

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

**DEPARTMENT OF BUILDING TECHNOLOGY
COLLEGE OF ARCHITECTURE AND PLANNING**



TOPIC:

**OUTSOURCING IN THE PROCUREMENT OF BUILDING STRUCTURES
AND ITS EFFECT ON PROJECT DELIVERY IN GHANA.**

**A PROJECT REPORT SUBMITTED TO THE DEPARTMENT OF
BUILDING TECHNOLOGY IN PARTIAL FULFILMENT OF THE
REQUIREMENT OF THE MASTER OF SCIENCE IN PROCUREMENT
MANAGEMENT**

BY

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NOVEMBER 2014

DECLARATION

I declare that I have wholly undertaken the research reported upon here-in under supervision and that , to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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ABSTRACT

Construction has become very sophisticated and diverse with new designs, technology and products being adopted in the procurement of contemporary building structures. Construction organisations in their bid to be competitive and meet their clients demand outsource various services to able external vendors. The organisations outsource primarily because it may not be their core function or they lack the necessary requisite technical expertise and resources. This study identifies the various resources and services construction organisations outsource and the effect on project delivery in Ghana.

Open ended, Close ended and Likert type questionnaire were developed and distributed to construction organisations in the Ministry Of Water Resources, Works and Housing category D1K1 to D4K4 in Accra. Each questionnaire had 22 questions with the Likert Type having a maximum magnitude of 5.

SPSS version 17 was used to analyze the data. The result indicated that skilled labour were predominantly outsourced in Accra compared to the unskilled in the labour category. Excavators were outsourced more in Accra in the earthmoving equipment category as compared to bulldozers, backhoe/site master and trenchers in that order. The most outsourced concreting plant in Accra was the truck mounted concrete mixers in that category. Architectural Services were outsourced more in the consultancy service category with contract management being the least outsourced. Electrical works was the most outsourced services with tiling/terrazzo being the finish most outsourced in their respective categories. External vendors predominantly met their completion schedules.

There is the need for appropriate measures to be taken to enhance outsourcing in Ghanaian Construction to ensure value for money to client and maximum productivity to construction organisations. This can be done through efficient and effective outsourcing and proper monitoring and supervision of outsourced external vendors.

Keywords: Outsourcing, Procurement, Building Structures, Effect, Project Delivery, Ghana.

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DEDICATION

This work is wholeheartedly dedicated to THE LORD GOD ALMIGHTY for his guidance, providence and faithfulness throughout the whole process. The Dedication is also to My Mum of Blessed Memory, Mary Adu –Gyamfi for all the tireless effort she put in to help me get here. The work is also dedicated to my entire family and loved ones most especially Rev. Paul Adu Gyamfi, Joseph Jackson Adu Gyamfi and Dominic Adu Gyamfi for their spiritual, financial and moral support. This is also dedicated to Mr. Kwame Asumadu Yeboa and Frema Osei Tutu and family for all their help. Thank You.



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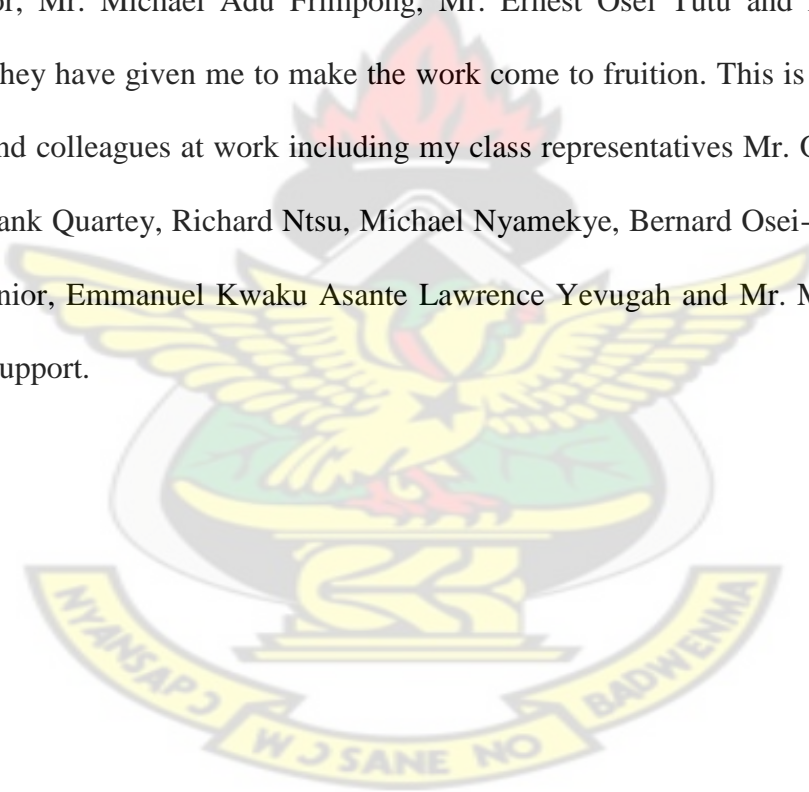


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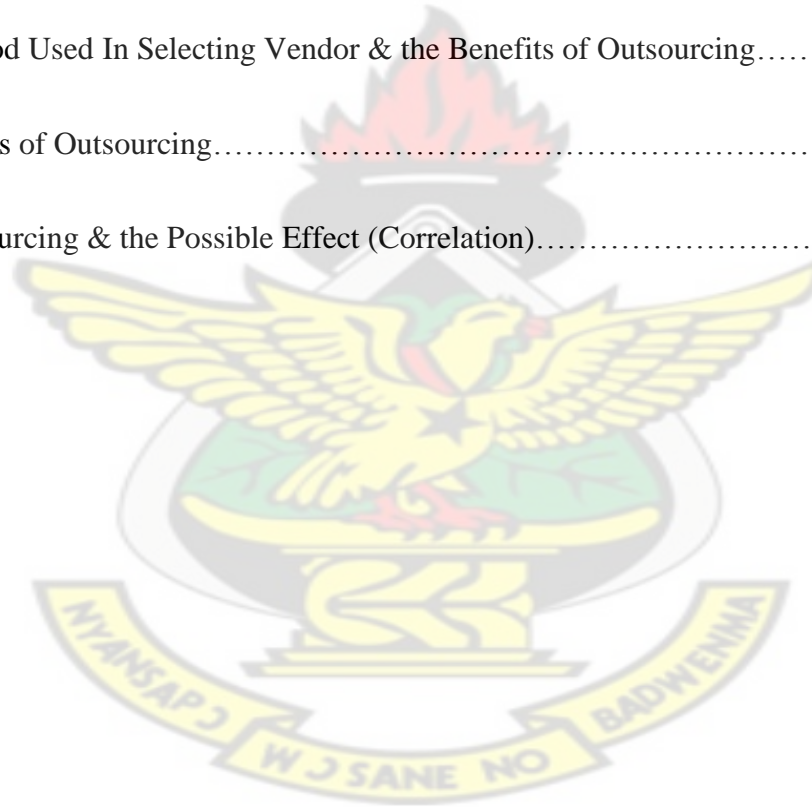
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CHAPTER ONE

1.0 INTRODUCTION /BACKGROUND INFORMATION

The construction Industry in Ghana contributes immensely to the Gross Domestic Product (GDP). Growth rates of 5.8% and 6.2% were realized in 2005 and 2006 respectively (Budget of Ghana, 2005 and 2006). It is in this vein that the decision of construction firms to outsource or subcontract its acquisition of certain goods, specialist works like glazing, cladding wall finishing (Reynobond/Alucubond), central air conditioning systems, and lift installations just to mention a few and both incidental and professional services is of utmost importance. This is because the construction firm's total performance on a project has a direct relationship with the project delivery/completion time. The amount of revenue that can accrue to the firm in most cases on complex projects is influenced by the actions or inactions of these outsourced firms or subcontractors. Delays in project completion do not only affect construction companies in terms of their profit margins alone, but have a ripple effect on the country in terms of the industry's ability to contribute to the country's Gross Domestic Product.

Outsourcing is a competitive acquisition of goods and services from outside the Performing entity instead of in-house provision (Domerger, 1997; Jensen and Stonecash, 2005; as cited by Kugonza, 2009).

Outsourcing may have an effect in terms of completion time and thus the overall delivery of the projects by construction firms. These firms may naturally lack the expertise or logistic requirement to carry out most of these specialist services on their own. Heshmati (2003)

describes outsourcing as “different kinds of corporate action related to all subcontracting relationships between firms and the hiring of workers in non-traditional jobs”.

Outsourcing may also be defined as any chore, operation, trade or process that could be accomplished by employees within an organization, but is instead contracted to a third party for a significant period of time. In addition, the functions that are performed by the third party can be performed on-site or off-site.

Companies having strengths in other areas may contract out data processing, legal, manufacturing, marketing, payroll accounting, or other aspects of their businesses to concentrate on what they do best and thus reduce average unit cost. Outsourcing is often a fundamental part of downscaling or reengineering and also called contracting out.

The Chartered Institute of Purchasing and Supply (CIPS) defines outsourcing as "the process of identifying the most suitable expert third party service provider to undertake the management, administration and provision of the service in question”.

The contracting or subcontracting of noncore services and work resources to free up cash, personnel, time and facilities for activities in which a company holds competitive advantage.

1.1 PROBLEM STATEMENT

Construction companies outsource a wide range of goods, works and services during project delivery. Outsourcing as a tool is currently widely being used by contractors in various fields of endeavor including Information Technology, Manufacturing, Telecommunication and Banking

and Finance just to mention a few. Construction has become very diverse and sophisticated with new technology, designs and products being adopted in the procurement of contemporary building structures. This has invariably forced the construction companies to take the critical decision of focusing on their core responsibility and competencies where they have they have a lot of technical expertise and enough material and plant resource at their disposition. Their non-core services and work resources which are usually concerned with a newer technology or have never been their focus as an organization are sublet to an external vendor. The external vendor's mode of operation, delivery rate and charges eventually have an effect on the main contractor or construction firm. This could in turn affect them in their project delivery either in terms of completion time or possibly financially. The Services rendered by these subcontracted firms are entirely managed by themselves with usually little supervision due to the lack of technical know-how of most of these construction companies. This in most cases has an effect on their productivity and consequently the overall productivity of the parent organization. According to Tafti (2005), contracted - out work could induce impediments in a firm's productivity (Tafti, 2005 as cited in Adu-Gyamfi, 2011). However, successful outsourcing in other fields of endeavour though has made a number of organizations give more and more of their services and resources they consider non-core out to external vendors. This study seeks to find out the various resources and services contemporary construction organizations may be outsourcing and their effect on project delivery.

1.2 RESEARCH QUESTIONS

1. What are the resources and services construction firms outsource in Ghana?
2. What is the effect of outsourcing on project completion times?

1.3 AIM OF THE STUDY

This research seeks to basically find out the effect which outsourcing has on the procurement of building structures in Ghana.

1.4 OBJECTIVES OF THE STUDY

1. To identify the resources and services that are outsourced by construction firms in Ghana.
2. To identify the effect of outsourcing on project completion times.

1.5 SIGNIFICANCE OF THE STUDY

The Study is intended to establish the direct effect outsourcing has on most project delivery and contactor performance in the Ghanaian construction industry with specific reference to construction companies in Accra. The relationship between project completion times and work resources and services that are outsourced if established will give firms a strong basis for making future decisions when acquiring specific goods, works and services. This is because they can know the relation between the work category that are outsourced frequently and the effect the outsourcing may have on their project. It should help them in forecasting their expected project completion times during project delivery.

1.6 RESEARCH METHODOLOGY

The secondary literature will be prepared by reading through journals, magazines, articles, literature and the internet resources. A questionnaire will be designed to collect quantitative data so that the effect of outsourcing on project delivery can be determined. Questionnaires will be

distributed through online resources such as emails and also by hand delivery and collection method. Questions will be made up of both close ended and open ended questions. Open ended questions are intended to give more depth into the research. The data will be analyzed by using quantitative analysis techniques. Statistical Package for Social Sciences (SPSS) software will be used in the Data analysis

Simple Random Sampling will be used in choosing some construction firms who fall under the Ministry of Water Resources, Works and Housing classification D1K1 – D4K4 category in Accra. This would mean there could be the chance that any construction firm could be chosen which will reflect the general situation on ground.

1.7 SCOPE OF THE STUDY

The scope of the study is to conduct a research on some category D1K1 – D4K4 construction companies engaged in various projects in the Accra Metropolis to establish the effect which outsourcing has on project delivery in Ghana. Category D1K1 contractors are those who have been certified by The Ministry of Water Resources, Works and Housing of The Republic of Ghana to undertake General Building Works of value over Five Hundred Thousand United States Dollars (\$500,000.00). Category D2K2– D4K4 undertaking works of lower value per their ranking.

1.8 ORGANIZATION OF THE STUDY

The Preliminary section will have all standard essential features like Title of report, Declaration, Certification, Dedication, Acknowledgement, Abstract, Table of contents and List of tables. The

main body of report will have five main chapters which will outline the 1. Introduction, 2. Literature Review, 3. Methodology, 4. Data Analysis, 5. Conclusions, Limitations and Recommendations in that chronological order. It will then end with bibliography/references and appendices as the Supplementary Section.

The introduction gives a brief review of the various outsourcing definitions, problem statement, research questions, aim, objectives, significance of the study, research methodology, scope and organization of the study.

The literature review provides more detailed information on outsourcing definition, concept and theory. Outsourcing and firms performance is also reviewed in this chapter highlighting stages in outsourcing, the merits and demerits.

The methodology offers information about the purpose, approach, data collection, sampling technique, questionnaire development and how data was analyzed.

The data analysis explains information on the descriptions, frequencies, percentages and correlation of the information gotten from the respondents.

The last chapter concludes the data analyzed, outlines challenges faced and gives future recommendation.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

Outsourcing has gradually become an integral part of how most companies achieve their required output or productive levels. Construction has enshrined this principle in its operations with the Ghanaian Construction companies not being left out. Various specialist goods, works or services that do not form part of the core activities of construction companies are let out to specialists so that these construction companies can effectively concentrate on their core responsibilities to enable them deliver. In this chapter, the research focuses on existing literature on outsourcing and research work which other researchers have done in an attempt to look out outsourcing in the construction industry or their beneficiary industry and its related impact on project delivery. With the set objectives as a guide, this section is intended to identify the various literature on the keywords of the topic, previous work done, contributions made, general findings and possibly criticisms that may exist keeping in mind the scope of the study. Literature on definitions, concepts, theories, merits and demerits of outsourcing presented by various authors will also be reviewed. A directional approach to how outsourcing is to be done to ensure better project delivery if found will be considered.

2.1 OVERVIEW OF OUTSOURCING: DEFINITION, CONCEPT AND THEORY

Traditionally, outsourcing is an abbreviation for “outside resource using”. Outside means to create value from without, not within, the company (Yang et. al., 2007). Outsourcing allows firms to focus on their own core competences by relocating limited resources to strengthen their core product or service (Lee and Kim, 2010) and to strategically use outside vendors to perform

service activities that traditionally have been internal functions (Raiborn et. al., 2009; Elmuti, 2004;Bustinza et. al., 2010). Outsourcing can also involve the transfer of both people and physical assets to the supplier (McIvor, 2005).

The term outsourcing was introduced in the mid 1980's. However the idea of hiring someone else to do specific jobs or of dividing labour has existed for hundreds of years. In business, outsourcing can be found everywhere; whether big or small, simple or complex. During the pre-1900's outsourcing was primarily carried out on labour intensive production task and business activities outside the company's core competencies such as outsourcing printing press, food preparation, janitorial services, hiring seasonal migrant farm workers and transportation services.

Outsourcing has been considered as one of the methods that institutions utilize to strengthen their core competencies to ensure cost-effective management of resources. Outsourcing involves reviewing of functions and processes within an organization with a view to restructuring to enable an organization to focus on its key competencies (Cyrus et al., 2013).

The rapid growth of outsourcing has transformed the way entities and institutions are managing their operations in providing services to the Ghanaian citizen. The need to respond to market changes on a daily basis and the difficulty of predicting the direction of such changes mean that organizations must focus on their core competences and capabilities (McIvor, 2008). Outsourcing allows firms to focus on their own core competences by relocating limited resources to strengthen their core product or service and to strategically use outside vendors to perform service activities that traditionally have been internal functions (Elmuti, 2004).

Outsourcing can also involve the transfer of both people and physical assets to the supplier (Chase, Shanker and Aquilano, 2010). With the increasing globalization, outsourcing has become an important business approach, and a competitive advantage may be gained as products or services are produced more effectively and efficiently by outside suppliers (Yang, Seongcheol, Changi and Jawon, 2007). The traditional outsourcing with emphasis on tactical benefits like cost reduction (for example, cheaper labor cost in low-cost countries), have more recently been replaced by productivity, flexibility, speed and innovation in developing business applications, and access to new technologies and skills (Elmuti, 2004).

The complexity of outsourcing operations assumes several dimensions, which all project managers should keep in mind while involved with these projects (Quelin and Duhamel 2003). The number of stakeholders influenced by the outsourcing decision becomes more numerous than when the projects were primarily done in-house; the selection criteria are not limited to cost savings; contracts are becoming denser, as agreements become more sophisticated in terms of measurements procedures, financial management of transferred assets and re-in sourcing clauses; Managing the transition involves shifting more complex interfaces between supplier and the outsourcing company; managing the relationship under more detailed service level agreements (SLAs) entails more complex operations in terms of control and performance reporting the strategic perspective would determine how to get and sustain a competitive advantage by acquiring the valued resources from outside(Cyrus et al., 2013).

Outsourcing may be used to gain competitive advantage and has been adopted widely. Companies are increasingly seeking able outside firms to perform services and provide resources

which previously were all in-house based in order to achieve time, progress and cost advantage. The act of outsourcing is realistic for firms that lack the necessary economies of scale, skills or technology to perform certain functions quickly and efficiently (Jacobs, 2009). Variances in design and emerging trends which are not very familiar with the indigenous Ghanaian construction companies have come to stay. Various form of finishing like Alucubond/Reynobond cladding system, more complex ventilation systems like central air-conditioning systems, mechanical systems like the lifts and escalator systems are now part of most contracts which was not the previous convention. The demand for more state of the art facilities which brought about these emerging trends have made contracts more complex in terms of the management system to be used to monitor all performing entities to the contract. These emerging trends brought about the need for seeking of external organization with the requisite skills to perform these functions so that the in-house operations could be well adhered to ensure prompt project delivery. Outsourcing therefore could be seen as a firm's reaction to rapid technological and developmental change thereby enabling the firm concentrate on its core responsibilities. Stevenson and Spring, (2007) perceive outsourcing as a growing aspect of supply chain management whilst Lyson and Farrington, (2006) perceive it as a management strategy by which non-core functions are transferred to specialist, efficient, external providers. The two attribute the development of outsourcing as a reaction to over diversifications of the 1970s and early 1980s as cited in Cyrus et al., 2013. These over diversifications led many enterprises to review their core services they provide and concentrate on their core-competencies. Outsourcing goes beyond the mere common purchasing and consulting contracts because not only are the services transferred, but also resources that make the services occur. The resources include people, facilities, equipment, technology, and other assets. An entire function may be outsourced or

some elements of an activity may be outsourced, with the rest of the services being kept in-house. Identifying a function as a potential outsourcing target, and then breaking that function into its components, allows decision makers to determine which services and resources are strategic or critical and should remain in-house and which can be outsourced.

Two influential theories in the study of outsourcing have been transaction cost economics and the resource based view of the firm. According to transaction cost economics, a company will make the outsourcing decision on the basis of reducing production and transaction costs. Resource-based view which views the firm as a bundle of assets and resources that if employed in distinctive ways can create competitive advantage (McIvor, 2008). These theoretical concepts have been the basis for indigenous firms to opt for outsourcing since they either want to reduce their production and transaction costs or alternatively want to maximize output of its existing resources based on its known competencies without distractions.

The choice whether to outsource or not is, not only dependent upon the transaction costs that arise but also on the schedule pressure due to lag times on the program of works. Schedule pressure is generally a consequence of missed milestones or late attempts to shorten project time. When acceleration is activated as per contracts conditions, regardless of which acceleration technique is used, the deadline for the project may be so close to the project completion date that, core personnel in project teams have less time available to carry out all the tasks needed to finish especially the specialist ones. Alternatively, the gap between the work that has to be done and the time left to complete the project may be woefully inadequate for same core personnel to perform the required function. The challenge however is whether to develop the required

resource capability to address this issue in-house or to outsource it. Even if the in-house capability development may seem to be a better option at first glance, the lack of economies of scale and the need for flexibility may make an in-house solution expensive. Several authors agree that if outsourcing is implemented with prior planning, it can result in lowering cost, increased capacity and productivity, and sometimes can lead to downsizing (Elmuti, 2003; Casale, 1996; Sinderman, 1995; Outlay & Ranganathan, 2005). According to Gartner, an independent research company, the worldwide business process outsourcing segment will expand from \$160.7 billion in 2007 to \$235.2 billion by 2011, a compound annual growth rate of 10.3% (Musico, 2008).

Although most of the outsourcing efforts made so far have been by big businesses, this dominance is starting to change in that smaller firms are also moving in the same direction in order to realize the benefits of outsourcing (McCracken, 2002). Some companies view outsourcing as a fast track system for penetrating new regions rather than a trend for the future (McCracken, 2002). Still others view outsourcing as a way to increase concentration on core-competencies, thus making it a more long-term approach (Bender, 1999; Corbett, 1996; Drezner, 2004; Engardio, Bernstein, & Kriplani., 2003; Farrell & Rosenfeld, 2005; Hoffman & Tibodeau, 2003).

The principal reason for an organization moving to outsource a service or services is that it allows that organization to focus on its core competency (Rajabzadeh, Rostamy et al., 2008) and that the organization receiving the outsourced operation will already be operating within its core competency. It can be argued that this is not always the case as there are some outsourcing

organizations that will predatorily seek outsourced services without necessarily having the understanding in depth of that operation.

Outsourcing otherwise known as ‘sub-servicing’, refers to the process of contracting tasks that are usually handled internally by the company itself to a third-party (Ganesh, 2007). It usually involves contractual agreements between two or more organizations involving an exchange of services and payments. These alliances often create synergistic effects, which could be in form of monetary and non-monetary benefits. In addition to risk reduction, outsourcing also allows companies to focus on their core competencies, while relying on their outsourcing partners for non-critical processes and operations (Khong, 2005). Since tasks are usually contracted to partners with competitive advantage in productions, outsourcing is expected to lead to improvements in quality of outputs, while at the same time reducing cost of production in-house. Outsourcing also induced faster access to intellectual property and knowledge, which often enhance capacity for innovation; it is also expected to increase productivity and customer service managements of both parties if properly implemented. On the part of customers and society in general, outsourcing is expected to bring about reduction in prices, since operations could be moved to countries with low labour costs or ability to enjoy tax incentives (Barthelemy, 2003).

Successful outsourcing is linked closely to the extent to which management is able to integrate all the key success factors. For outsourcing programme to be successful, the two companies must have done adequate research and planning, with well-developed objectives, goals and expectations of the programme.

Micro, industry and macro environmental factors affecting outsourcing must be properly researched, and well communicated to all stakeholders (Dele, 2012). It is also important to select the right partners, based on criteria like credibility, reliability and expertise (Gunu, 2009; Elmuti, 2003; Arnold, 2000). It is imperative that all possible chances of opportunism should be explicitly curtailed. It is worth mentioning to get the right team, with requisite knowledge to champion, negotiate, develop, manage and review all the stages of outsourcing efforts. A comparative analysis of results from past outsourcing efforts world-wide gives reason to suggest that the issue of outsourcing implementation is very important, since it is often very complex and needs to be checked against numerous success and failure factors to ensure successful implementation (Al-Mashari & Zairi, 1999).

There must be adequate and objective performance evaluation and reward system, while feedback and corrective mechanism on the outsourcing programme must be properly elucidated (Thomas, 2004). It is worth mentioning that, the opposite of these success factors represents the key failure factors. Hence, lack of clear direction and expectations of outsourcing efforts, choice of wrong partners, inadequate skills, poor communications, and poor control measures, low morale and productivity, lack of adequate supporting infrastructures, poor change and conflict managements, and inadequate performance measures and feedback mechanism are often responsible for the poor execution of outsourcing efforts (Thomas, 2004; Khong, 2005; Elmuti, 2003). Planning, Implementation and Controlling of various support services are the key determinants for the strategic approach to outsourcing. They contribute immensely to successful outsourcing efforts.

2.2 OUTSOURCING AND FIRMS PERFORMANCE

Firms are increasingly turning to outsourcing in order to enhance their competitiveness. Bank of Ghana was one top organization that outsourced its non-core services like transportation of workers to Kingdom Transport Services (KTS).

Foreign companies like Chrysler for example outsources 100% of its manufacture of half of its mini compact and subcompact cars. Chrysler and Ford currently produce less than one half of the value of all their vehicles in –house.

Boeing has begun to rely heavily on outsourcing partners to manufacture its aircraft. For example, the manufacture of a large portion of the Boeing 767, Boeing's third largest commercial aircraft, is outsourced to a consortium of Japanese manufacturers including Fuji, Kawasaki and Mitsubishi. About 10% of the value of the 767 is produced in -house (Hill & Jones, 1995 as cited in Gilley & Rasheed, 2000).

Business performance refers to how well an enterprise performs, and is an important construct in determining organizations success (Khong & Mahendhiran, 2006). It determines both the objective measures such as return on investment, profits and sales turnover, and perceived measures of business performance of the enterprise, which relates to productivity in the context of the construction industry: department, individuals and customers who could be collectively called client. Perceived measures can replace objective measures (Khong & Mahendhiran, 2006). Hence, the impact of outsourcing on business performance outcomes can be considered both in financial and non-financial terms (Bontis, 1998; Bontis et al., 2000).

Bontis (1998) and Bontis et al. (2000) indicate that the perceived measures are a feasible tool to measure business performance. In addition, the survival of an organization depends on its customers; hence customers are the driving force of outsourcing programs (Lewis, 2000; Kotler, 2000).

Client retention is therefore crucial to the survival of any organization, and this could be achieved through good client service management which is the widely accepted and ensures paramount client satisfaction. Client satisfaction could also be achieved through outsourcing an organization with the requisite technical experience, ability and recognized trademark who in effect can be a major boost in prime contractor's image. When there is high client retention rate, it indicates that these retained clients are satisfied with the services offered by the organization, and are likely to invite others (Kotler et al., 2001). An improved client service management can also expedite and enhance client re-buy, which often is as a result of improved client satisfaction, client retention and relationship management all being an indication of improved business performance.

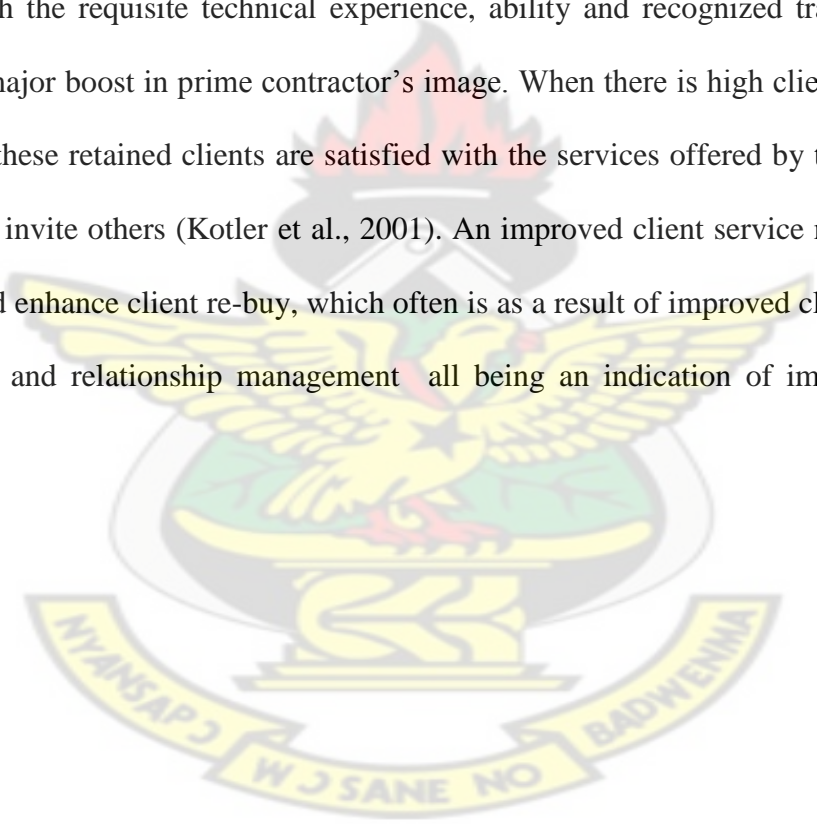


Table 1. 0 THE PERCEPTUAL MEASURE OF SUCCESSFUL OUTSOURCING.

	<i>KEY FACTORS MANIFESTING SUCCESSFUL OUTSOURCING</i>
A1	Clear objectives, environmental scanning and expectations of outsourcing programme.
A2	Choice of outsourcing partners.
A3	Adequate skills to negotiate a sound contract.
A4	Adequate planning during the various phases of outsourcing.
A5	Change of management system and culture.
A6	Effective communication among cross-functional areas.
A7	Management competence and getting the right people.
A8	Organisational structure.
A9	Operational risk and project management.
A10	Good control mechanism.
A11	High morale and performance of the remaining employees.
A12	Emphasis on short- and long-term benefits.
A13	Adequate alignment of IT/ supporting infrastructure.
A14	Flexibility in anticipating change/ change management technique.
A15	Adequate and objective performance criteria and feedback.

Source: Elmuti (2003)

Quin (1992) proposes that, by allowing outside specialist organizations to concentrate on certain tasks, firms may increase their performance by focusing narrowly on the things they do best. Bettis, Bradely and Hemel (1992) argue that outsourcing may reduce organisational innovation, may shift knowledge to supplier organization and may reduce control over a firm's activities. By outsourcing services not generated by core competences to specialist organizations, companies can see an improvement in their organisational performance (Kotabe, 1989). Gilley and Rasheed (2000) state that there are three reasons for this improvement in organisational performance. Firstly, the acquisition of non-strategic services allows the organization to center on what it really can do well, that is, on the services whose resources have a high strategic value (Gilley et al., 2004). Focusing on services not included in the core competences can increase performance and allow the company to be more flexible. Secondly, increasing the outsourcing of nonstrategic services can improve both the quality and the service (Dess et al., 1995).

The outsourcing of services of low strategic value enables the company to reduce costs and improve its competitive position (Gilley & Rasheed, 2000; Espino-Rodriguez & Robaina 2004). Because of resource limitations, few firms have the ability to apply world-class resources to all areas of competition. Thus, in order to gain competitive advantage they must select areas in which they will concentrate their resources (Hamel & Prahalad, 1994). Research shows that companies that make alliances by trusting external sources have better results, reduce risks and improve the quality ratio while also increasing their capacity of innovation and flexibility (Espino-Rodriguez & Robaina 2004). Kotabe et al. (2008) propose a dynamic perspective, which suggests an inverted U relationship between outsourcing and performance (Kotabe et al., 2008; Lee & Kim, 2010).

When a company decides to outsource, it is typically seeking to achieve one or more of the following:

- Increased cost savings.
- Value for money.
- Better service levels.
- Access to best practices.
- Greater innovation.

The decisions related to “make or buy” evolved during the past 20 years, generating a wide range of possible solutions of outsourcing (from smart sourcing to offshoring). In general terms, by recurring to outsourcing, companies have to deal with a very sensitive equilibrium between internal services and external purchases. Figures from the OECD STAN database show that although outsourcing reached its peak of popularity during the late 1980s and the 1990s boosted by the rush to corporate downsizing and the reengineering bandwagon, it has been growing over the last decade by rate of 30%-35% until 2007 (revenues per year), and a restart was expected by 2011 (OECD, 2007).

In managerial terms, the outsourcing practices have varied a lot over the past two decades, spanning from the externalization of support services to some core processes, from primarily service-based activities to productive processes, such as in the case of modular production (Brusoni & Prencipe, 2001; Prencipe, Davies, & Hobday, 2003). Today, firms manage a portfolio of outsourced services and work resource that may include relatively low-skill activities (e.g., call centers) as well as knowledge-intensive services (e.g., market research and analysis).

The present scenario that sees the flourishing of information technology (IT) outsourcing (Tettelbach, 2000). Alternatively the increasingly widespread use of finance and accounting outsourcing (FAO) as well as medical outsourcing, and the emergence of knowledge process outsourcing (KPO), a very promising niche within the broader concept of business process outsourcing (Luca Giustiniano, 2013).

The described enhanced complexity of the supplier-customer relations in outsourcing calls for a deep reflection on its definition and actual span of action. Broadly speaking, outsourcing refers to the acquisition from outside the firm of inputs, services, or processes (Amiti & Wei, 2005; Boldea & Brandas, 2007). Other scholars view outsourcing as an element of the overall firm's strategy, implying a decision by the firm not to make a service/product internally and instead purchase it externally (Quinn & Hilmer, 1994; De Fontenay & Gans, 2008), while others focus on global sourcing and define outsourcing as the integration and coordination of production and marketing on a consolidated basis (Kotabe, 1990; Murray, Kotabe, & Wildt, 1995).

More specifically, outsourcing is defined as domestic, if firms source from suppliers from the same (home) country, whereas offshoring refers to the practice of outsourcing business functions in another country in order to reduce costs, typically where the costs of labor are lower (Luca Giustiniano, 2013).

An area of concern (Fenwick & Shaw 1994) was that if the contractor or works executor was in-house, then potentially they are all a part of the same organization and as such the possibility of laxity or complacency setting in is very high which would not auger so well for the projects

delivery. The potential for a more sympathetic approach to contractual enforcement may then arise, as opposed to the contractor being external to the employing organization and receiving no preferential treatment. That view is supported within the literature (Domberger & Jenson, 1997).

The manager of the client side will have a substantially reduced workforce to manage (Fenwick & Shaw, 1994), the majority having migrated to the contracting side. The same authors make the important point that the firm's manager despite having fewer staff to directly manage is likely to have greater responsibilities in terms of budgetary control. The firm's managerial role has now changed into a decreased man management role with very little line management responsibility. The role does have increased budgetary responsibilities and carries the need to engage much more with service users to monitor performance.

Domberger and Jenson (1997) states that contracting out services has little effect on the overall employment levels contrary to the opinion of other authors (Boyne, 1998); although they do acknowledge that contracting out inevitably results in job losses especially where expertise is repeatedly outsourced for a considerable length of time. Domberger and Jenson (1997) spend little time identifying where the contracting out savings are derived from other than employee reductions, wage reductions and other wealth transfers. Boyne's argument holds as contracting out will inevitably result in employment reductions, as salaries are the biggest costs within the public sector and hence where immediate efficiencies can be made.

Best value in construction is clearly demonstrated as an effective project delivery tool when a performance based specification is utilized (Kashiwagi & Savicky 2003). This approach required a win-win benefit to exist between client and outsourced contractor, where the client receives

best value, possibly by way of a project delivered which is fit for purpose: such as a roof replacement which is effective and has guaranteed longevity rather than the contractor simply maximizing profit with minimum outlook of call back due to faulty workmanship. Also Maintenance Service Agreements (MSA's) are reached between the outsourced companies, example for special service provisions like elevators and central air conditioning systems. This enable the principal contractor provide after sales service benefit and best value for the client in question since conventionally the prime contractor may not have the luxury of time and resources to do that himself. This invariably increases the prime contractor's quality performance rating if being accessed.

There is a great deal of discussion relating to the identification of core and none core functions within an organization. The importance of this discussion relates to an organization retaining core services and outsourcing none core services. Retaining core services and resources allows an organization to lower costs and release resources to concentrate on improving those areas (Harland, Knight et al., 2005); it can be argued that this approach can assist in breaking interdepartmental barriers. Identifying core services can also assist an organization to develop a competitive advantage (Burnes & Anastasiadis, 2003) while outsourcing them may lead to the loss of a competitive advantage. However others argue with limited evidence to support, that outsourcing technical and human skills leads to a loss of competitive advantage. This argument does not hold, particularly where the human asset does not have a unique skill set or a large financial investment is required. Contrary to the retention of core services and resources, leading companies have outsourced core services and resources or processes (McIvor, 2011) and these companies have benefited from being able to access specialist processes and expertise.

Within the organization, the identification of core services is not straightforward, it can be argued that, at the operational level the core services of a society's social service function could be security education and refuse collection, for a construction sector function the core service activity would do with the earthworks, substructure works, superstructure rigid frame thus concrete works blockworks and monolithic finishing with a typical standard roofing system. Supporting those functions is: administration, payroll and pension, legal services, facilities management, planning and building control, council tax, specialized services, works and goods like the elevator system, central air conditioning systems and contemporary cladding systems etc. It could also be argued that all of the above functions are noncore and could be outsourced with little effect on the recognizable service provided to the clients and the society in this context. The organization would retain a limited number of key personnel as a part of the core service management and become a sort of virtual operational team.

2.3 OUTSOURCING FRAMEWORK

Many scholars and practitioners view outsourcing as an efficient way to address organisational competitiveness (Mohiuddin & Su, 2013). Outsourcing involves the process of vertical disintegration across the globe in favor of competitive production factors and market opportunities, which correspond to the new international division of labour (Su, Regnière, & Su, 2013).

The conceptual framework is developed from the outsourcing frameworks developed by Johnson (1997), Greaver (1998), Lonsdale and Covx (1998), Jensen and Heinzi, (2001) and Momme (2001) as discussed by Busi and Ball (2006) and cited in (Cyrus et al., 2013).

Table 2.0 Outsourcing Frameworks

Johnson (1997)	Greaver (1998)	Lonsdale & Covx (1998)	Jensen & Heinz (2001)	Momme (2001)
Strategic Analysis	Planning initiatives	Assessment of business activities	Deciding on the company strategy	Competence Analysis
Identifying best candidates	Exploring strategic implication	Assessment of supply market	Describing the outsourcing project	Assessment & approval
Defining requirements	Analysis costs/performance	Selection of appropriate types of suppliers relationship	House cleaning	Contract negotiation
Selecting providers	Selecting providers	Supplier selection	Defining the different production tasks	Managing Relationships
Selecting operations	Negotiating terms	Supplier Management	Designing the network	Contract termination
Managing relationships	Transitioning resources	Re-tender or return in house	Selecting the partners	
	Managing relationships		Framing the internal network structure	
			Implementation	
			Continuous adjustment	

Source: Busi and Ball, (2006)

Continuous research has revealed several outsourcing measurement variables including cost, dependability, flexibility, quality and variety of products and services, quality of work-life indicators, suppliers' capability and performances across various industries and organizations. The casual linkages among these variables are assumed to influence organisational performance and customer responsiveness.

The research model views these variables as essential elements of effective outsourcing strategy and linked it to organisational performance.

2.4 STAGES IN OUTSOURCING

Organizations and construction companies should know the various key stages in outsourcing to be able to effectively undertake it after a successful realization of the non-core services and work resources of the organization. An effective and prudent analysis of core and non-core functions should be done and well identified before a decision is finally made to sublet the non-core functions of the organization. This is to make sure the core competencies of the organization is not sublet which would eventually lead to staff inactivity.

After identification of non - core functions, there are basically three (3) main stages of a typical outsourcing contract done by both private organizations and public entities. These are:

1. Review of the required Services, Works or Goods.
2. Tendering and Selection of Need Provider.
3. Contract Management of Need Provider.

as outlined in “A Guide to Outsourcing” (March 2008, 3rd Ed) by the Efficiency Unit of the Government of the Hong Kong Region Special Administrative Region, China.

2.5 MERITS OF OUTSOURCING

Outsourcing is a management tool and should be approached in a manner like that. Before any outsourcing contract is undertaken whether it is the first time by the organization or it has been done a number of times, the merits of the core reasons should be looked at extensively. Primarily an organization would outsource its non-core function that are not available in-house with the intention of making savings or cost reduction to boost revenue generated coupled with better productivity.

2.5.1 Reduction in Cost

Organizations would choose outsourcing for a number of reasons, the most prominent of which is cost cutting (Susarla et al., 2003). This assertion is strongly supported by Hindle (2005) when he believes that companies make the decision to outsource for a number of reasons with cost reduction being the number one priority. In many cases outsourcing can reduce both capital and recurrent costs. 27% average savings per annum was made for non-core services that were originally done in-house in the Hong Kong public service after outsourcing. (A Guide to Outsourcing, 2008).

Outsourcing firms can achieve cost advantages relative to vertical integrated firms (Bettis et al., 1992). Through outsourcing, manufacturing costs decline and investment in plant and equipment can be reduced (Bettis et al., 1992). This reduction in capital costs lower fixed cost and leads to lower production costs. This makes outsourcing a very impressive way of improving a firm's financial performance especially in the short run.

2.5.2 Access to New and Better Technology

Outsourcing brings client firms advantages related to technology (Jurison, 1995). Organizations can have the added advantage of getting access to specialized, state-of-the-art technology which is supposedly supplied to them by their need provider. On the other hand, the efficient use of outsourcing will most probably reduce the need to make investments in mature technology, simultaneously increasing the availability of resources related to new technologies for the client organization (Clark et al., 1995). Need providers usually are more equipped with the requisite new technology in use and emerging ones coupled with staff with adequate knowledge on them. This presents a very good opportunity to the client organization in this case construction. They are also able to implement new technology better and more quickly because market competition drives them to maximize their return on technology investment with continuous technology refreshment. Firms focusing on outsourcing can switch to new suppliers as new, more cost effective technologies become available. Outsourcing allows for quick response to changes in the environment (Dess, Rasheed, McLaughlin & Priem, 1995) in ways that do not increase costs associated with bureaucracy (D'Aveni & Ravenscraft, 1994). Vendors can supply expertise and state-of-the-art technology (Benko, 1993) and increase the flexibility and quality of services (Antonucci, 1998).

2.5.3 Focusing On Core Competencies

Outsourcing makes it easier for organizations to focus on their basic competences (Hayes, Hunton & Reck, 2000). This basically simplifies the roles and responsibilities of line managers because they do not have to be responsible for so much. When an organization concentrates on carrying out its core duties, it can use its financial, human and management resources more

effectively and efficiently. Outsourcing of non-core functions gives organizations the flexibility to redirect and focus their resources on services critical to their mission. Gupta and Gupta, 1992 state that “Market forces are somehow driving firms to outsource everything but the core businesses”. For example Honda’s core competencies is small engine production and Nike’s core competencies are design and marketing of shoes rather than in their manufacture (Gilley & Rasheed, 2000). Managers should apply their experience and knowledge to core competencies and outsource services in which they are less competent and can benefit from vendors' expertise Beaumont and Sohal (2004).

2.5.4 Quality Service Delivery

Outsourcing naturally tends to increase competition amongst external service providers, thereby ensuring availability of higher quality of goods, works and services (Kotabe & Murray, 1990). Quality improvement may also be realized by outsourcers, because firms can often choose suppliers whose products or services are considered to be amongst the best in the world (Dess et al., 1995; Quinn 1992). This competition allows the outsourcer to switch supplier based on quality, service delivery and even after sales service. Outsourcing also improves quality because there is less workload on line managers so efficiency in production is increased. Clark, Zmud and Mc Cray, 1995 opine that the service provider can access more advanced technologies and count on more motivated staff and better management systems in order to be able to achieve a better service coordination or control, or, simply, is more strongly committed than the internal staff to make the alliance with the client work properly. Alternatively in an era of increasing specialization and rapid advances in technology, organizations deem it necessary to keep pace with the best practice in the system by adopting more innovative, flexible and effective ways of

delivering services and ensuring services reach their customers. Typical example is the after sale service, warranty and defects remedy option given by most outsourced entities. Outsourced entities also have the added advantage of sister institutions or partners as stand-by to increase productivity when demand increases and exceed their capacity and are willing to lower reduction when demand falls. This peaks and troughs are responded to well by outsourced companies e.g. BESS BLOCK CONCRETE PRODUCTS LTD AND AFRICAN CONCRETE PRODUCTS LTD who are two sister organizations that partner each other in the production of vast amounts of pavement blocks when they are outsourced and one does not meet the productivity needed by the client in the time frame.

2.5.5 Increased Job Flexibility

Outsourcing gives a degree of high flexibility during resource utilization. It allows and makes it easier for organizations with serious work overloads and perennial fluctuations deal with work management concerning the outsourced activity workloads (Jurison, 1995).

2.5.6 Access To Expertise/Skill

Organizations may perennially face a shortage of skilled and experienced staff brought about by the change in organisational operational landscape, retirement, resignations, inability to recruit as per organisational or state restrictions. Already existent staff may not have the requisite expertise/skill to perform all the functions or keep pace with the rapid changing technology. Outsourcing is a very good option in such a situation.

2.6 DEMERITS OF OUTSOURCING

Outsourcing has its inherent benefits but also has its challenging sides also. Although outsourcing's potential benefits are many, some argue that its challenges as outlined below are also very critical and worth noting when it come to the performing organization. Outsourcing's benefits are not automatic and that establishing and monitoring a significant outsourcing arrangement requires a considerable investment of managerial time and care (Lacity & Willcocks, 2001).

2.6.1 Loss of Organisational Innovation, Skill and Resource

Continual reliance on outsourcing could lead to a very threatening condition where there would be a constant decline in outsourcer's innovation, skill upgrade and opportunity to expand resource base. Outsourcing can lead to a loss of research and development competitiveness (Teece, 1987). Firms that outsource constantly loose the opportunity to get a touch with new technological breakthrough that offers opportunities for product and process innovations (Kotabe, 1992).

2.6.2 Patency Theft.

Outsourced entities have the likelihood of getting to know the mode of operation for patented goods, works or service procedures of the organization. They may use that knowledge to begin marketing the goods, works or service procedure (Prahalad & Hamel, 1990). Many Asian firms have made their initial entrance into U.S. markets by first entering outsourcing arrangements with U.S. manufacturers and subsequently marketing their own brands aggressively. In this way, many Asian firms have achieved market dominance.

2.6.3 Possible Loss of Key Staff

Continual outsourcing may create a sense fear in some key staff since they may not be very comfortable and feel threatened by the agreements. They may feel management may let them off at a point in time so they would naturally want to move out. Tafti, 2005 states that the loss of talent is another reason that an outsourcing agreement does not always provide a firm with technical gains it anticipates. Key employees leaving at that time may be very detrimental to the organisational productivity since they may have lost their company's innovative brains.

2.6.4 Lower Rebuilding Capacity

Key employees leaving may pose a challenge when that particular contract is over and the firm would need the services of the previous staff to rebuild. The firm would have to go through the task of rehiring new staff who may not be well versed with the company's operations in use. Tafti, 2005 states that the loss of talent poses great challenges for the firm when it decides to rebuild its previously outsourced department.

2.7 GHANAIAN CONSTRUCTION IN PERSPECTIVE

Construction is a major contributor to the nation's Gross Domestic Product (G.D.P). 2005 and 2006 saw growth rates of 5.8 % and 6.2 % respectively (2005 and 2006 Budget). As per our National Development Agenda to make the country a middle income country by 2015, construction has a major role to play for this to be realized. Prudent management which enables constructions companies to focus on their strengths while letting out the non-core functions to external performing entities is supposed to boost their productive levels which in turn should have an immense positive effect on the national wealth (G.D.P).

The construction industry is very important because of the outputs and outcomes of its services rendered. The physical infrastructure achieved through the construction activity is the nations' economic backbone because it houses the performance of activities by all the sectors of the economy. This therefore makes it very prudent for every effort to be made to adopt all available concepts which have been successful with other performing organizations. Information Technology outsourcing has been widely embraced by numerous firms in the Ghanaian Economy most especially our telecommunication giants; MTN, VODAFONE, TIGO just to mention a few and our indigenous Banks. According to Lacity and Willcocks (1998), success rate of IT outsourcing is 56 per cent. Outsourcing therefore becomes a concept embraceable by Ghanaian Construction companies for which a number of them especially the indigenous ones have adopted. This enables them to perform contracts that previously were being done by the Foreign Companies operating in the country. The knowledge of their ability to let out what was not their core function is good news enough to make the indigenous companies compete for works of '*special nature*'.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 INTRODUCTION

This section of the study addresses the methods and procedures used in carrying out the research. It also discusses the purpose of the research as well as the approach. This exploratory research that seeks to find out the relativity of an unknown area of research concerning construction firms' services and work resources outsourced. This provides an explanation of the research design, details regarding the sample, the variables to be examined, chosen measurement instruments, means of data collections and data analysis tools to be used.

3.1 PURPOSE OF THE RESEARCH

This particular research explores to find out what is happening with respect to construction firms' outsourcing and describe the data and characteristics of what is observed using statistics such as frequencies, averages and other statistical calculations. This study investigated outsourcing in the procurement of aspects of building structures and its effect on project delivery in Ghana.

3.2 THE RESEARCH APPROACH

Research has basically two main forms of approach. These are The Quantitative Approach and The Qualitative Approach. For the purposes of this research, the quantitative approach method was used. The aim in quantitative research is to determine the relationship between an independent variable and a dependent variable or outcome in a population. Data was collected numerically to ascertain the existence, describe, explain, predict and control an interest or

phenomenon. Statistical data produced by quantitative research can be analysed using statistical instrument SPSS.

3.3 DATA COLLECTION

The collection of data was done by the administration of a structured questionnaire, conducting interviews and general conversation with key target construction professionals like Architects, Quantity Surveyors, Engineers, Project/Contract Managers and Site Supervisors of various construction firms located in the Greater Accra Region of Ghana for the required information. This formed the raw or primary database. Use of literature, journals, magazines, articles and internet sources also was the basis for my secondary data. Construction firms of D1K1-D4K4 category when chanced upon in the capital city Accra, in Ghana was visited and questionnaire given to the targeted sources. Thus Supervisor, Project Manager, Architect, Quantity Surveyor and Planner on site and relevant information was obtained from them. This defined my scope. The questionnaire designed was made up of both close ended and open ended questions. The open ended questions were intended to give more depth into the research. The data was analyzed by using quantitative analysis techniques. Statistical Package for Social Sciences (SPSS software version 17) was used in the Data analysis.

3.4 SAMPLING TECHNIQUE

Basically, the idea was to select some elements in a population so that conclusions could be drawn about the entire population. There were several compelling reasons for sampling; amongst them were lower cost, greater accuracy of results, greater speed of data collection and

availability of population elements (Copper and Schindler, 1995). The population for the research was Category D1K1- D4K4 construction firms in Accra.

The non-probability sampling technique, Accidental Sampling was chosen to locate construction firms who fall under the required category in the Greater Accra Region of Ghana. This would mean that there is the chance that every construction firm chanced upon was chosen which would reflect the general situation on the ground.

3.5 QUESTIONNAIRE DEVELOPMENT

Literature review, journals, internet sources and brainstorming of research objectives form the structured questionnaire. The questions, both open and close ended give opportunity to extract enough information as possible from the sources.

3.6 QUESTIONNAIRE ADMINISTRATION

The structured questionnaire designed was intended to gather enough information about outsourcing in the construction industry and its effect on project delivery in Ghana from the targeted registered category of construction firms (D1K1 to D4K4) in Accra. The following are a number of the construction firms (D1K1 to D4K4) that were visited.

1. Michelletti & Company Limited.
2. De Simone Limited Ghana.
3. David Walter Limited.
4. Krane Construction Limited
5. Consar Limited
6. Nowak Company Limited

7. Berock Ventures Limited
8. Antartic Contract Works Limited
9. Group Five Construction limited
10. Mannet Limited
11. Dream Realty Construction Limited
12. Top International Construction Limited
13. Bougess Construction Ltd

Copies of the questionnaires designed were delivered by hand and by email to respondents of the construction firms, the aim behind the research explained to them and time given them to fill the forms to be taken later. The questionnaire were explained and ample time given for filling the form before collection. Other construction firms were also given some questionnaire.

3.7 LIMITATIONS OF THE STUDY

This addresses the hitches, encountered challenges that hindered the smooth running of the survey.

Amongst them were:

3.7.1 FINACIAL CONSTRAINTS

The project involved moving from one company to another and one geographical location to the other. This entailed a lot of expenditure on transportation and other miscellaneous costs.

3.7.2 DIFFICULTY IN LOCATING COMPANIES & RESOURCE PERSONNEL

Locating company's offices was very hectic. Most firms do not easily have locatable offices. Alternatively getting the opportunity to meet the right people to hand questionnaires was very challenging. I had to travel between site and office to get the right supervisors.

Some companies' policies made it difficult for otherwise interested and potential participants restrain from answering questionnaire unless the head office had given approval. This meant going to the head office to seek the necessary approval before coming back to the respondent on site.

3.8 DATA ANALYSIS

The data analysis for this research study commenced with a preliminary set of codes based on the perceptual framework, the research aim and research questions, and the key factors apparent from the literature review. As Robson and Hedges (1993) advise, a process of revisiting the data was adopted, whereby the data was continually re-examined and re-evaluated. The researcher was then able to refine and revise the codes as the analysis progressed. Some codes 'decayed' and were dropped, while others ultimately proved important enough to be included in the study. Coded data on responses were fed into the computer based programme, Statistical Package for Social Sciences (SPSS), version 17 for display and analysis. The programme generated figures, frequencies, percentages and tables to show results of the data analysis. Descriptive analysis conducted involved the use of tabular analysis (percentages and frequencies), mean and graphs for discussing the key variables involved in the study. The statistical technique, Relative Importance Index (RII) was further employed to examine the relative importance of the various resources and services outsourced by the surveyed construction firms. The five-point scale ranged from 0

(never) to 4 (always) was adopted and transformed to relative importance indices (RII) for each as follows:

$$RII = \frac{\sum W}{A * N}$$

Where

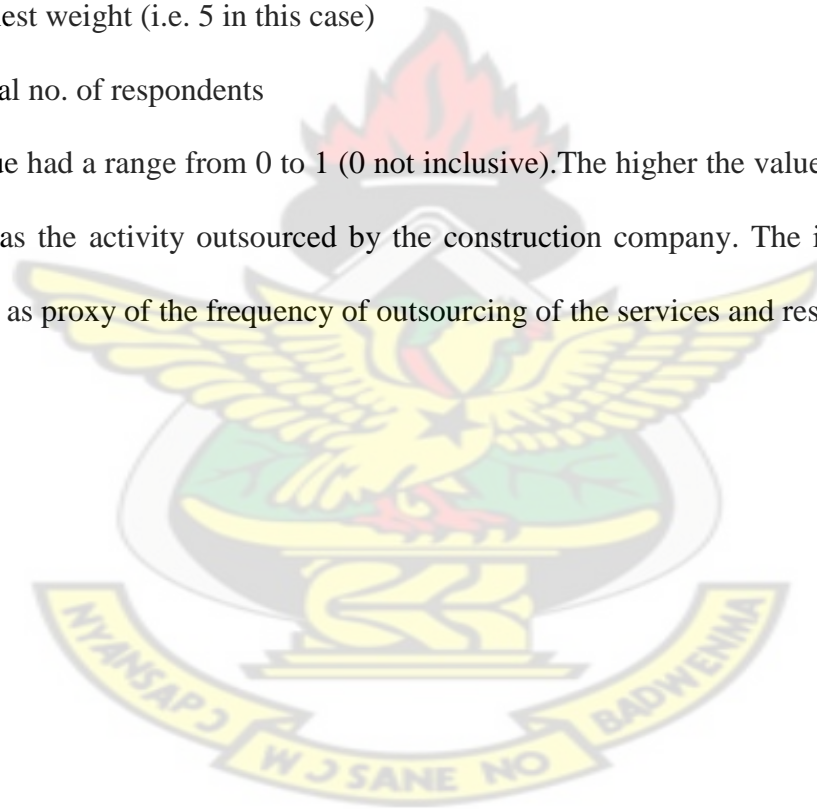
RII = Relative Importance Index

W = is the weighting given to each factor by respondents ranging from (0 to 4)

A = highest weight (i.e. 5 in this case)

N = Total no. of respondents

The RII value had a range from 0 to 1 (0 not inclusive). The higher the value of RII, the more important was the activity outsourced by the construction company. The importance index was adopted as proxy of the frequency of outsourcing of the services and resources.



CHAPTER FOUR

DISCUSSION AND ANALYSIS

This chapter presents the collated data, and analyses the data to address the objectives in Chapter One of the study. The major areas the chapter discussed include the respondent's background, the resources and services which the construction firms outsourced in Ghana, and the effect of outsourcing on the project completion times

4.1 Socio Demographic Profile of Company and Respondent

The demographic information of the surveyed respondents and their company profile is discussed in this section of the study. The major socio demographic characteristics discussed were the registration category of the construction companies surveyed, ownership type of the companies, role of respondents in the companies, working experience in the roles, age of respondents and years of operation of the surveyed construction companies. The result of the demographic information of the surveyed respondents is presented in Table 4.1.

Table 4.1: Socio Demographic Characteristics

Demographics	Frequency	Percent
Registration category of company with the MWRWH		
D1K1	23	57.5
D2K2	12	30.0
D3K3	3	7.5
D4K4	2	5.0
Ownership type of company		
Part Ghanaian part foreign	8	20.0
Completely Ghanaian	31	77.5
Others	1	2.5
Role of respondent in the company		
Architect	7	17.5
Quantity surveyor	6	15.0
Project/contract manager	8	20.0
Supervising engineer	16	40.0
Contractor	3	7.5
Years worked in current role		
0-5 years	2	5.0
6-10 years	7	17.5
11-15 years	27	67.5
15+ years	4	10.0
Age of respondent		
18-30 years	3	7.5
31-40 years	11	27.5
41-50 years	23	57.5
51+ years	3	7.5
Years of operation of company		
0-10 years	3	7.5
11-20 years	8	20.0
21-30 years	28	70.0
31+ years	1	2.5

Source: Field Survey, 2014

From Table 4.1, out of the total respondents of 40, the majority (57.5%) are with companies registered in the category of D1K1 with the Ministry of Water Resources, Works and Housing, whereas 30.0% also have their firms registered with the Ministry in the category of D2K2. The ownership type of the construction companies of the majority (77.5%) of the surveyed respondents is completely Ghanaian, whereas 20.0% also work with companies that are partly

Ghanaian and partly foreign owned. The role played by the majority (40.0%) of the surveyed respondents in their respective construction companies was an engineering supervisory role. The majority (67.5%) of the surveyed respondents have been working in their current role for 11 to 15 years. the companies of the majority of the surveyed respondents have been in operation for 21 to 30 years in Ghana. The majority of the surveyed respondents of the study are within the age category of 41 to 50 years, indicating that surveyed respondents are predominantly within the working age of the Ghanaian population.

4.2 Resources construction firms outsource in Ghana

This section of the study discussed the various resources construction firms outsource in Ghana. To achieve this objective, the respondents were presented with several categories of construction resources used by construction firms in Ghana to indicate the level at which they are outsourced by their respective construction firms by choosing from 'Never' [0] to 'Always' [4]. Therefore, to indicate importance of the various resources outsourced, for each resource, the RII was calculated by summing up the scores given to it by the respondents, and the relative importance index was calculated and by extension their rank. The result of the frequency responses of the surveyed respondents and the weight, RII and ranks of the outsourced resources are presented in Table 4.2.

Table 4.2A: Resources Outsourced By Construction Firms

Description	Frequency Of Response				Weight	RII	Rank
	1	2	3	4			
LABOUR							
Skilled labourers	0	0	3	37	157	0.981	1
Unskilled Labourers/Workers	0	34	5	1	87	0.544	2
PLANT							
Earthmoving/Excavation							
Excavator	0	0	8	32	152	0.950	1
Bull Dozer	0	0	10	30	150	0.938	2
Backhoe/Site Master	0	2	8	30	148	0.925	3
Trencher	0	5	6	29	144	0.900	4
Concreting Plants							
Truck Mounted Concrete Mixers	0	0	6	34	154	0.963	1
Normal Concrete Mixers	0	0	7	31	145	0.906	2
Dumpers	0	3	10	27	144	0.900	3
Poker Vibrator	0	4	10	26	142	0.888	4
General Equipment							
Tipper Trucks	0	0	3	37	157	0.981	1
Leveling Instrument	0	0	8	31	148	0.925	2

Rank: [4-Always, 3- Mostly, 2-Occasionally, 1-Rarely, 0-Never]

Source: Field Survey, 2014

From Table 4.2A, the labour resource most outsourced by the construction companies as indicated by the surveyed respondents was skilled labourers as indicated by the RII of 0.981. However, RII of 0.544 which is below 0.700 indicates that unskilled labour force is rarely outsourced by the construction companies in Ghana. from Table 4.2A, the major earthmoving or excavation plant most often outsourced by the construction firms in the Accra metropolis was excavators with RII of 0.950, then bull dozers with RII of 0.938, then backhoe or site master with RII of 0.925, and then trenchers with RII of 0.900.

The result of the RII also shows that the concrete plant resource most often outsourced by the construction firms in the Accra metropolis was truck mounted concrete mixers with RII of 0.963, then followed by normal concrete mixers with RII of 0.906, then dumpers with RII of 0.900, and

finally by poker vibrator with RII of 0.888. The general equipment that is most often outsourced by the construction firms in the Accra metropolis was Tipper Trucks ranked first as shown by the RII of 0.981, and this is followed by leveling instrument with RII of 0.925. Outsourcing of these resources is imperative because it allows the surveyed construction companies to concentrate on their core services by relocating limited resources to strengthen their core product or service and to strategically use outside vendors to perform service activities that traditionally have been internal functions (Elmuti, 2004).

Table 4.2B: Services Outsourced By Construction Firms

	Frequency Of Response				Weight	RII	Rank
	1	2	3	4			
CONSULTANCY SERVICES							
Architectural	0	0	2	38	158	0.988	1
Engineering Services (plumbing, fire and alarm, electrical, mechanical)	0	0	3	37	157	0.981	2
Structural/Civil Engineering	0	1	2	37	156	0.975	1
Quantity Surveying	0	4	4	32	148	0.925	2
Contract Management	2	10	2	26	132	0.825	3
TECHNICAL SERVICES							
Electrical	0	0	3	37	157	0.981	1
Air Conditioning	0	0	4	36	156	0.975	2
Plumbing	0	0	6	34	154	0.962	3
Fire and Alarm Systems	0	0	14	26	146	0.913	4
Lift Installation	0	4	9	27	143	0.894	5
FINISHING SERVICES							
Tiling/Terrazzo	0	0	2	38	158	0.988	1
POP/Plasterboard/Acoustic Ceiling	0	0	3	37	157	0.981	2
Curtain Walling/Sun Breakers	0	0	5	35	155	0.969	3
Alugubond Cladding	0	1	7	32	151	0.944	4
Glazing	0	8	8	24	136	0.850	5
Painting/Skimming	0	25	9	6	101	0.631	6
CLEANING AND JANITORIAL SERVICES	5	10	7	18	118	0.738	
MAINTENANCE SERVICES	1	8	13	18	132	0.825	

Rank: [4-always, 3- mostly, 2-occasionally, 1-rarely]

Source: Field Survey, 2014

From Table 4.2B, the result of the RII indicates that the most often outsourced consultancy service was architectural services with RII of 0.988, then followed by engineering services (plumbing, fire and alarm, electrical, mechanical) with RII of 0.981, then by structural/civil engineering services with RII of 0.925, then by quantity surveying services with RII of 0.925, and finally contract management services with RII of 0.825.

The most often outsourced works services by the construction firms surveyed was electrical services with RII of 0.981. Air conditioning work services was ranked second as shown by the RII of 0.975 in terms of outsourcing, followed by plumbing services with RII of 0.962, then by fire and alarm systems with RII of 0.913, and finally by lift installation services with RII of 0.894. The relative importance index of the work services of greater than 0.700 indicates that all the listed works services are of great importance to the construction firms in terms of outsourcing. The act of outsourcing makes sense for firms that lack the necessary economies of scale, skills or technology to perform certain functions quickly and efficiently (Jacobs, 2009).

From Table 4.2B, the result of the RII indicates that the most outsourced finishing service was tiling/terrazzo ranked first with RII of 0.988, followed by POP/Plasterboard/Acoustic Ceiling with RII of 0.981, then followed by Curtain Walling/Sun Breakers with RII of 0.969, then by Alugubond Cladding, and Glazing with RII of 0.944 and 0.850 respectively. Both cleaning or janitorial services and maintenance services were also found to be outsourced by the construction firms in the Accra metropolis as shown by their respective RII of 0.738 and 0.825 which are above the benchmark of 0.700. The traditional outsourcing with emphasis on tactical benefits like cost reduction (for example, cheaper labour cost in low-cost countries), have more recently

been replaced by productivity, flexibility, speed and innovation in developing business applications, and access to new technologies and skills (Elmuti, 2004) and hence probably the outsourcing of these services and resources by the surveyed construction firms. The growing in the current trend of outsourcing several services, works and goods among construction firms in Ghana is an antecedent to world growing trend of outsourcing. Outsourcing has been growing over the last decade by a rate of 30%-35% until 2007 (revenues per year), and a restart was expected by 2011 (OECD, 2007).

4.3 Effect of outsourcing on project completion times

This section of the study assess the methods used to select outsourced vendors, the prime criteria used in the selection of outsourced vendors, the time frame for completing outsourced contract, and the benefits organization enjoy due to vendor outsourcing. The result is presented in Table 4.3 with the aid of frequencies and percentages.

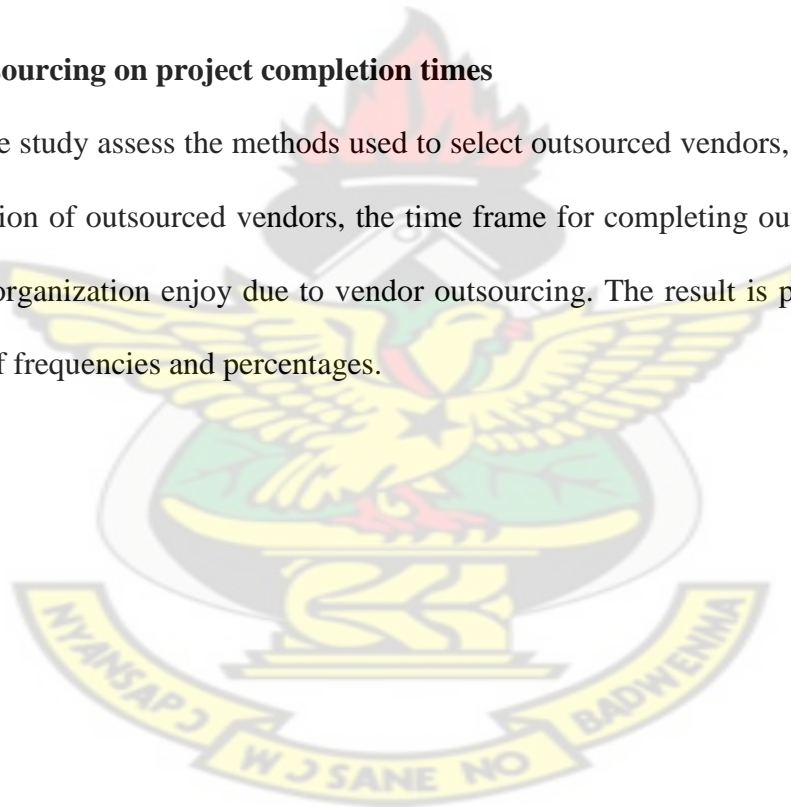


Table 4.3: Method Used In Selecting Vendor and the Benefits of Outsourcing

	Frequency	Percent
Person responsible for the decision of outsourcing		
Top management	30	75.0
Procurement manager	8	20.0
Human resource manager	0	0.0
Project manager	2	5.0
Method used to select outsourced vendor		
Competitive tendering	32	80.0
Selective tendering	5	12.5
Single sourcing	3	7.5
Prime criteria used in selecting outsourced vendor		
Strong financial base of vendor	5	12.5
Experience in similar project	26	65.0
Perceived capability	8	20.0
Willingness to work within terms and conditions	1	2.5
Have written contract with outsourced vendors		
Always	34	85.0
Usually	5	12.5
Sometimes	1	2.5
Rarely	0	0.0
Never	0	0.0
Have time frame for completing outsourced contract		
Yes	37	92.5
No	3	7.5
Vendors meet required time period as programmed		
Yes	29	72.5
No	11	27.5
Advise management to continually outsource services		
Yes	27	67.5
No	13	32.5
Benefits organization enjoy due to vendor outsourcing		
Cost reduction in operation	0	0.0
access to new technology	0	0.0
Access to improved expert knowledge	0	0.0
Improved service delivery	4	10.0
Improved level of income	1	2.5
Company focusing on core issues	0	0.0
All of the above	35	87.5
Feel insecure when role is outsourced		
Yes	12	30.0
No	28	70.0
Company makes financial gain via services & resource outsourcing		
Yes	34	85.0
No	6	15.0

Source: Field Survey, 2014

From Table 4.3, out of the total respondents of 40, the majority (75.0%) were of the opinion that the person responsible for the decision of outsourcing in their respective construction companies was the top management of the companies. The majority (80.0%) of the surveyed respondents agreed that the method use to select outsourced vendors in their respective construction firms was competitive tendering. Goods and services are predominantly required to be acquired by competitive tendering as prescribed the Public Procurement Act, 2003

The prime criterion used by the construction companies in selecting outsourced vendors was experience in similar projects as indicated by the majority (65.0%) of the surveyed respondents. From literature, it is imperative to select the right partners, based on criteria like credibility, reliability and expertise during outsourcing (Gunu, 2009; Elmuti, 2003; Arnold, 2000). The majority (85.0%) of the surveyed respondents were of the opinion that their respective construction companies always have written contracts with outsourced vendors. Domberger and Jenson (1997) assert to the need for ensuring an appropriate contractual agreement between a vendor and the demanding company. The majority (92.5) of the surveyed respondents of the study were of the opinion that their respective construction companies have a specified time frame for completing the outsourced contracts. The majority (72.5%) of the surveyed respondents were of the opinion that the vendors meet the required time period as programmed. The majority (67.5%) of the surveyed respondents are willing to render advice to the management of their respective construction firms to continually outsource services and resources in their firms. The majority (87.5%) of the surveyed respondents agreed to a reduction in the cost of operations, access to new technology, access to improved expert knowledge, improved service delivery, improved level of income and company focusing on core issues as

some of the major benefits enjoyed by construction firms due to vendor outsourcing. The principal reason for an organization moving to outsource a service or services is that it allows that organization to focus on its core competency (Rajabzadeh, Rostamy et al. 2008). However, the existing literature in support of this finding suggest that other essential reasons given for outsourcing by organizations are to reduce costs, improve its competitive position, access new technology (Gilley and Rasheed, 2000; Susarla et al., 2003; Espino-Rodriguez and Robaina 2004).

The majority (70.0%) of the surveyed respondents of the study were of the opinion that they do not feel unsecured when their role is outsourced. Contrary to the opinion of the respondents, literature assert that continual outsourcing may create a sense fear in some key staff since they may not be very comfortable and feel threatened by the agreements (Tafti, 2005). The construction companies are believed by the majority (85.0%) of the surveyed respondents to make financial gains when services and resources are outsourced. In consistency with the finding of this study, literature indicates that the impact of outsourcing on business performance outcomes can be considered both in both financial and non-financial terms (Bontis, 1998; Bontis et al., 2000).

4.3.1 Description of the effects of outsourcing

This section of the study provides descriptive statistics of the effects of outsourcing services and resources on firms in the construction industry. To achieve this result, the respondents were presented with several possible effects of outsourcing identified in literature, and to indicate their agreement to them as possible effects of outsourcing in the construction industry by choosing

from strongly disagree [1] to strongly agree [5]. Table 4.4 highlights the data from the respondents.

Table 4.4: Effects of Outsourcing

Effects of outsourcing	1	2	3	4	5
Reduction in Cost	0(0.0)	1(2.5)	3(7.5)	6(15.0)	30(75.0)
Access to New and Better Technology	0(0.0)	1(2.5)	4(10.0)	6(15.0)	29(72.5)
Focusing On Core Competencies	0(0.0)	2(5.0)	3(7.5)	5(12.5)	30(75.0)
Quality Service Delivery	0(0.0)	0(0.0)	3(7.5)	4(10.0)	33(82.5)
Increased Job Flexibility	0(0.0)	0(0.0)	2(5.0)	3(7.5)	35(87.5)
Access To Expertise/Skill	0(0.0)	0(0.0)	5(12.5)	2(5.0)	33(82.5)
Loss of Organisational Innovation	0(0.0)	0(0.0)	4(10.0)	2(5.0)	34(85.0)
Possible Loss of Key Staff	0(0.0)	0(0.0)	6(15.0)	4(10.0)	30(75.0)

Rank: [strongly disagree-1, disagree-2, fairly agree-3, agree-4, strongly agree-5]

Source: Field Survey, 2014

From Table 4.4, out of the total respondents of 40, the majority (75.0%) strongly agreed to reduction in the cost of project construction as possible effect of outsourcing. Thus, reduction in cost implies more efficient and effective production of construction services to clients. Table (4.4) show that the majority (72.5%) of the surveyed respondents strongly agreed to the access to new and better technology as a possible effect of outsourcing construction services. Thus, construction companies can ensure higher profit through both technical and allocative efficiency by outsourcing newer and better technologies they deem relatively efficient and effective. The majority (75.0%) of the surveyed respondents agreed on the need to focus on core competencies as possible effect of the outsourcing of construction services. The majority (82.5%) of the surveyed respondents strongly agreed to quality service delivery as a possible effect of outsourcing in the construction industry. The majority (82.5%) of the surveyed respondents strongly agreed to increases in job flexibility as a possible effect of outsourcing services in the construction industry. The table (4.4) also shows that the majority (82.5%) of the surveyed

respondents strongly agreed to the firm's access to expertise or skills absent in a company as a possible effect of outsourcing construction services. From Table 4.4, the majority (85.0%) of the surveyed respondents perceived loss of organisational innovation as a possible effect of outsourcing construction services in the construction industry. Thus, this implies that a company that concentrates on outsourcing services hardly would invest in research and development to come up with more innovative ways of carrying out construction activities which they can possibly have patent right over. The table (4.4) further shows that the majority (75.0%) of the surveyed respondents of the study strongly agreed to possible loss of key staff as a negative effect on construction firms that predominantly outsources construction services. Thus, staff can be displaced or feel threatened by predominant outsourcing of services that relates to their field of expertise.

4.3.2 Correlation between outsourcing and the possible effects of outsourcing

This section of the study assesses the relationship between outsourcing in the construction industry and the possible effects of outsourcing through Spearman correlation analysis. This statistical tool aids in the assessment of the magnitude and direction of the relationship between two variables. The possible values of the test are between -1 and 1. A result of -1 implies perfect negative correlation between the variable whereas 1 implies perfect positive correlation between the variables. However, correlation coefficient values greater than 0.5 or less than -0.5 are said to be strong correlation. The result of the relationship between job satisfaction and performance is therefore presented in Table 4.5.

Table 4.5: Outsourcing and Its Possible Effects

	OS	RIC	ANT	FCC	QSD	IJF	ATE	LOI	LOS
Outsourcing [OS]	1								
Reduction in Cost [RIC]	.352**	1							
Access to New and Better Technology [ANT]	.560**	.587**	1						
Focusing On Core Competencies [FCC]	.540**	.665**	.543**	1					
Quality Service Delivery [QSD]	.406**	.393**	.365**	.355**	1				
Increased Job Flexibility [IJF]	.337**	.251**	.444**	.336**	.364**	1			
Access To Expertise/Skill [ATE]	.233**	.350**	.229**	.349**	.135*	.333**	1		
Loss of Organisational Innovation [LOI]	.404**	.399**	.376**	.322**	.470**	.418**	.402**	1	
Possible Loss of Key Staff [LOS]	.454**	.352**	.543**	.527**	.480**	.593**	.482**	.544**	1

***, ** & * Correlation is significant at the 1%, 5% & 10% respectively

Dependent Variable: Outsourcing

Source: SPSS Version 17 Output

The Table (4.5) reveals a positive correlation of 0.352 between outsourcing services and resources and reduction in the cost of project construction at a statistical significance level of 5%. Thus, any significant increases in the outsourcing services and resources in the construction industry would possibly lead to more cost reduction in construction. This result is supported by the study of Susarla et al. (2003) that showed that outsourcing can possibly lead to cost reduction in the production process. Furthermore, an averagely 27% savings per annum was made on non-core services that were originally done in-house in Hong Kong public service (A Guide to Outsourcing, 2008). Bettis et al. (1992) in their study also assert that through outsourcing, manufacturing costs decline and investment in plant and equipment can be reduced.

The table (4.5) also shows a positive correlation of 0.560 between outsourcing of construction services and access to new and better technologies at a statistical significance level of 5%. This therefore implies that any increases in the outsourcing services and resources of a construction firm is likely to lead to increases in the companies possibility of having access to new and better technologies. The finding of Clark et al. (1995) also showed that efficient use of outsourcing will most probably reduce the need to make investments in mature technology, simultaneously increasing the availability of resources related to new technologies for the client organization. Firms focusing on outsourcing can switch to new suppliers as new, more cost effective technologies become available.

The table (4.5) shows that there is a positive correlation of 0.540 between focus on core competencies and the outsourcing of construction services at a statistical significance level of 5%. This therefore implies that any significant increases in construction services increases the focus of the construction companies on their core competencies. This result is consistent with the study of Hayes, Hunton and Reck (2000) that indicated that outsourcing makes it easier for organizations to focus on their basic competences. This therefore simplifies the roles and responsibilities of line managers because they do not have to be responsible for a lot of activities. Also, when an organization concentrates on carrying out its core duties, it can use its financial, human and management resources more effectively and efficiently.

The study revealed a positive correlation of 0.406 between outsourcing services and resources of construction companies and the quality of service delivery at a statistical significance level of

5%. Thus, any significant increases in the services of construction firm that is outsourced, will result in higher quality of the services delivered to clients. This result is consistent with the finding of Kotabe and Murray (1990) which showed that outsourcing naturally tends to increase competition among external service providers, thereby ensuring availability of higher quality of goods, works and services. Quality improvement may also be realized by outsourcers, because firms can often choose suppliers whose products or services are considered to be among the best in the world (Dess et al., 1995; Quinn, 1992).

Table 4.5 shows that there is a positive correlation of 0.337 at a statistical significance level of 5% between the outsourcing services of construction companies and increases in job flexibility. Thus, any significant increase in the construction services of construction firms implies increases job flexibility of the company. Outsourcing is perceived to give a degree of high flexibility during resource utilization (Jurison, 1995). Jurison (1995) further asserts that outsourcing allows and makes it easier for organizations with serious work overloads and perennial fluctuations to deal with work management concerning the outsourced activity workloads.

The study further revealed a positive correlation of 0.233 between the outsourcing services of construction firms surveyed and access to expertise or skills at a statistical significance level of 5%. This therefore implies that any significant increases in the outsourcing of services of a construction firm could lead to increase in its access to expertise and skills absent in the firm. Consistent with this result is the study of D'Aveni & Ravenscraft, (1994) which asserts that outsourcing allows and makes it easier for organizations with serious work overloads and

perennial fluctuations to deal with work management concerning the outsourced activity workloads.

Table 4.5 showed positive a correlation of 0.404 between the outsourcing services of construction firms and loss of innovativeness. Thus, this implies that any significant increase in outsourcing the construction services of construction firm's would lead to possible increases in the loss of organisational innovativeness. Continual reliance on outsourcing could lead to a very threatening condition where there would be a constant decline in outsourcer's innovation, skill upgrade and opportunity to expand resource base. This result of the study is consistent with the finding of Teece (1987) which showed that outsourcing could lead to a loss of research and development competitiveness. Kotabe (1992) also indicates that firms that outsource constantly loose the opportunity to get a touch with new technological breakthrough that offers opportunities for product and process innovations.

Table (4.5) revealed a positive correlation of 0.454 between outsourcing services of construction firms and possible loss of key staff at a statistical significance level of 5%. Thus, any significant increases in the services outsourced by construction firms could lead to a possible loss of key staff since such staff would feel redundant and displaced. Tafti (2005) asserts that continual outsourcing may create a sense of fear in some key staff since they may not be very comfortable and feel threatened by the agreements. Tafti (2005) further asserts that the loss of talent is another reason that an outsourcing agreement does not always provide a firm with the technical gains it anticipates.

CHAPTER FIVE

SUMMARY OF FINDING, CONCLUSION AND RECOMMENDATION

This chapter mainly focused on key finding of the research problem analysis, measures to be taken in order to improve the sector and conclusion of the study. The recommendations constitute principally managerial level policies.

5.1 Summary of Finding

This research was set to find answers to the following: 1) What are the services and resources construction firms outsource in Ghana, and 2) What is the effect of outsourcing on project completion times.

The findings are as follows:

5.1.1 Resources Construction Firms Outsource

The major labour resource predominantly outsourced by the construction firms in the Accra metropolis were skilled labourers. The construction firms were also found to outsource earthmoving or excavation machines including excavators, bulldozers, backhoe or site-master and trenchers in that order of their importance. Concreting plants outsourced by the construction firms include truck mounted concrete mixers, normal concrete mixers, dumpers and poker vibrators. Some of the general equipment also predominantly outsourced by the construction firms was tipper-trucks and levelling instruments. The construction firms were also found to outsource consultancy services such as architectural services, engineering services, structural or civil engineering services, quantity surveying services and contract management services. other services also outsourced by the constructions firms in the Accra metropolis were electrical

services, air conditioning, plumbing, fire and alarm systems, lift installation, tiling/terrazzo, acoustic ceiling, curtain walling, alugubond cladding, and glazing.

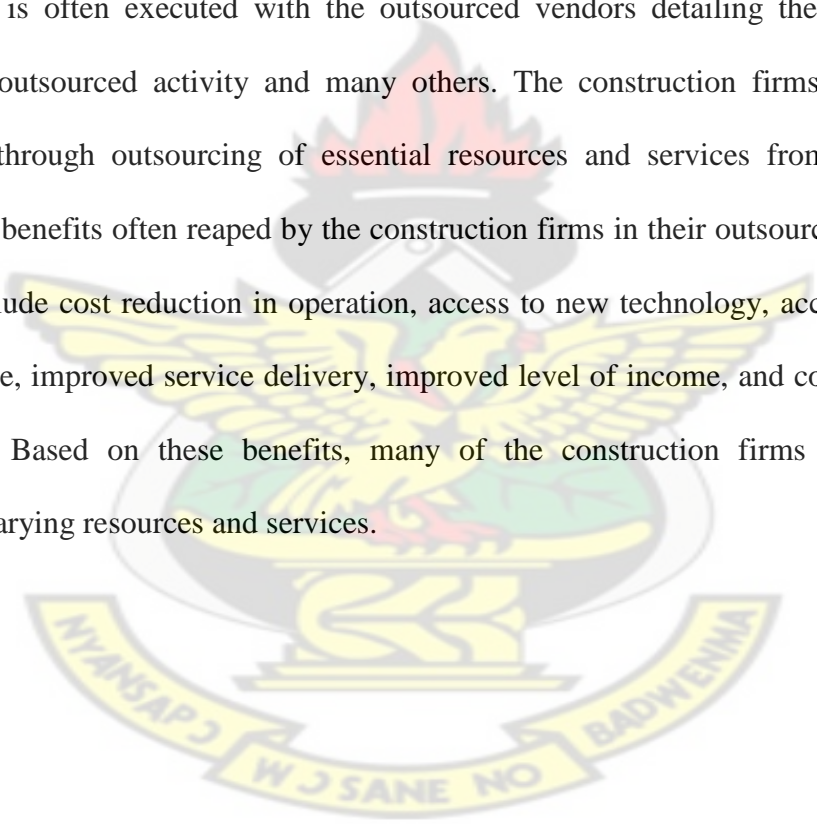
5.1.2 Effect of Outsourcing on Project Completion Time

The study revealed that vendors are often outsourced to handle some major services by competitive tendering. The prime criterion employed in selecting the outsourced vendors was found to depend on the experience of the vendors in similar projects. The construction companies always ensure an appropriate written contract with outsourced vendors which also define the time frame for completing the outsourced contract. The vendors predominantly meet the required time frame for the contract completion. The benefits found to be enjoyed by the construction firms through outsourcing include cost reduction in operation, access to new technology, access to improved expert knowledge, improved service delivery, improved level of income, and company focusing on core issues.

5.2 Conclusion

Construction companies outsource or subcontract a wide range of resources including goods, works and services during project delivery phase. The current study revealed imperative services, goods and works such as skilled labourers, excavator, bull dozer, backhoe/site master, truck mounted concrete mixers, normal concrete mixers, dumpers, tipper trucks, leveling instrument, architectural, engineering services, structural/civil engineering, electrical, air conditioning, tiling or terrazzo, acoustic ceiling, curtain walling, alugubond cladding and others that are predominantly outsourced to ensure effective and efficient project delivery. The outsourcing of these resources and services affords the surveyed construction firms to concentrate on areas they

are highly efficient and effective, and hence ensuring higher or profit maximization. The main method employed in outsourcing these goods, works and services is competitive tendering. Outsourcing through competitive tendering ensures provision of quality and relatively less costly services, goods and works in the construction industry. In the competitive tendering process, the prime criterion for the selection of the outsourcing vendors is their experiences in similar projects; though other factors such as strong financial base of vendor, perceived capability of vendor and the willingness to work within terms and conditions are given consideration. A written contract is often executed with the outsourced vendors detailing the time frame for completing the outsourced activity and many others. The construction firms reap enormous financial gains through outsourcing of essential resources and services from the right sub-contractors. The benefits often reaped by the construction firms in their outsourcing of resources and services include cost reduction in operation, access to new technology, access to improved expert knowledge, improved service delivery, improved level of income, and company focusing on core issues. Based on these benefits, many of the construction firms are engaged in outsourcing of varying resources and services.



5.3 Recommendation

Based on the findings of the study, there is the need for appropriate measures to enhance the outsourcing services of construction firms in Ghana so as to ensure quality construction and company profitability through the numerous recommendations made below:

5.3.1 Effective and efficient outsourcing

Based on the numerous benefits perceived to be enjoyed through outsourcing of services, goods, and works by the surveyed construction firms, there is the need for effective and efficient assessment of project execution to identify the technical and cost efficiency of the various project activities, and subsequently identify those activities that can be outsourced to enhance quality and profitability.

5.3.2 Proper monitoring and supervision of outsourced construction services

The full benefits of outsourcing construction firms can reap would be through properly monitoring and supervising sub-contractors that have been outsourced to deliver certain essential construction project services. Proper supervision and monitoring of outsourced services would enhance the construction quality and company profitability.

5.4 Limitations and Areas for Further Studies

The current study was limited to providing an insight into the outsourcing services and resources of construction firms. Therefore, any further study could be widened to capture other procurement activities of the construction firms in Ghana. Furthermore, the current study was limited to a small sample size of 40 which limits the generalizability of the study. Therefore

further studies in this area could enhance the validity, reliability and generalizability of the study by increasing the sample size.

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APPENDIX

QUESTIONNAIRE

Name:.....

Tel No.....

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF BUILDING TECHNOLOGY

MSC PROCUREMENT MANAGEMENT

PROJECT TOPIC: OUTSOURCING IN THE PROCUREMENT OF BUILDING STRUCTURES AND ITS EFFECT ON PROJECT DELIVERY IN GHANA.

GENERAL: This study refers to outsourcing; that is the giving away of the non- core functions of the organisation to an external supplier. In construction, outsourcing could be services rendered by external consultants to your firm e.g. Professional Architects, Quantity Surveyors, Engineers and the like on certain projects. Specialist works like finishes (Curtain Walling, Glazing, and Alucubond Cladding), Central Air Conditioning System, Lift Installations and so many others can be outsourced. Some companies may also outsource their labour and plant for specific works because of technicality, location or any other factor.

I basically seek to know the services and resources of your operations you outsource (goods, works and services) and its effect on project delivery.

NAME: OSEI-ANNOR EVANS

The following questions for the project undertaken by the above named student is for academic purposes only and shall be treated with the utmost privacy.

PART A. –Company and Respondent Information.

Please Tick Lettered A- F Where Applicable And Add Additional Information Where Necessary.

1. What is the name of your company?
2. What is your registration category with the Ministry of Water Resources, Works and Housing?
 - a. D1K1 b. D2K2 c. D3K3 d. D4K4
3. What is the ownership of your organisation like?
 - a. Part Ghanaian Part Foreign b. Completely Ghanaian c. Other, specify

- been in operation?

resources and services your company outsources because

Do you plan to outsource some of your services and resources?
If yes, to whom?
If no, why not?
If yes, how often?
If yes, how much?
If yes, how long?
If yes, how much?
If yes, how long?

Companies may outsource non-core function of their operation. Under listed are some areas. Use scores below to indicate to which it is done. Please Tick Appropriately

0-occasionally, 1-rarely, 2-never

	4	3	2	1	0
Workers					
Carpenters, masons, welders)					
.....					
.....					
.....					

- Companies may outsource non-core function of their operation. Under listed are some areas. Use scores below to indicate to which it is done. Please Tick Appropriately
- occasionally, 1-rarely, 0-never)**
- | | DEGREE | | | | |
|----------------------------------|--------|---|---|---|---|
| | 4 | 3 | 2 | 1 | 0 |
| /Workers | | | | | |
| carpenters,
carvers, welders) | | | | | |
| | | | | | |
| | | | | | |

	DEGREE				
	4	3	2	1	0
/Workers					
carpenters, masons, welders)					
.....					
.....					

	DEGREE					
	4	3	2	1	0	
/Workers						
(carpenters, masons, welders)						
.....						
tion						
.....						
xers						

ii. Truck Mounted Concrete Mixers					
iii. Poker Vibrator					
iv. Dumpers					
Others please Specify					
General Equipment					
i. Tipper Trucks					
ii. Levelling Instrument					
Others please Specify					

DESCRIPTION	DEGREE				
C. CONSULTANCY SERVICES	4	3	2	1	0
i. Architectural					
ii. Engineering Services (plumbing, fire and alarm, electrical, mechanical)					
iii. Structural/Civil Engineering					
iv. Quantity Surveying					
v. Contract Management					
Others please Specify					
D. TECHNICAL SERVICES					
i. Plumbing					
ii. Fire and Alarm Systems					
iii. Electrical					
iv. Air Conditioning					
v. Lift Installation					
E. FINISHING SERVICES					
i. Painting/Skimming					
ii. Glazing					
iii. Curtain Walling/ Sun Breakers					
iv. Alugubond Cladding					
v. Tiling/Terrazzo					
vi. POP/Plasterboard/Acoustic Ceiling					

Others please Specify					
F. Cleaning/Janitorial Services					
G. Maintenance					

Part C. Effect outsourcing has on project completion time

10. Who decides whether or not to outsource in your organization?
 - a. Top Management (CEO, Director)
 - b. Procurement Department
 - c. Human Resource Department
 - d. Project Team
 - e. Other specify

11. Which method do you use to select outsourced vendor in your organization?
 - a. Competitive Tendering(National /International)
 - b. Selective Tendering
 - c. Single Sourcing
 - d. Others, please specify.

12. What prime criteria do you use on in selecting an outsourced vendor?
 - a. Strong Financial Base of vendor
 - b. Experience in similar projects
 - c. Perceived Capability
 - d. Willingness to work with your organization's terms and conditions
 - e. Others' specify.

13. Do you have written contracts with outsourced vendors?
 - a. Always b. Usually c. Sometimes d. Rarely e. Never

14. Do you have time frame for completing the outsourced contract?
 - a. Yes b. No

15. Do the vendors meet the required time period as programmed?

- a. Yes b. No

If YES, do they finish before time or on time?

.....

If NO, how late are they?

.....

16. How does the vendor's completion time affect your total project's completion time?

Explain

17. Would you advise management to continually outsource services in your organization?

If Yes/NO, Why?

.....

18. Which of the following benefits do you see your organization enjoy due to vendor outsourcing?

- a. Cost reduction in operations/particular activity.
- b. Access to new technology
- c. Access to improved expert knowledge
- d. Improved service delivery
- e. Improved level of income
- f. Company focusing on core issues.

19. Do you feel insecure when your role is outsourced?

If Yes/NO, Why?

.....

20. Do you think the company makes any financial gain when services are outsourced?

If Yes/NO, Why?

.....

21. How has an outsourced activity affected your project completion time positively or negatively in the past? Give practical example.

.....

.....

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.....

.....

KNUST

22. Please indicate level to which you agree to the under listed factors as effects of outsourcing some services and resources in the construction industry by choosing from strongly disagree [1] to strongly agree [5]. [Strongly disagree-1, disagree-2, fairly agree-3, agree-4, strongly agree-5]

Effects of outsourcing	1	2	3	4	5
Reduction in Cost					
Access to New and Better Technology					
Focusing On Core Competencies					
Quality Service Delivery					
Increased Job Flexibility					
Access To Expertise/Skill					
Loss of Organizational Innovation					
Possible Loss of Key Staff					

