company?
 - (a) 1 -5 years []
 - (b) 6-10 years []
 - (c) 11-15 years []
 - (b) (d) 16-20 years []
 - (e) 21 years and above []
4. What kind of work have you been doing?
 - (a) Road construction []
 - (b) Railway building []
 - (b) (c) Building construction []
 - (d) Bridge construction []
 - (e) Stadium building. []

SECTION B**CHALLENGES FACING BUILDING CONTRACTORS**

Rate scale: 1 = Very unsatisfactory 2 = Unsatisfactory
 3 = Satisfactory 4 = Very satisfactory

Circle one of each line

Statements	1	2	3	4
Providing a safe and decent working environment for workmen				
Ensuring safe access to and from the working place.				
Lack of conducive working environment.				
Lack of skilled human resources experts				
Poor employees' perceptions of work				
Poor application of technology and facilities				
Inadequate work facilities				

SECTION C**STRATEGIES TO REDUCE THE CHALLENGES**

Rate scale: 1 = Very unsatisfactory 2 = Unsatisfactory
 3 = Satisfactory 4 = Very satisfactory

Circle one of each line

Statements	1	2	3	4
Provision of job satisfaction				
Provision of job security				
Attractive remuneration				
Desired working hours				
projects should be viable and rewarding				
There should be suitable environment				

SECTION D

SUGGESTIONS TO REDUCE THE CHALLENGES

What suggestions could be put in place to minimise the challenges faced by the building

contractors?.....

.....

.....



APPENDIX C

QUESTIONNAIRE FOR TRADE FOREMAN

SECTION A - PERSONAL INFORMATION

Please read and select by ticking (✓) the question below which in your own discretion the most appropriate answer to the questions.

1. What category of trade foreman do you belong?
 - (a) Bridge foreman []
 - (b) Road foreman []
 - (c) Building foreman []
 - (d) Railway foreman []
 - (e) Timber foreman []
2. How long have you been a trade foreman? (Please specify).....
3. What kind of work have you been doing?
 - (a) Bridge building []
 - (b) Road construction []
 - (c) Building construction []
 - (d) Railway building []
 - (e) Stadium building []
4. For how long have you been working with this firm?
 - (a) 1 -5years []
 - (b) 6-10 years []
 - (c) 11-15 years []
 - (d) 16-20 years []
 - (e) 21 years and above []

SECTION B**CHALLENGES FACING BUILDING CONTRACTORS**

Rate scale: 1 = Very unsatisfactory 2 = Unsatisfactory
 3 = Satisfactory 4 = Very satisfactory

Circle one of each line

Statements	1	2	3	4
Providing a safe and decent working environment for workmen				
Ensuring safe access to and from the working place.				
Lack of conducive working environment.				
Lack of skilled human resources experts				
Poor employees' perceptions of work				
Poor application of technology and facilities				
Inadequate work facilities				

SECTION C**STRATEGIES TO CURB THE CHALLENGES**

Rate scale: 1 = Very unsatisfactory 2 = Unsatisfactory
 3 = Satisfactory 4 = Very satisfactory

Circle one of each line

Statements	1	2	3	4
Provision of job satisfaction				
Provision of job security				
Attractive remuneration				
Desired working hours				
projects should be viable and rewarding				
There should be suitable environment				

SECTION D

SUGGESTIONS TO REDUCE THE CHALLENGES

What suggestions could be put in place to minimise the challenges faced by the building

contractors?.....

.....

.....



APPENDIX D

INTERVIEW FOR LABOURERS

I am carrying out a survey investigation into the challenges facing building contractors in Accra Metropolis using Supreme Bird Contractor as a case study. I would be very glad if you will not mind to provide answers to those questions.

Thanks.

1. When were you employed by this company?
2. What specific job task do you perform at this site?
3. How can you describe your relationship with your contractors?
4. Do you think the building contractors face challenges in their work?
5. What are some of the challenges as building contractors?
6. What strategies do you think can be employed by building contractors to counter the challenges they are face?
7. What procedures could be put in place to minimise the challenges faced by the building contractors?

APPENDIX E

INTERVIEW FOR ARTISANS

I am carrying out a survey investigation into the challenges facing building contractors in Accra Metropolis using Supreme Bird Contractor as a case study. I would be very glad if you will not mind to provide answers to those questions.

Thanks.

1. What category of artisan do you belong?

(a) Carpentry (b) Mason (c) Painter (d) steel bender

How long have you been an artisan? (Please specify).....

3. For how long have you been working with this company?

(a) 1 -5 years (b) 6-10 years (c) 11-15 years (d) 16-20 years (e) 21 years and above

4. How can you describe your relationship with your contractors?

5. Do you think the building contractors face challenges in their work?

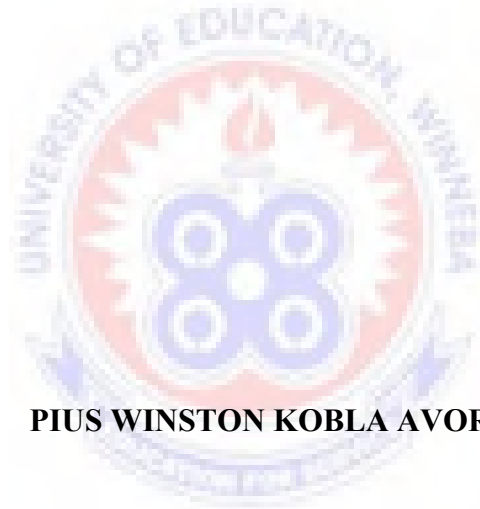
6. What are some of the challenges as building contractors?

7. What strategies do you think can be employed by building contractors to counter the challenges they are facing?

8. What procedures could be put in place to minimise the challenges faced by the building contractors?

UNIVERSITY OF EDUCATION, WINNEBA

**AN INVESTIGATION INTO CHALLENGES FACING BUILDING
CONTRACTORS IN ACCRA METROPOLIS**



PIUS WINSTON KOBLA AVORNYO

AUGUST, 2014