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Study on Stakeholder Management Strategies in Construction Projects

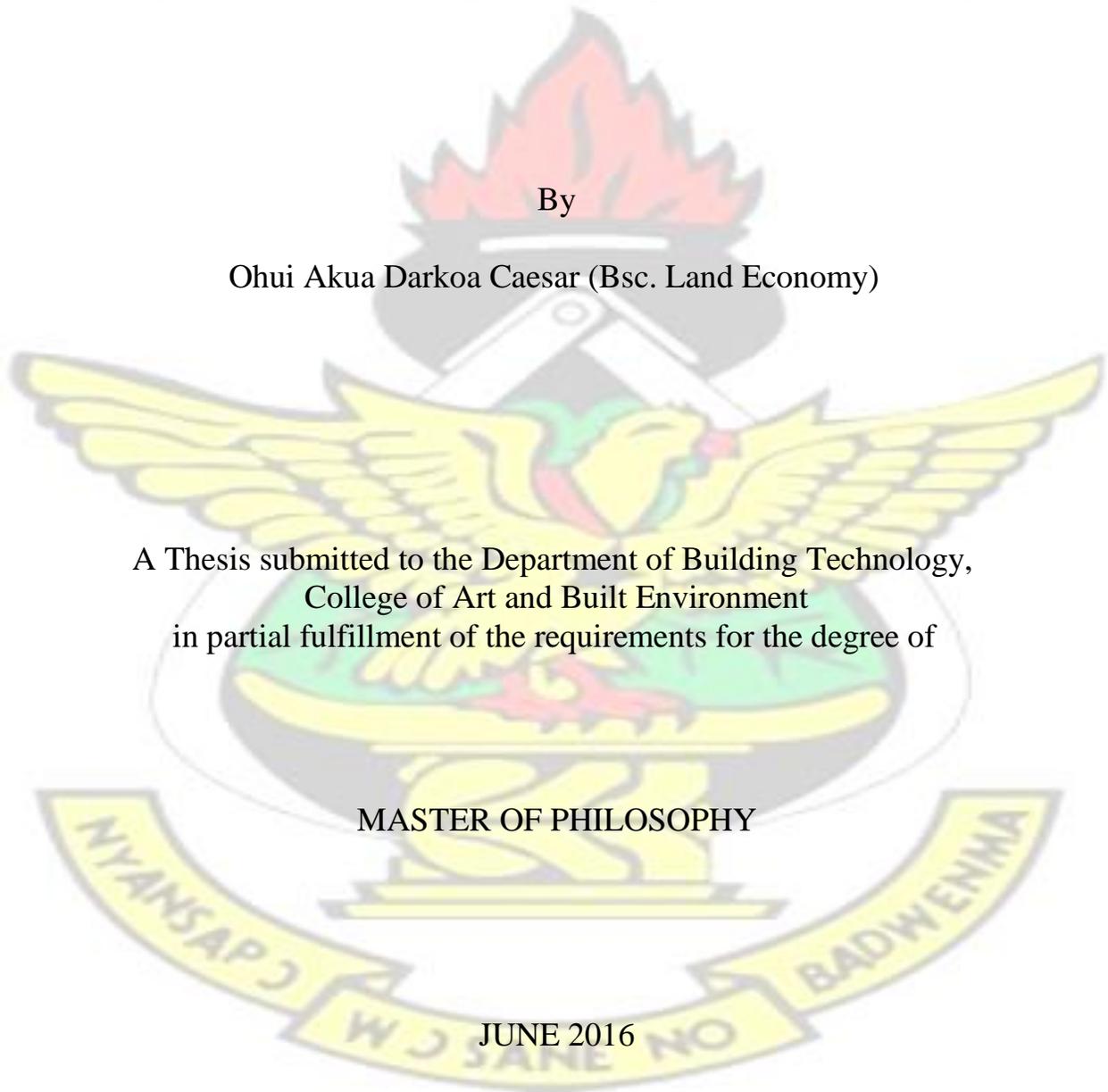
By

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A Thesis submitted to the Department of Building Technology,  
College of Art and Built Environment  
in partial fulfillment of the requirements for the degree of

MASTER OF PHILOSOPHY

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## CERTIFICATION

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

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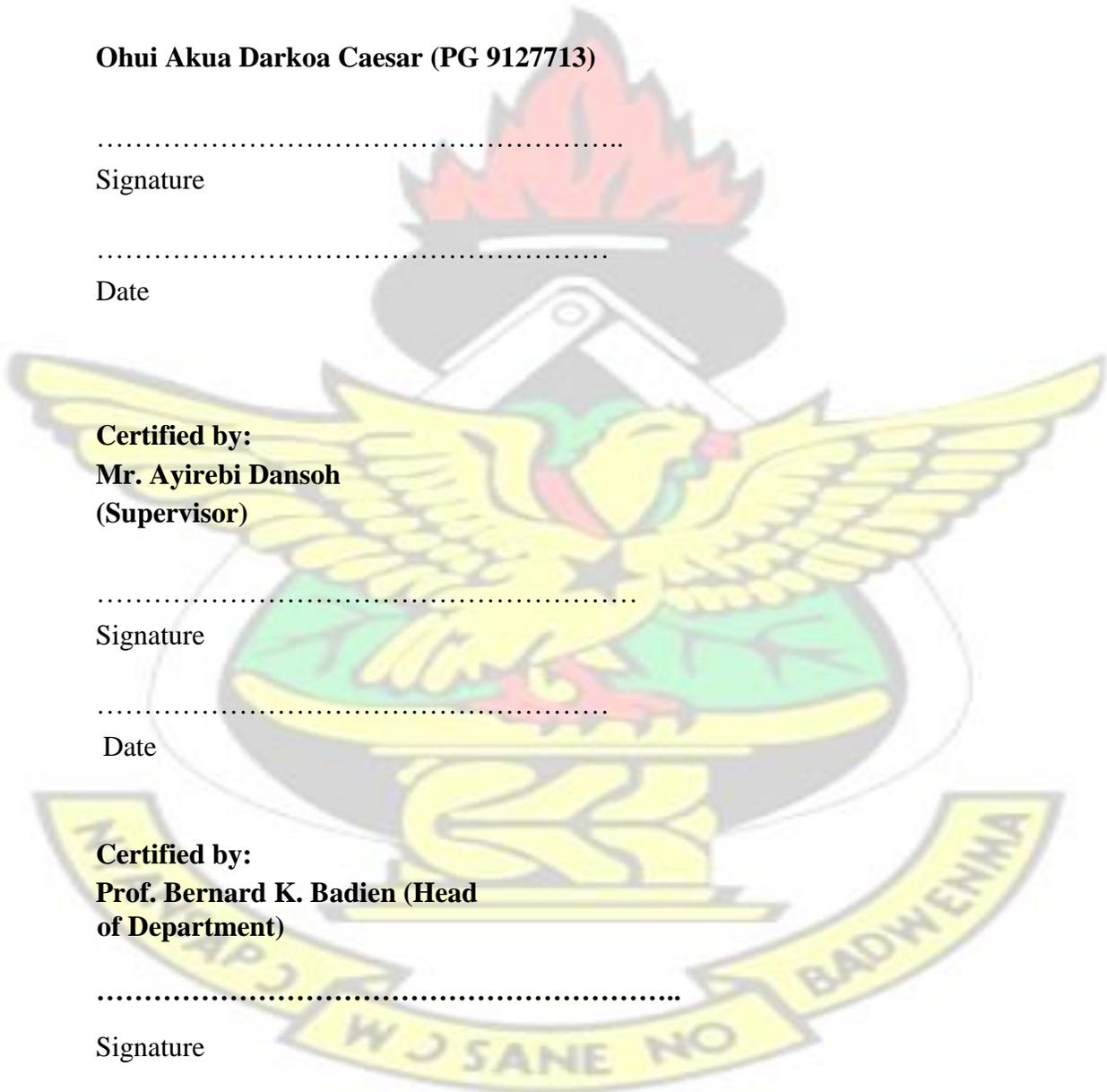
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## ABSTRACT

The study was aimed reviewing stakeholder management at the pre contract stage of construction project. Specifically the study aimed at identifying the factors that affect stakeholder management used in construction projects. The study also was interested in identifying the best stakeholder management practices used in construction projects and the challenges of improper stakeholder management. The study used a survey strategy to collect data from fifty internal stakeholders of projects managed by five reputable construction firms in Ghana. These stakeholders were clients of projects, consultants and contactors. Using multiple regression analysis the study found that communication and stakeholder participation as well as transparency are key factors that influence stakeholder management in the construction industry. The study also used the Relative Importance Index (RII) in identifying the best practices in stakeholder management and the challenges of improper stakeholder management in the construction industry. The analysis revealed that the three main stakeholder practices are management practices, method of analysing stakeholder concerns and method employed in engaging stakeholders. The study found that as part of management practices studying legislation concerning land ownership system, identifying risks associated with stakeholders and general land acquisition and stakeholder identification issues were considered important to stakeholder management. As part of the process of analysing stakeholder concerns and needs the study found the use of personal past experience, interviews and workshops to be important ingredient in analysing stakeholder concerns and needs. However, the use of professional services, questionnaires and surveys were found only to be important in analysing concerns and needs of consultants. The study also showed that the consequence of improper stakeholder management result in conflict between stakeholders and insufficient funding for the

project leading to general failure of projects. The study therefore concludes that stakeholder management is influenced by several factors including stakeholder managerial issues such as personal competence to stakeholder involvement. It is also concluded that in the management of stakeholders in the construction sector best practices requires that managerial issues methods employed in analysing concerns of stakeholders and method employed in engaging stakeholders are dealt with. The study also concludes that improper stakeholder management results in project failures. The study therefore recommended that measures such as ensuring flow of information between stakeholders and create the environment that ensures stakeholder participation.



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## **ACKNOWLEDGEMENTS**

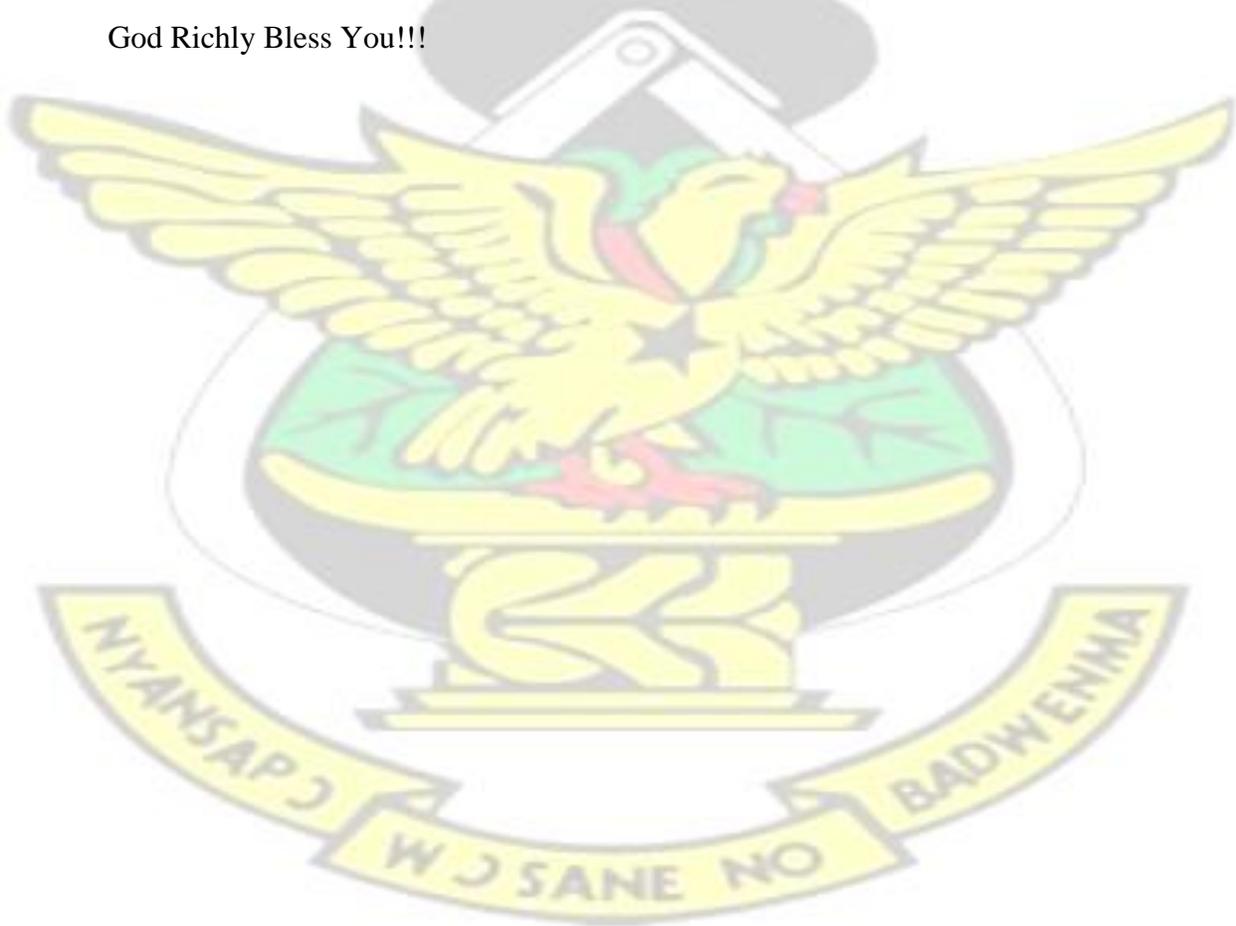
All Glory and thanks be unto God Almighty who by His grace and mercy has brought as this far.

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God Richly Bless You!!!



## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the study

The amounts of resources invested in contracts are usually so high that contractors cannot afford to let these contracts fail. Some of these contracts if successfully executed produce deliverables that affect a vast number of people. Contracts are never executed to the exclusion of society; as a consequence, construction activities will have an effect on the society as well as the society affecting the various deliverables of construction contracts.

An essential component in the development and administration of any agreement is the relationship that exists between the parties or stakeholders. This is in agreement with MacMillan and Stone (2012) who expressed that legal relationship is key to the management of agreements. This is in consonance with the fact that having an expert, useful association with the invested individuals is a key factor in the fruitful conveyance of the results looked for by the agreement.

The point of relationship administration in contract is to keep the correspondences between the gatherings transparent, non-antagonistic and in view of common comprehension. This is in conformity with Government Procurement Solution (2011) who posited that communication is a critical component of contract administration. This ought to help with keeping issues from emerging furthermore resolve them in an opportune way if they emerge. Having an expert, useful relationship ought to help the

powerful administration of execution, especially under-execution, if it happens. Keeping up a decent relationship does not imply that issues of rebelliousness or underexecution can't be talked about and followed up on. It implies that there is a more prominent probability that such issues can be examined and determined in a helpful way.

Contract exercises can be part into two unmistakable however related stages: precontract honor/restoration and post-contract administration. Contract administration is an order and control of the exercises spreading over both stages, however the potential quality including results of post contract administration won't be acknowledged unless successful pre-contract administration has brought about an agreement that addresses every one of partners' necessities with the most extreme expert expertise. A disappointment in pre-contract administration will bring about post-contract administration time and exertion being squandered on attempting to determine and remedy oversights and disappointments of the prior stage (CIPS, 2013).

Partner administration has long been perceived as a focal piece of an association's adequacy. Partners assume vital parts as supporters, patrons, accomplices and operators of progress. The interdependence between organisations and society has made it imperative for construction management teams to effectively engage stakeholders as part of contract management at pre-contract stage.

## 1.2 Statement of problem

Companies in both the general population and private divisions are confronting expanding weight to decrease costs and enhance money related and operational execution. New administrative prerequisites, globalization, increments in contract volumes and many-sided quality have brought about an expanding acknowledgment of the significance and advantages of compelling contract administration.

The establishments of a compelling and fruitful post-grant contract administration depend upon cautious, extensive and exhaustive execution of pre-contract exercises. The pre-contract stage of any contract constitute one of the most important phases of the contract which requires contract managers to be strategic in dealing with stakeholders (CIPS, 2013). Central to the success of the execution of a construction contract is the successful management of stakeholders at the pre-contract stage. The execution of contract is complex and interdependent set of activities which normally will involve several interested parties whose concerns must be addressed for the contract to be successful. However, because of complex nature of stakeholders and their varied interest managing stakeholders at the pre-contract stage is such a daunting task that contract managers in certain instances are unable to get it right and in some other instances stakeholders have been ignored completely, the consequences for which has been rife and disastrous.

Conflicting stakes have resulted in disagreements and delay in the award of contracts and as a consequence the completion of projects. Karlsen (2002) explained that failure on the part of contract management team to properly manage stakeholders at the precontract

stage have sometimes led to different sub-groups of stakeholders with different stakes in the project amounting to a risky and potential source of conflict. Such risk is compounded when few organisations team up to form a coalition.

Gibson (2002) recounts failure of projects and contend that failure of pre-contract stakeholder management have resulted in improper and inaccurate evaluation of the interest and powers of stakeholders. This has resulted in poor prioritisation and sometimes optimisation of the achievement of their desires.

The emergence of coalition stakeholders, according to Newcombe (2003) presents a formidable force that contract management team cannot ignore. Compromises in such situation present the only practical solution. This makes a strong case for an effective stakeholder management at the pre-contract stage to avert conflict and improve performance.

### **1.3 Research Aim**

The aim of the study is to identify the problems that arise as a result of improper stakeholder management, potential solutions and best practices in stakeholder management.

#### **1.4 Research objectives**

The general objective of the study is to determine stakeholder management strategies at pre-contract stage of a project. The study was specifically aimed at achieving the following:

1. Determine the factors that affect stakeholder management used in construction projects;
2. Identify the best stakeholder management practice used in construction projects;
3. Assess the challenges of improper stakeholder management.

#### **1.5 Research Questions**

Considering the course and prominence of the research, various key inquiries are required to be made. As part of these key queries are:

1. What are the factors affecting the stakeholder management in the construction project?
2. What are the stakeholder management practices of the construction project?
3. What are the challenges of improper stakeholder management?

#### **1.6 Significance of the Study**

The proposed study is significant for a number of reasons. First, stakeholder management at pre-contract stage if effectively than could help prevent conflicts at the inception of the contract. This was very critical to the success of any contract. It ensures timely completion

of project and also helps keep the project within budget. The findings of the proposed study will be policy makers to shape stakeholder management policies in contracts.

Second, the extant literature on stakeholder management in the various stages of contract was platted with gaps which require studies to fill. These gaps were basically the lack of information that solely pertains to construction management. The proposed study offered an opportunity to fill these knowledge gaps in the literature. It was also expected to set the tone for further studies in the area of stakeholder management.

Third, the proposed study is of great importance to project/construction and contract managers and management teams as the study will unravel the strategies that can be adopted in contract stakeholder management.

### **1.7 Methodology**

For the study, an exploratory survey strategy was adopted. Primary data collected by using questionnaire and the conduct of interviews were used. The study therefore used a mixed method; both qualitative and quantitative data were used. Questionnaire and interview were thus the data collection instruments adopted. The study used both descriptive and regression analysis in achieving the objectives of the study. To determine the factors affecting stakeholder management the study employed both regression analysis and relative importance index. The relative importance index ranked the factors affecting stakeholder management in order of importance whilst multiple regression analyses

identified the variation in stakeholder management that is explained by the variation in the factors of stakeholder management. Relative importance index

(RII) was again employed in identifying the best practices in stakeholder management. Here again the RII was useful in identify importance of these best practices as far as stakeholder management is concerned. To identify the challenges of improper stakeholder management the study employed the RII to rank the challenges in order of importance.

### **1.8 Scope of the Study**

Even though there are generally two types of stakeholders, internal stakeholders and external stakeholders the focus of the current study is on internal stakeholders. It has become necessary to focus on internal stakeholders because of challenges of data collection access and the challenge of identifying such stakeholders. The study therefore had to focus on only internal stakeholders as they can be identified easily. It is a truism that Ghana has a lot of construction firms but what is also evident is that most of these firms are not well organised and do not meet the standards the study require. The study required construction firms which are well organised and structured and has experience in stakeholder analysis. The study was therefore compelled to focus on big and recognised construction firms with several years of experience in construction and stakeholder management and therefore sampled only five construction firms including Ghana Highways, VRA, Bui Power Authority, Ghana Gas and Micheletti and their stakeholders.

## **1.9 Limitation**

The study sought to measure the factors affecting stakeholder management, stakeholder management practices and challenges in construction management. For lack secondary data the study relied on opinions of internal stakeholders. There is therefore the possibility of inaccurate responses in the data collection exercise either from the researcher or the respondents which may fail to accurately capture the factors. Again relying on sample drawn from just five firms affects the capacity of the study to be generalized for the entire construction industry of Ghana. Again the dynamics in the construction industry differ from large firms to small firm and therefore using only large construction firms make generalisation for smaller construction firms challenging.

## **1.10 Organisation of the Study**

The study was outlined in five chapters. The Chapter One of the study introduces the study by looking at the background of the study, the problem of the study, the significance of the study, the scope and limitations of the study. The second chapter of the study reviews imperative literatures related to all of the aspects of stakeholder management and contract management. The chapter three of the study describes the various methods and methodologies employed for the study. This chapter described the study design, the population, the sample size and sampling techniques, the data collection instruments, the method of data analysis and the validity and reliability of the study. The chapter four of the study however presents and discusses the result of the study. The chapter five of the study summarizes the study findings, concludes and makes imperative recommendations.

## **CHAPTER TWO**

## LITERATURE REVIEW

### 2.1 Introduction

This section of the study reviews literatures related to stakeholder management in the construction industry. The chapter begins with the concept of stakeholders, stakeholder theory, and project stakeholders. The chapter further delves into stakeholder management, stakeholder management models, and stakeholder management practices. The key elements for stakeholder administration, the pre-construction errors and their effects, and contract management also are discussed in the final section of the chapter.

### 2.2 The stakeholder concept

Initial studies on stakeholder have provided numerous of explanations of stakeholders. These opinions articulated vary from broad to narrow. Freeman (1984) gives an explanation of stakeholder in a standard but somewhat comprehensive form. Freeman (1984) stipulated: —a participant of a construction project in a company is a team or persons who can influence or is influenced by the gains of the company's aims. The explanation is thought comprehensive since it is grounded on the fact that firms can really be tremendously influenced by practically all individuals (Mitchell *et al.*, 1997). However, Freeman (1984) explanation did not stipulate the association that stakeholders have with the company it is said to be wide-ranging. Moreover, this explanation provides a posture on the entitlements raised. Goodpaster (1991) on the other hand indicated that Freeman (1984) description really defines two categories of stakeholders: strategic and moral.

For instance, mentioned in Freeman (1984) the Stanford Memo (1963) related stakeholders to the existence of the company, as partners of construction projects are devoted to the partners deprived of whose sustenance the company will stop. Consequently, this description emphasises on only the numerous groups of individuals who are important in area of the company's economic feasibility. Stakeholders are described through their respective importance and capability to impact the firm; with regards to the researchers, stakeholders —have a concern in the activities of a firm and...the capability to affect it (Savage *et al.*, 1991:12). Brenner (1993) also highlights the legality of stakeholder associations in the construction partner's description —taking certain valid, essential association with a firm, for example exchange businesses, action influences, and decent tasks (as quoted in Mitchell *et al.*, 1997). Clarkson (1994) characterized stakeholders into voluntary and involuntary. Clarkson (1994) further suggested that volunteer stakeholders face risks due to the appreciated venture (capital; liquid and fixed). Involuntary stakeholders however are at mercy of risk due to events of a company. Hereafter deprived of the component of threat stake is absent.

The spontaneous construction partners circuitously mean that for an individual to be regarded as a stakeholder an association with the company is not required to be present, however it also could be latent (Clarkson, 1994). In other words, a company's work linking to a stakeholder may be affected.

The mentioned descriptions pinpoint certain prevailing connection among stakeholder and the company, performing a defined work. On the bases of the current study, stakeholders in the administration of construction projects can be described as any person or team of persons who are actively or passively influenced by a project in the construction sector.

### **2.3 Stakeholder Theory**

Considering the discussions above, project stakeholder would be employed through this study to denote anybody who is directly or indirectly influenced via a construction work. It should therefore be opined that a stakeholder can be internal or external contingent on a defined construction project. Hence, the definition of whether a group or an individual falls under the mentioned group relies on the group performing the construction project and the whole construction project boundary. Though there are numerous viewpoints of stakeholder concept (e.g., social science stakeholder concept, instrumental stakeholder concept, and convergent stakeholder concept), a shared issue that is defined among all the recognized concepts are of the opinion that they have a share in the component or in this study a building scheme. Owing to their supposed palisade they typically possess some anticipations and this consequently, makes them adopt certain types of behaviors, which may always not be constructive (Bourne and Walker, 2006).

They therefore use some attitudes that individuals or groups believe are in their favour and so aid them achieve their numerous aims that might be in consonance or contrast from

the project/construction manager's aims. Hence, it is reliant on the manager of the project to comprehend their numerous aims so as to successfully manage boundary of the project. To accomplish a feat in all forms of project including construction, the manager of the project is required to be armed with the ability of effectively categorizing the stakeholder and identifying the risk associated with the project especially at the precontract stage.

Therefore a class of thinkers suggests that a strategic project stakeholder management framework should be employed because is best suited for project managers in optimizing the latent positive effect, and curtailing the unexpected effect that may be harmful.

#### **2.4 Project Stakeholder**

Bourne and Walker (2005) and Olander and Landin (2005) stipulated that the effective management of stakeholders is broadly recognized as a critical component of project management procedure. Numerous researches have opined that the incapacities of construction project managers to manage claims and effects the risk related to construction partners are crucial foundation for project letdown. The importance of construction partner's management is likewise reinforced in the description of construction works administration. For instance, the PMBOK (2008) postulates that the manning of a construction project is described as, —Manning a project comprises familiarizing the conditions, strategies and methods to varying interest and prospects of the numerous participants of the project. This hence opines that the stakeholder is the fulcrum about which the project rotates due to the fact that they may either be the project bankrollers, host environment, recipients etc. As is obvious, the fundamental supposition in most

studies of project stakeholder opines that for an effective operation of construction projects management is mandated to be receptive to stakeholders. Nevertheless, though the concerns of the administration of stakeholders is often offered in arena of the administration of building projects at the preliminary phase of 1980s thru Cleland, numerous scholars of project administration including El-Gohary *et al.* (2006) and Olander (2007) have admitted they have actually comprehended the significance of the administration of stakeholders recently and initiated to bestow study philosophies to it. Previously it should be well-known that nevertheless the dynamisms of developing countries comprising Ghana have not wholly combined the idea of the management of our construction projects. This has resulted in numerous controversies which have almost hauled projects. In Ghana for instance until a strict policy demanding and ensuring that all government and other big private projects perform proper stakeholder management at the pre-contact stage many will continue to overlook this very important concept.

Notwithstanding the numerous meanings of stakeholders by different authors, the crust of their definition points to the fact that stakeholders have some interest in the failure or success of a project. In this regard, they will always try to affect a project so they get the maximum achievable benefits. Stakeholders are characterized contrarily, and one of the popular categorisation divides stakeholders into internal and external. Since the various stakeholders have different interest and power that influence them that of the former usually very high (Fewings, 2005). Nash and Chinyio (2010) assert that a construction partner that realizes the end of an activity is likely to be contented with the result.

## 2.5 Stakeholder Management

Projects engulf more than the conveyance of a product, service; they produce change. One obstacle confronted by many firms in their pursuit to convey a fruitful project in an environment of insecurity is to improve stakeholder partnership (Bourne, 2010). This suggests that the achievement of a construction project is partially reliant on how healthy the construction project is able to man the varied interest of the stakeholders at all phases of the construction project.

Mitchell *et al.* (1997) suggested that considering the opinion of strategic management, the rudimentary distress is which groups of stakeholders merit management stern concern, and which groups rarely do. This query recounts the qualities of partners of construction projects. Agle *et al.* (1999) suggest that a numeral of documentation frameworks, numbers, rules, and classification structures have been projected by scholars to categorize partners of construction. The chief drive of diverse continuums is to aid administrators to classify the stakeholders who might impact the firms' verdict, the kinds of entitlements they possess, and how the stakeholders can advance their entitlement. On the grounds of detailed information of stakeholders and their abilities and aims, managers are capable of developing planned activities in a manner to man stakeholders.

The utmost renowned study on partners of construction qualities and construction partner's classification is Mitchell *et al.* (1997) construction partner's key framework that clarifies the procedure of executive verdict. The key model categorizes construction partners based on 3 scopes: influence, legality and earnestness.

Based on the study of Mitchell *et al.* (1997), the 3 qualities describe —the grade to which executives attach significance to contrasting construction partner's entitlements throughout their choice creation procedure, i.e., the quantity and kind of consideration shareholders obtain from executives. Thus, crucial characteristics are connected to the probability of linking stakeholders in the pronouncement making procedures. Mitchell *et al.* (1997) model was verified by researchers including Agle *et al.* (1999). These researchers discovered that, certainly, the construction partner's qualities of authority, legality and earnestness are linked to construction partner's key in the judgments of the executives. The key background has also established hefty disparagement.

Divergence concerning legitimacy as a characteristic has also been supported. Amongst others, Jawahar and McLaughlin (2001) suggested that the background does not discourse matters that are fundamental to stakeholder supervision: how a firm's management interacts with stakeholders who differ in the area of salience. Banerjee (2007) evaluated the salience background for being chiefly difficult for relegated associations, for example native societies that are craving to discuss the endurance with companies and managements. Stakeholder legitimacy is a derived from power relations among varying troupes and the level-headedness that mans the legality of a construction partner's emerge from business and monetary worth, but communal (Banerjee, 2007).

## 2.6 Stakeholder management models

Two stakeholder management models have been identified, and they are: planned needs inquiry framework given by Smith *et al.*, (2001) and participant administration framework also given by Jergeas *et al.* (2000). These two frameworks form the fulcrum around which stakeholders of projects are managed.

The pre-contract stage of a project is regarded as the fulcrum of construction activities growth. This is seen as the point in a project where consideration is attached chiefly to evaluating the requirements of customers, shareholders plus the project design group. This opinion is consistent with the suggestion of Love *et al.* (1998) that choices made in the process of the determinative and initial project phases in the lifespan of a design are regarded as vital issues that need to be given the needed attention if a construction project is to be completed on time, to be economical and to the required standard. Throughout these initial phases, the greatest of the vital choices that influence the budget, efficacy, scheduling, practical content, features and the real worth of the construction project are confirmed and rationalized. Certainly, numerous scholars including Atkinson *et al.* (1997) and Wateridge (1998) concur that fruitful construction schemes succeed when shareholders are up to the demand necessities, separately and jointly.

Earlier writings indicate that to be able to integrate the requirements of shareholders into the determinative phase of a construction scheme, it is essential to permit the shareholder to give their requirements, opinions and anticipations in a suitable medium.

Considering this method, Smith *et al.* (2001) suggested a framework referred as Planned Required Analysis to aid customers, shareholders plus the design group in defining the planned requirement for a specific construction scheme. The Planned Required Analysis procedure is built on the participation of as numerous important shareholders as pragmatically feasible. The teams are: customers, executives, managers of facility, project executives; staffs; external customers, consultants plus other design group associates. The edifice of the Planned Required Analysis procedure is built on the participation of shareholders at a defined three stages including briefings, seminars and workshops. Phase one is the meeting phase that involves briefing in the procedure of conferences and workshops. The phase two, involves participants bringing out other plans for the attainment of business assignments, while in the phase three, participants develop a comprehensive performance brief for the operation of the project.

Jergeas *et al.* (2000) in a study suggest that to enhance shareholders' administration, communication, common goals, purposes plus construction schemes urgencies are required to be methodically deliberated towards embarking on the scheme. Mounting a more formal procedure aids in circumventing perceptions rising from the fact that the construction schemes are alike. The scope of this framework is that the sample is too small and the outcomes gotten may rarely be statistically correct. Though, it does deliver great level of framework for essential rudiments in administering construction scheme shareholders.

Team members in projects are drawn from various disciplines and this result in multidisciplinary teams. However, whilst task groups, by their exceptionally nature, are most liquid as far as individuals, most various as far as firms, they regularly have hazy "authority" and settled upon particular objectives; they sometimes prepare together furthermore travel every which way on a venture by undertaking premise (Cornick and Mather, 1999). This unique set of characteristics of project teams promotes intragroup conflicts. Conflict is defined as consciousness, on the side individual's part, of inconsistencies in views, mismatched needs or incompatible requirements (Chou and Yeh, 2007). Jehn (1997) identified three types of conflicts as task conflict, process conflict and association conflict.

Task conflict (TC) is a discernment of difference between team associates or persons about the composite of their views (Jehn, 1997), and constitutes varying belvederes, philosophies and views (Jehn, 1995). Examples of task conflict are conflicts concerning the delivery of incomes, concerning processes or frameworks, and concerning the clarification of issues (De Dreu & Van Vianen, 2001). Procedure conflict (PC) is referred as consciousness of disagreements concerning features of duty achievement (Jackson *et al.*, 2002). Precisely, PC denotes subjects of obligation such as who must do what and how much role dissimilar persons must be given (Jehn, 1997). Relationship conflict (RC) on the other hand refers to the insight of relational mismatch, and constitutes irritation and hostility between persons (Jehn, 1995). There are many definitions and arguments relating to the perceived meanings of conflict. According to Tjosvold (2006), this situation has led researchers to ignore the potential positive effects of conflicts. Some

researchers (Awakul and Ogunlana, 2002; Kassab *et al.*, 2006) have focused on the delays, cost overruns, and decrease in construction project productivity.

Contrary to the above assertions, the general management literature regards conflicts as bad only when they generate dissonance among groups. There is mounting concern that groups can really shine in the attendance of some kinds of dissonance. Conflict can improve choice making results and team efficiency by improving the value via positive reproach and by persons employing a devil's advocate function (Knippen and Green, 1999). Conflict has positive aspects relating to commercial risk taking – the very basis of free enterprise and competition. For example, Wall and Callister (1995) argue that when conflict is absent, teams might fail to identify inefficiencies, and they tend to bring finer choices when pre-deliberations inclinations are in divergence rather than in covenant. Some researchers (e.g. Lu *et al.*, 2011 and Posthuma, 2011) show that task conflicts, in particular, can encourage employees to be innovative and share their knowledge. Conflict is therefore regarded as a creative factor that may kindle groups of a company to expand their technical acumen and skills to take part in corporate improvement and efficiency.

## **2.7 Stakeholder Management Practices**

Project managers are required to classify and interrelate with crucial organizations and persons in the project schemes setting. A crucial share of the administration of the project schemes setting is a planned procedure to classify and man the plausible construction

partners in that setting, and define the means with which they respond to the construction project verdicts (Cleland and Ireland, 2007). Moreover, Jepsen and Eskerod (2009) elucidated the areas fundamental to project stakeholder administration that comprises making thoughtful attempts to exercise impact on construction project partners so as to improve their assistance to the construction works, assigning inadequate funds in manner to obtain the maximum potential outcomes, and increasing efforts through a variety of construction partners than focused on a limited scope. Hence, management project partner is crucial to regulate the adverse influences of construction partners, make best use of the seeming benefits, and attains the predetermined task (El-Gohary *et al.*, 2006).

Project-stakeholder merit of administration is premeditated to inspire the employment of active construction work administration for restricting construction partner's events that could influence the construction works adversely, and to aid the construction work squad's capability to utilise chances that inspire stakeholder sustenance of project aims (Bourne and Walker, 2006). Considering the drive of stakeholder management is to discourse the varied opinions of numerous members, enhance interaction amongst stakeholders, and elucidate their requirements (Yang *et al.* 2009).

A good practice of stakeholder management necessitates associating workshops at the initial stages of the projects, while the mainstream are frequently prearranged by contractors, not the customer institutions, proposing that the contractors have acknowledged the essentiality of others either than the clients (Egan, 1998; Latham, 2007). This essential practice is shown by the report of Sir John Egan that indicated that

by the end of 2004, some 20 percent of all projects by worth is built by unified project squad and unified supply chains, and 50 percent at the end of 2007 (Egan, 1998; Latham, 2007). For instance, in the UK, the Emirates Stadium of the Arsenal Football Club and the Wembley Stadium were built via stakeholder partnering practices. More crucially since ‘Rethinking Construction’ (Egan, 1998; Latham, 2007), the Constructing Excellence Demonstration Programme (CEDP) has established itself as an outstanding drive for the apprehension and broadcasting of best practice information in the built atmosphere in the UK (Egan, 1998; Latham, 2007). Additionally, building a concession with crucial stakeholders in their interests are ignored or despoiled in many ways including, failing to perform enough research on environmental effect, given inappropriate financial data to the core stakeholders, and giving substandard reimbursement to landowners (Egan, 1998; Latham, 2007). Other scholars also highlight the essentiality of compromise and control as best practice in managing stakeholders in the construction industry (Dess, 1987; Price and Cybulski, 2004). The top three ordered best practices of stakeholder management showed by Yang et al.

(2009) in their research include —administration of construction partners with societal tasks, —evaluating the construction partners requirements and barriers to the construction work, and —collaborating with construction partners appropriately and regularly. Cosier and Schwenk (1990) highlight that construction companies in undefined environments must hearten "planned conflict" in their verdict making procedure.

Besides, best practices or activities available for increasing stakeholder contribution and commitment include employing stakeholders in the preparation and verdict making procedure of construction projects (Archer, 2003). Perhaps the more efficient way of employing stakeholders in preparation and verdict making is by alluring them to contribute in enabled workshops and focus groups. Heathrow Terminal 5 (T5) exemplifies the significance of preemptive progress of long-term pledged relations with stakeholders and stakeholder appointment (Bourne, 2010). In the T5 project the stakeholder appointment and commitment procedure is aided by the project managers, to involve with project leadership and dealers in order to announce a right first time quality idea and to get their buy-in and commitment (Basu *et al.*, 2009). On the shortcoming, British Airways' management fell-short of appropriately engage with its vital stakeholders earlier to going working—staff and salaried the price of a stained status (Bourne, 2010). Communication is also regarded the most conjoint and efficient method of resolving project barriers, and thus affecting the involvement and commitment of stakeholders through the period of a project (Archer, 2003). Stakeholder involvement and efficient communication are crucial practices of construction partner administration in the construction sector.

## **2.8 Critical Success Factors (CSFs) for the Administration of Construction**

### **Partners**

Numerous scholars including Yu (2007) and Yang *et al.* (2009b) employed the key factors as a mode to enhance the result of the construction administration procedures.

Critical success factors are often described as —environment, in which acceptable performance guarantee effective economical outcome for the company (Yang *et al.*, 2009:15). Saraph *et al.* (1989), observed CSFs as —vital domains of administrative preparation and activities that should be experienced so as to obtain high level of efficiency. It is vital for the construction works squad to know whether or not it is fruitful —mannin the construction partners (Cleland and Ireland, 2002).

Critical success factors are opined as works and activities that must be resolved so as to guarantee efficient administration of construction partners. All the features of CSFs of construction partners is presented thirty major elements influencing the accomplishment of construction partners administration are classified into 6 chief squads including administrative assistance, classification of construction shareholder's information, construction partners valuation, verdict conclusion, activities & assessment, and a continual assistant partners, and should be scrutinized as theories meaningfully crucial for construction partners administration.

### **2.8.1 Management Assistance Partners**

The assistance of executives from the formulation and executing agencies is considered critical for efficient construction partner's commitment (Yang *et al.*, 2009). In many construction works, some persons at managerial position are given the duty of overseeing their stakeholder management works and to enhance their importance. High administration level should validate the standard of stakeholder steadily and willingly. To ensure a successful stakeholder management, participants must be keen to participate in

control of resources that could profit the general company's goal (Brooke and Litwing, 1997).

Othman and Abdellatif (2011) in their study suggested that stakeholder administration should possess communal task to helping efficient administration of the partners in the execution of projects. Manning construction partners with commercial, legal, moral, ecological, and social tasks as the required procedures for construction partner's administration (Yang *et al.*, 2009b). With regards to the description of communal task, the commercial obligation is the onus to yield products and services, retail them at reasonable fees and gain economic turnover; the lawful obligation defines the responsibility to conform to legalities; and the moral obligation engulfs matters not personified in law however required by society. Lately environmental anticipation has been allotted enough concern by numerous researchers (Prager and Freese, 2009).

Li *et al.* (2011) opined that an adjustable project company is required to manage the intricacy and risks of construction projects in China that is iterated by Olander and Landin (2008), who also emphasizes the significance of the liveness management of construction works to employ workers to attain the purposes for construction works.

Under many conditions the association with the construction partner is handled by the construction administrator. Subsequently, the performance of the construction partner's administration is reliant on the construction administrator's knowledge, communication ability, and skills (Karlson, 2002). Olander and Landin (2008) showed that the construction work administrator must be extremely capable envoys and correspondents so as to manage construction partners' anticipations and making an optimistic

philosophy alteration in the area of the general company's construction scheme.

The construction sector engulfs a broad scope of construction partners, all getting them an inordinate diversity of welfares, apprehensions, necessities and possible chances. In project management, efficient project managers need intense logical and instinctive acumen to undertake the classification of stakeholders and work with them to comprehend their anticipations and effect on the success of projects. This therefore enables the manning procedures that optimizes construction partner's affirmative efforts and reduces some possible harmful effect (Bourne and Walker, 2005).

### **2.8.2 Information Input Group**

Classifying construction partner's data is a critical duty for evaluating construction partner's information since is the mainstay in the achievement of the construction work (Freeman *et al.*, 2007). Earlier any management events, data concerning the construction project and stakeholders everywhere need widespread study and investigation. The information comprises the mission of the project, full population framework of stakeholders, participants interests areas, and their requirements and obstacles to the construction work (Yang *et al.*, 2009b), the construction partners' obligations, concerns and authority must completely evaluated to ensure the construction work administrator resolves the critical challenges in the construction partners' administration procedures and the possible effect on the achievement of the construction work.

The demarcation of a well-defined mission for a construction project at varying phases is broadly regarded to be critical for the efficient administration of stakeholders (Winch, 2002). Previously all stakeholder administrative work, project management squad must possess better comprehension of the responsibilities and aims of the peculiar phase of the construction project lifespan, constituting the subjects like price, timetable, budget (Yang *et al.*, 2009b). Jergeas *et al.* (2000) additional showed that —making shared objectives, aims and construction work significances is critical for enhancing construction partners' administration, and further opined that the reason for the construction works must be comprehended, and response from construction partners be petitioned so as to attain configuration among construction partners and work partners, meanwhile through this measure anticipations could be manned, and concealed plans could be brought to light, and project significances could be proven.

Project managers are required to classify and interrelate with crucial stakeholder in the project schemes atmosphere. A crucial component of the administration of the construction project schemes atmosphere is to establish the procedures in manner to be capable of classifying and to man the possible construction partners in that atmosphere and define the mode to respond to construction work assessments (Olander, 2006). Classification of construction partners comprises both partners that partake in the construction work and possible construction partners that would also enhance the aid and proprietorship to the construction partner's administration procedures (Karlsen, 2002).

### 2.8.3 Stakeholder Assessment Group

In factual environment, construction partners have impacted construction works in diverse ways. To examine the influence of stakeholders on construction works, it is imperative to classify and comprise issues through which is done. To improve the comprehension of construction work executives of construction partners, their traits, attitude, and possible effect required to be evaluated and projected. The skirmishes and alliances amongst construction partners can further be examined on the basis of the data on construction partners (Yang *et al.*, 2009). After the data on the construction partners is prioritized, the valuation of the partners based on influence and bestowed involvement in the construction work could be accomplished, hence is essential to possess a precise comprehension of traits of construction partners so as to classify the partners with regard to behaviour categorization.

The ability and readiness of construction partners to impend or collaborate with construction works squads must be assessed (Savage *et al.*, 1991) throughout the construction partner's administrative procedures. Since construction partners might have undesirable or optimistic influence on construction work, it is required to define complainers and cohorts. Construction partners behaviour talk about stakeholder help or opposition to construction project (McElroy and Mills, 2000). Likewise, there are numerous construction partners benefits through composite of construction works (Yang *et al.*, 2009), and Freeman *et al.* (2007) suggested that classifying construction partners concern is a crucial job to evaluate construction partners, the concerns comprising security, honesty of monetary broadcasting innovative services, and monetary gains.

Olander (2007) suggests that project management process is influenced by construction work partners. Consequently distinguishing the construction partner's impact is vital to —strategy and perform adequately laborious construction partners administration procedures (Olander and Landin, 2005). The individual that established that the —construction partner's influence index, and also examines the possible influence of stakeholders designates the determination of the structure and effect of construction partners impact, the likelihood of construction partners exerting their effect and construction partners' place in connection to the construction work (Olander, 2007).

Also, Yang *et al.* (2007) showed in their study that mechanization and incorporation know-how might vitally add to the outcome of the construction in area of construction partner's achievement. They further claim that owing to hi-tech advancement, stakeholders are able to pursue a diversity of data from many sources. Unquestionably, the more information a stakeholder has about the project, the more their capability to impact it. Walker *et al.* (2008) showed the prominence of the accessibility of individual construction partners to acquire the information concerning the construction work; and McElroy and Mills (2000) propose construction partners expertise stands between full consciousness and full unawareness.

#### 2.8.4 Decision Making Group

On the premises of results in ‘data effort’, and the outcome in ‘construction partner’s evaluation’, the construction work administration group is required to negotiate skirmishes amongst construction partners. This is usually done by selecting the clear valuation of the alternate resolution created on construction partner’s interest, and to settle on the heights of construction partner’s involvement in way that warrants efficient communication and articulate methodologies to resolve the issues raised by stakeholders at this phase.

Olander and Landin (2008) outlined that the pure consideration of substitute responses for the progress of a construction work dependent on the interests of construction partners could assist construction work administrators to create the foundation for faith required for a satisfactory stakeholder administration technique. Jergeas *et al.*, (2000) classified two facets that serve as a boost in handling construction partners. One of these classifications is communicating with construction partners. To guarantee the achievement of construction work data, comprising anticipations, aims, requirements, assets, status information, funds and acquisition appeals, required to be connected on a consistent root to crucial construction partners. Communication comprises procedures vital to safeguard opportune and suitable cohort, gathering, dissemination, storage, recovery, and eventual nature of project data. Efficient project managers devote 90 percent of time connecting with the squad associates and other project stakeholders, whether they are core (at every administrative level) or exterior to the group. Efficient interaction generates a link amid varied stakeholder’s part of the project, linking

numerous social and structural circumstances, diverse heights of know-how, and numerous viewpoints and concerns in the project performance (Čulo and Skendrović, 2010).

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The dominant query of stakeholder administration has to do with —the policies that companies employ to discourse construction partners. Comparable outcome is found by Karlsen (2002) in a study that specified there are diverse kinds of the approaches; nonetheless fundamentally the construction partner’s administration approach is the behaviour, the means thru which construction work administration squad luxuries diverse stakeholders. To be able to classify diverse types of policies that are passed by institutions as replies to the needs and requirement offered by outside stakeholders, thru an experiential examination of 4 diverse construction works, Aaltonen and Sivonen (2009) showed the employment and appearance of the —reply approaches. These researchers showed the significance of articulating suitable policies to handle construction partners.

### **2.8.5 Action and Valuation Teams**

The activities and assessment squad is the last administration action squad in the procedure of stakeholder administration. The efforts needed are the verbalized policies, and the stages of stakeholder management to guarantee efficient communication. This group comprises three administrative undertakings.

Emerging policy application strategy development grid can aid developers and makers of decisions achieve an apparent image of what will be needed for application and aid them formulate active strategies that will catch the interest and resources of stakeholder (Bryson, 2004). Subsequently the plans being put in place, the assessment of the construction partner's responses to the approaches employed to advance the aims in the subsequent construction partner's administration procedures. Forecasting construction partners' responses is a critical element for project managers in their decision process concerning approaches (Freeman *et al.*, 2007). Yang *et al.*, (2011) attached greater attention to the acknowledgement of the detail that there are numerous construction partners whose anticipations and effect should be involved in the procedures of the construction work administration. And it is highlighted that if a construction works main partners are not pleased with the ensuing construction results, the construction work group would be needed to fine-tune limitations, period, price and value so as to equate the construction partner's supplies to opportunities.

#### **2.8.6 Continuous Assistance Team**

Bourne (2005) indicates that project of the building sector are transitory, but companies are congruently perpetual. Meanwhile numerous stakeholders including central authority, societies and mass media will be part in the final phases of the construction work procedures or in upcoming works, project managers, as the agents of diverse institutions, have the obligation to comprehend the alteration of their effect and relations, stimulate a stable connection with them, and interconnect with them effectively and regularly (Yang *et al.*, 2009). This team comprise the actions that must be done to assist the administrative

works instigated, and the designation of this team as ‘\_incessant assistance’ arises from the actions inside, not merely aid a distinct administrative procedure, or partake in the achievement of a solitary construction work, however could be employed for accruing the knowledge and understanding of the administrative group of the project in the far reaching period.

Project accomplishment is knotted to efficiently connect and manage relations with the numerous stakeholders of a construction project (Assudani and Kloppenborg, 2010). Consequently, improving the grade of connection among the construction work members, the greater the stakeholder’s happiness (Takim, 2009). Contribution of stakeholders of construction project at varying phases of construction project can be useful in numerous conducts (Li, and Skitmore, 2012). Classifying and examining participant interest in building works is crucial responsibilities throughout the stakeholder’s procedure so as to achieve a certain level of consensus and evade construction project catastrophes (Atkin and Skitmore, 2008). Numerous glitches have been met on substructure works the world over which has ultimately contributed to construction works catastrophe. Communal antagonism through numerous issues has been stated as the foremost cause of catastrophe in numerous cases, so the stakeholder participation in substructure construction projects contributes critically (El-Gohary *et al.*, 2006).

Fruitful relations amid the construction work administration group and its partners are vibrant for effective carriage of construction works and providing the required construction partners anticipations (Jergeas *et al.*, 2000). However, it is incorrect to disregard the construction partners or effort to enforce a stiff comprehensive mechanism on the construction work-partners connection (Karlsen, 2008). These are

thoughtprovoking and requirements that the handler of the construction project cannot ignore but need to take into account and solve. Karlsen (2008) further showed that numerous issues influence project-stakeholder connection, and classified factors including conviction, indecision and regulator, assets and understanding, and aim equivalence as being the critical stimulating and vital for establishing relations among a project and its participants.

Construction works are often subjected to indecision and these integral doubts are required to be incorporation so as to provide advantageous aims of potential change (Turner and Müller, 2003) contend that). They underscored that a significant avenue to lessen this vagueness was to select an affiliating connection where the uncertainty was distributed among the operative and the contractors. Access to resources and information was recognized as a critical element in the development of relations. Karlesen *et al.* (2008) showed that the construction project occurrence was a chance to attain knowledge on the main providers of innovative skill and for this knowledge drive a tight relation was critical.

### **2.9 Pre-Contract Stage**

The construction industry is a channel via which a country's corporeal progress is triggered by starting projects from the drawing phase to the implementation (Adnan *et al.*, 2008). The letdown and achievement of any project is affected by numerous choices exacted in place of customers. Hatush and Skitmore (1997) stipulated that

pronouncements are exacted in varying phases of construction scheme development, after viability researches, preparation, strategy, service assortment then threat valuation to appropriate management upkeep. Among the verdict has to do with the activities before the final contract phase.

Numerous descriptions offered via varying powers that be aimed at the description 'Agreement'. Sir Anson, the erudite British expert on the Rule of Contract has described agreement as: —lawfully requisite arrangement among several stakeholders, via which privileges are needed through several acts or self-controls on behalf others. According to the dictionary contract of engineering contract is described as: —An obligatory contract among several individuals that makes shared privileges, responsibilities that are mandated by legal instruments. Consequently activities achieved earlier than the definite agreement is contracted to comprise the activities before the actual contractual phase.

Activities before the actual contractual phase of the project encompasses activities comprising land purchase comprises lawful dues; customer's own institutional overheads allotted to the construction scheme (this perceptibly differs nonetheless may be about ten percent of the complete construction scheme cost outlay); setting examination (regularly underestimated cost outlay ensuing in pointless additional overheads and period – might be about one percent of the cost outlay); permitting construction activities, cleansing; assurances (other essential customers favour protect from the dangers by subscribing to construction scheme protection policy plan casing the contractor and the owner of the project– this covers about one percent of the cost outlay); fees covering construction

experts outsourced (covers conveyance and groundwork of the project and this is about fifteen to twenty percent of the cost outlay); outlays of the project (classically is about seventy percent to eighty percent of the construction scheme) (without land); VAT (presently is about approximately eighteen percent); eventuality as well as uncertainties (shelters the undefined and is around the figures of twenty percent to twenty five percent) or if construction scheme of extensive period the eventuality issue may be twice; Bankrolling and the cost-outlay of suits (bankrolling charges may be significant contingent on funding technique taken and archetypal rate of bank– may be around seven percent to twenty percent; barristers are luxurious – something in the neighbourhood of £500/man hour or more) (Potts, 2008). The Construction Industry Board (1996) suggests that the overheads regulations needs serious consideration to ensure obligations is done. To do otherwise sees overheads regulation reach the process of overhead supervision alone. Ensuring financial regulation before the actual contract is signed thus is required to be a appropriate blend amid design-overhead regulation and overhead supervision nonetheless placing much interest on affirmative overhead regulation than inert supervision. The Construction Industry Council (2005) suggests that the critical instrument for economic regulation is the overhead strategy.

Nevertheless, in preparation, the problems of approximation construction is aggravated as the construction scheme includes crucial risks; possibly since no comparable activities have been undertaken earlier, or since the limits of construction activity is ailing demarcated as suggested by Swinnerton in 1995. Parliament Building of the Scottish is a major instance of an exclusive structure with off-color described brief – preliminary cost outlay of forty million dollars whereas the concluding overheads was in the

neighbourhood of about four hundred and thirty one million dollars as suggested by the Auditor General for Scotland in 2004.

The activities before the actual contract setting reviews of the documents of contract and depictions are debatably among the critical facets of all schemes in the construction industry (Harmonie Group Construction Committee's report, 2007). Cautious deliberation of settings and geotechnical review intelligences cloister the supplier from possible obligation for alteration instructions, interruption sections, and imbursement for post-construction contributions. The proprietor commences a responsibility of revelation that, if executed precisely as well as apt, should armor the proprietor from obligation and move the accountability to the supplier.

In the selection procedure of advisers and suppliers are three distinct phases: (1) first phase, (2) the assortment procedure and (3) honor procedure (Potts, 2008). Potts (2008) suggest that throughout the first phase it is essential to classify do's of the adviser or supplier as stipulated in the agreement, thought of the assortment choices plus uncluttered, discerning or negotiated, ID of exact wellbeing and security needs, growth of the needs of contract and in the civic segment.

Fordham (2007) suggest that the assortment procedure creates a line of maximum appropriate companies from the ones that exposed an attention in the construction scheme. Potts (2008) suggests that the assortment procedure must be impartial,

responsible and translucent with the standards for assortment demarcated before requesting for vocabularies of concern. Potts (2008) suggest that the assortment procedure involves numerous stages plus classifying the assortment standards; founding the premium; classifying the least standard for assortment, as suitable; building the assortment apparatus; Alluring the required vocabularies; making extensive list; and as well as making the short-list.

### **2.10 Pre-Construction Errors and Their Effects**

Construction schemes are largely multiple of disciplines and comprise numerous advisers and suppliers. Effective and efficient schemes is chiefly reliant on indispensable comprehension of the design values and techniques of construction by numerous groups of players (Love & Smith, 2003). Love *et al.* (2004) suggests efficient synchronization frameworks and effective preparations for information and communication is vital for the accomplishment of the project. Present are numerous blunders at the initial stages of construction activities phase that can impact the accomplishment of the construction scheme. Blunders of construction designs and have grave significances on building schemes, plus numerous letdowns. Kaminietzky (1991), Atkinson (1999), and Love and Josephson (2004) suggested that Humanoid blunders are amongst the foremost reasons for faults, redraft and inefficiencies in building schemes. Riemer (1976) suggests that construction blunders may be expensive and further be a public canker attributed to imminent upkeeps, problems, and supplementary dangers plus security. Unrestrained redraft then wastes may influence the construction scheme efficiency. Rounce (1998), Acharya *et al.* (2006), and Palaneeswaran *et al.* (2007) suggested that improvement of

some destructive stuff may be beleaguered thru efficient administration of design of construction that would eventually produce maintainable whole-life standards as well as stakeholder fulfillment.

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Errors happen owing to physical and psychosomatic boundaries of the public. The situation is subject of dispute on the grounds that persons may defensibly be liable for every blunders, as creating blunders is an inborn feature of humans (Reason 1990). Human blunders happen for numerous factors and hence varying activities are required to circumvent the varying categories of blunder witnessed in the engineering and building services. Hagan and Mays (1981) suggest that notwithstanding the talent level, building the acumen of that person, blunders and lapses would still happen at some period. The construction blunders include nonconformity of some kind, whether a deviation from an envisioned sequence of action, parting from a trail of actions premeditated toward an anticipated objective, or nonconformity from the suitable attitude at work (Reason and Hobbs, 2003). A blunder can occur as a result of varying reasons including mistakes, slip-ups and inattentiveness towards work.

Broadbent *et al.* (1982) suggest that the equivalent to social blunders is an idea of reasoning letdown. Busby (2001) indicated that mistaken choices taken in project may happen as a result of reduced humanoid reasoning. A cognitive failure is explained as reasoning-based blunders on unassuming responsibilities that an individual must usually be capable to finish deprived of fault; these blunders include challenges concerning reminiscence and attentiveness (Simpson *et al.*, 2005). Reason (1977, 1979, 1984)

suggests that responsiveness gaps (or else regarded as reasoning disappointments) are a usual happening. The incapability to engross and withstand consideration is rarely a straight result of monotony. Plutchik (1980) suggested that tedium is frequently labeled as an adversative emotional or reasoning stage; nonetheless, Damrad-Fyre and Laird (1989) is of the opinion that debatably essentially an incapability to engross and withstand consideration. Fenichel (1951) suggest that monotony happens once an individual is prohibited against engaging in to do preferences prefer to do, or obliged to do things they barely love to do. The dual kinds of monotony are denoted as dissatisfied appointment of consideration or compulsory appointment of attention.

Noteworthy but 3<sup>rd</sup> kind of monotony is rarely branded by restriction but by a disorder, is the seeming autonomy that persons are incapable to uphold devotion on, or attention in, some job. Robertson et al. (1997) suggest that the responsive blunders as well as activities letdowns are regularly accredited to conditional monotony. Wallace *et al.* (2002) suggests that the monotony endurance results to sloppiness and is absolutely related to the propensity to create great level of reasoning and communicative mistakes thru absence of incentive and energies. Busby (2001) suggests that reasoning verdict execution blunder that are met throughout the processes associated with the design of the construction project are attributed to prejudices. Love *et al.*, (2008) suggest that the pressures associated with the workplace experience of designers are owned to plan and fee weights, they incline to favour lawful-grounded answers to equate the stresses forced on the designers. These blunders are often witnessed at periods designers explore for before-packed answers thru the re-usage of projects or requirements that satisfy their

instantaneous wants. In this case, a regulation is originally required earlier relying on higher energetic information-grounded operative. However this is difficult, since not comprehending issues persons are required to know may result to misleading rulebooks actuality executed that of sequence might have insinuations that results to construction blunders (Busby, 2001). Reasoning procedures of persons responsible for construction designs may be dispersed thru their group then the construction scheme that are engaged in, then in acting so might result to blunder-making to begin. Busby (2001) suggests that designers might forget to: include other stakeholders in the design making process, notify some of the rulebooks that they brand, produce other's requirements and timetables, and comprehend the past of some challenges resolving in a simulated strategy.

The bases of mistakes in a construction scheme revealed the foundation of the blunder is the construction scheme (Hammarlund and Josephson, 1999). Example, the mean defect costs of customer is thirty-two percent and forty-five percent persons responsible for the designs connected to the setting administration, the workforces and the other contractors and twenty percent emerges from resources (Hammarlund and Josephson, 1999). Furthermore, the Construction Study Founding (1981) revealed that fifty percent of blunders in building constructions had their source in the phase of the design and forty percent in the building phase. In Australia a study conducted showed that ninetytwo percent of the difference in their building firms was contributed to blunder in building pamphlets and the customers shared sixteen percent, project assemblage shared sixty percent, paperwork given is approximately one percent and the inspectors given is four

percent (Choy and Sidwell, 1991). The highest percentage of the alteration guidelines and alterations came from the holders or their mediators and that contributes forty-six percent of entitlements in subsidized schemes in the federal states (Diekman & Nelson, 1985).

A study in Kuwait suggests that faulty building frameworks are part of the greatest important bases of mistakes in building pamphlet (Kartam and Kartam, 2001). In Japan a comparable outcome has been found (Sawada, 2000). Furthermore, the incidence of mistakes at the stage of designs is rarely confined to building sector only. The extraction of numerous carriages thru the marketplace so as to alter many schemes in the carriage (NHTSA, 2000) is attributed to errors in the designs of the cars.

In the construction documents, there are numerous kinds of blunders that have been categorised in varied modes. Errors categorized in building pamphlets into accidental and planned blunders (Rooney *et al.*, 2002); whereas other studies also categorised errors into energetic and dormant (Atkinson, 1998). Additional categorization are slipups and gaps, faults, oversight and defilements (Love *et al.*, 2011); skill-grounded, rulegrounded, knowledge-grounded and choice of blunders; surrounding, design, and employees blunders (Cheng-Wing and Davey, 1998). Mohammed (2007) suggests that the blunders in investment overheads estimation, blunders of designers, blunders in construction scheme circumstantial elements, blunders and oversights in fees of amounts, blunders in requirements are also some of the existing error categorisation.

## 2.11 Contract Administration

Contract administration is the activities that allow two shareholders to an arrangement to equate their roles to perform the functions required of the arrangement (SCC, 2012). Contract management additionally needs the establishment of reputable working affiliation with clients and workers. It stays via the lifetime of an arrangement and necessitates managing effectively to predate impending needs including retorting to circumstances that soar. The vigorous resolution of formal agreement administration is to advance the activities as arranged in the formal agreement paper and attain higher price for separated cash (Forgor, 2007). This suggests maximising the competence, effectiveness and the cost of the activities or connotation well-defined by the arrangement, matching costs together with uncertainties and dynamically running the customer–dealer association (Cavaliere *et al.*, 2007). Contract management may additionally necessitate given attention to continuous improvement in performance over the life span of the arrangement.

Contract management activities may be broadly assembled into 3 units: distribution executives, relationship executives, and agreement administration as given by OECD (2011). Distribution organization necessitates that whatever is regimented is dispersed to the required elevation of worth and outcome as specified in the arrangement. Distribution organization checks the flora, capacity and worth of goods transported – upon supply and also, when appropriate, at the retro of manufacture; events design – in addition to the designs of the construction scheme and drafts, worth of workmanship and capitals; and facilities completed – organized with reviewing to guarantee that the desirable services elevations and duration are obeyed. According to the OECD (2011), relationship organization appear to recollect the connotation amid the economic worker and the

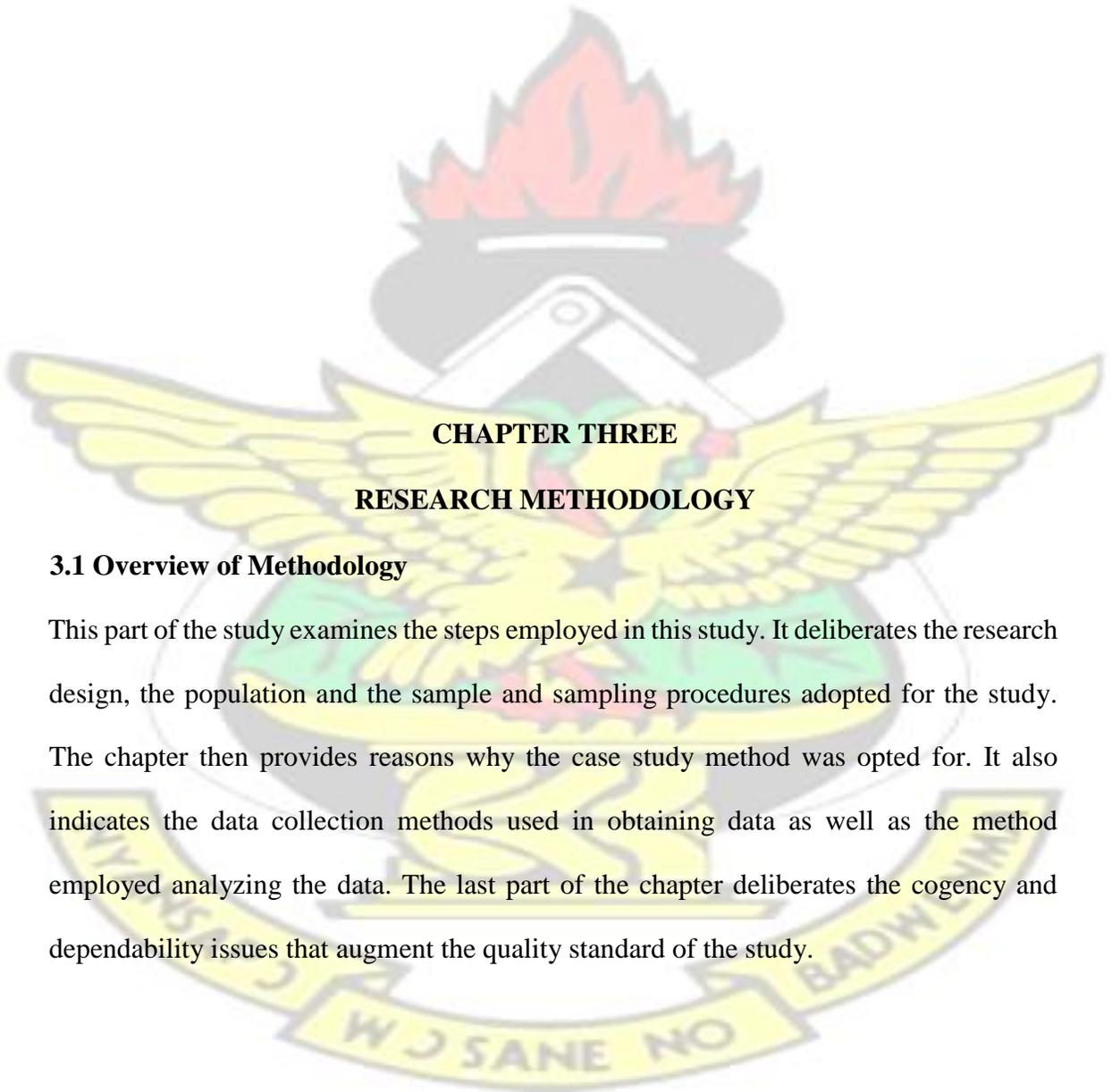
constricting consultant open and creative, with the aim of dismissing straining and distinguishing likely obstacles at the first stage, while noticing probabilities for improvement. Relations must be wholly capable throughout the sequence of the scheme and must encircle a capable technique to controlling obstacles. Contract administration however involves the authorized regulator of the arrangement and some permissible changes to guarantee thru the lifespan of the arrangement. This area of contract administration ensures that the normal features of making the arrangement are controlled professionally and efficiently (OECD, 2011).

Afterward to the yielding of a service arrangement, an essential view is that the basics for contract arrangement are arranged in the phases before the agreement is wrapped up, plus the procurement procedure (Cavalieri *et al.*, 2007). The footings of the arrangement in the contract are required constitute a settled stage of service, pricing apparatuses, providers' inducements, contract schedule, mode to quantity outcomes, conversation roads, growth processes, alteration regulatory processes, arranged departure method and arranged disruption choices, and the entire formal channels that allows a contract to work (Abdel-Razek *et al.*, 2007). These formal arrangements galvanize a framework upon which a favourable relation flourishes. As long as contract is ill built, it will be highly problematic to make the relation fruitful. The arrangement compromising procedure should be built on the framework of the need for contract administration. It is essential to shape a contract that classifies evidently the duties of the worker, together with enabling a creative relation framed on appropriate communication pus joint reliance. Whereas the arrangement needs to be framed on strong formal and lawful grounds, it must not be so

preventive that it prevents supply, positive administration of the association amid client and supplier.

Increasingly, public sector organisations are moving away from old-style official approaches of contract management and in the direction of building constructive association with suppliers (Augusto *et al.*, 2006). The administration of such an agreement, in which the requirement might have been for an association somewhat than a specific service, necessitates a variety of 'soft' abilities in the client and the supplier. A vital idea is the association that is acknowledged in the agreement, not only the procedure of managing the agreement. Agreements, models and procedures constitute a vital initiation phase for evaluation whether the agreement is underachieving, but communication, trust, flexibility and negotiation are the vital modes via which it can be carried back into the appropriate way. Confrontational methods only intensify and strain the relationship between the client and supplier (Augusto *et al.*, 2006).

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## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Overview of Methodology**

This part of the study examines the steps employed in this study. It deliberates the research design, the population and the sample and sampling procedures adopted for the study. The chapter then provides reasons why the case study method was opted for. It also indicates the data collection methods used in obtaining data as well as the method employed analyzing the data. The last part of the chapter deliberates the cogency and dependability issues that augment the quality standard of the study.

### 3.2 Research Design

Polit *et al.* (2001) in a study defined research design is a general strategy for performing a study so as to provide solutions to defined research questions. The research design shows the procedures that are trailed in performing the study. Burns and Grove (2001) labeled research design as a parameter for the research procedure so as to attain the envisioned outcomes that are images of realism. Polit and Hungler (1999) showed that the study design comprise specific critical decisions in the study methodology that the researcher put in place in performing the research. Hair *et al.* (2009) suggested that there are three wide-ranging study designs: investigative research, descriptive research, and causal research. The selection of the study design is required to be thoroughly connected to our study objective. On the basis of the shortage of empirical work in the area of effective stakeholder management at the pre-contract stage and the necessity to acquire appropriate information, the research was deliberated as exploratory and so, a case study approach was regarded suitable (Yin, 2003). Case study approach is valuable for reconnoitering parts where prevailing information is partial (Eisenhardt, 1989) and are also valued in producing a comprehension of a peculiar condition (Yin, 2003). The cogency of the case study method as an exploratory technique has been acknowledged by prominent scholars in differing areas of research (Benbasat *et al.*, 1987; Walsham 1995), and is employed for further empirical study.

Additionally, it has been contended that the usage of case-based study is suitable where the occurrence is dynamic and far from maturity (Darke *et al.*, 1998) and where the study is in its beginning phase (Benbasat *et al.*, 1987). In the case of the current research, while

much of the theory on criteria is well-defined from an economic viewpoint, a more amalgamated method relating the integration of an improvement oriented opinion is needed. The study centered primarily on the construction projects executed by five major stakeholder institutions such as the Ghana Highways, VRA, Bui Power Authority, Ghana Gas, and the Micheletti.

In support of the choice of exploratory study, several scholars have relied on it as a mode of emphasizing communal occurrence. Daniel and Grimshaw (2002) established a background of eight issues that affects trade in an exploratory comparison. The factors influencing usage and application of B2B E-business in Australian health care industry was studied by Lin *et al.* (2010) through an exploratory approach. Cloning in industrial software product lines in Israel was study by Dubinsky (2006) employing an exploratory approach to study. Hu *et al.* (2002) studied the adoption of telemedicine technology by health care organizations through an exploratory approach. The study further employed both descriptive methods of analyses.

### **3.3 Population of the Study**

The target population of any research is the all-inclusive collection of persons about whom there is the need to crease material. To strategize a suitable research study, there is the need to be precise concerning the size and location of the target population. The target population of the current study was therefore the internal stakeholder group of construction projects. The population to whom the questionnaire targeted was thus internal stakeholders they included but were not limited to consultants,

contractor/subcontractors, funding bodies/donors or Government agencies. Basically depending on their organizational structure they were given numerous titles. The population under consideration is project management team members of recognised projects in Ghana estimated to be two (hundred).

### **3.4 Sample Size of the Study**

Scholars typically cannot mark straight notes of each person in the target population they are studying. As an alternative, they take information from a subsection of persons and employ those individuals to make extrapolations about the whole target population (Zickmund, 2003). Consequently, there is the need for determination of appropriate number of respondents to be sampled from the entire target population of the study. With lack of prior knowledge of a well-defined population of the stakeholder groups of construction projects sampled, fifty (50) respondents were selected from five institutions including Ghana Highways, the Volta River Authority (VRA), Bui Power Authority, Ghana Gas and Micheletti. These institutions served as a conduit to reaching stakeholders of construction projects. The institutions were not per se the target sample but internal stakeholders of construction projects the organisation has executed. Usually in choosing qualitative samples it is important that the adopted size is substantial enough to guarantee most or all of the opinions that are important to be unraveled, however if the selection is too large, data obtained is usually repetitive. In the case of an in-depth interview, Abbie Griffin and John Hauser observed that a sample of 20-30 was enough to reveal 90-95% of all customer needs. Thus, it was determined for the purposes of this study that a sample

of fifty (50) respondents would provide much reasonability especially with the adoption of questionnaires.

### **3.5 Sampling Techniques**

The non-probability selection procedure was used in this research. This procedure was adopted due to the fact that it was necessary for the respondents of this research to possess some skills in managing construction projects. In likelihood selection, the choice as to whether a specific component is encompassed in the sample or not, is administered accidentally. However, nonprobability selection does not endeavour to handpick arbitrary sample from the population of concern. Furthermore, personal approaches are employed to choose which items or persons are involved in the study sample (Battaglia, 2011).

The study employed both convenience and purposive sampling techniques. Both convenience and purposive sampling procedures were employed to select the five institutions deemed stakeholders of many construction projects in Ghana. This method was employed because it is easy to identify institutions involved in construction project in Ghana, thus since the study was gear towards the management of stakeholder in construction projects, they were purposely targeted. Secondly the willingness of the company to be part of the research made it convent for both parties.

The sampled institutions deemed stakeholders of construction projects in Ghana were the Ghana Highways, the VRA, the Bui Power Authority, the Ghana Gas, and the Micheletti. The first four of the institutions were selected based on the reason that they have

undertaken some construction activities that have affected the largest number of stakeholders. Moreover, many of them are still dealing with residual stakeholder management issues. However, Micheletti was sampled on the premises that considering the kinds of project they have undertaken which includes but is not limited to Ohene Djan Sport Stadium, One Airport Square, World bank (IFC) Ghana Office, Villaggio Primavera, Red Bull Soccer Academy and the National Hockey Stadium it is perceived to be amongst the top 5 foreign construction companies in Ghana. These institutions were also sampled based on the availability of data and willingness to assist in the survey. Purposive sampling also defined as judgmental sampling or expert sampling regularly aids in producing a sample that can be regarded “representative” of the target population (Battaglia, 2011) and hence its usage. Per the objectives of the study the sampling only targeted the internal stakeholders of projects managed by the selected institutions.

### **3.6 Data source**

The study relied solely on primary data sources. Data was also collated from five sampled institutions through the administration of a questionnaire and face to face interviews. Ten questionnaires were taken to each institution hence the questionnaire were administered to fifty professionals engaged in construction management. This gave all stakeholders of the project the chance to opine their own views founded on individual information, understandings and relations with the management of stakeholders. The interviewees were communicated to originally on phone to appeal for their participation in the research. As proposed by Fellows and Liu (2003) the subsequent stage was to give them more data in writing, elucidating the study and assuring discretion in the management of any

information provided. The corresponding places where the interviews were to be conducted were settled with the participants. Purposive non-probability sampling employed in accessing information is critical and generalization is rarely the chief objective (Flick 2009). This tailored the situation of this exploratory study and hence purposive non-probabilistic selection procedure was used in accessing the participants from among the contractors, architects, project managers, etc. Apart from the questionnaires eight meetings were organized with very senior staff involved in construction management. These persons were amongst the persons who were initially given the questionnaires to fill eventually, 7 of the interviews were conducted on a face-to-face basis whereas one was done on skype. The interviewees were labeled as 1 to 8 for secrecy. This interview was basically to outline a list of best practices for professional. Though a number of the interview participants had related via the construction works they had done, their views in this study were presented as professionals and not with interpretation to achieving or lacking anything. This reduced any prejudiced opinions. Since the study is on stakeholder management, it was thought prudent to have the opinions of some professional working in our case institutions. However, because of time and cost constraint, such respondents were given questionnaires to fill.

### **3.7 Data Collection Instruments**

For qualitative research, data is usually collected through direct interaction with individuals on a one to one basis or direct interaction with individuals in a group setting. As earlier stated, the collection instrument adopted for this study is interviews and questionnaires. While numerous researches effectively employs single procedures,

coalescing techniques, a procedure demarcated as triangulation (Denzin, 2006), could be a valuable study choice. Mason (2002) suggested that the main objective of triangulation is to —look for corroboration between one instrument of data collection and method with another... [and to] improve the worth of the information. In the broader sense, Easterby-Smith *et al.* (2004) highlights 4 varying systems of triangulation: information triangulation (information collated from varying sources or at varying periods); procedural triangulation (utilizing varying procedures); theoretic triangulation (the solicitation of a concept from a varying study areas); and triangulation by investigators (the use of several independent investigators). This study employs information triangulation as an approach whereby manifold viewpoints of the identical portents are considered via examination of varying information foundations (Denzin, 2006). It is believed that the fruitfulness and deepness is increased with an exploration of the numerous sources of information accessible to the investigator within each of the selected construction projects. The principal methods that were adopted for this study were in-depth interview, and a questionnaire, which have all been addressed in the next section. Considering the exploratory nature of the study, interviews were employed to serve as a complimentary method so as to provide deeper and more detailed information for future research in this area. The interview conversations were recorded and examined via the coding procedures with the help of a qualitative information technique. Coding is a vital technique for qualitative information scrutiny and it is suggested for qualitative study (Glaser and Strauss 1967; Orlikowski and Baroudi, 1991).

### 3.7.1 Questionnaire

The study basically relied on structured questionnaire for collating information. The questionnaire was designed and developed on closed-ended queries. The structured form of questioning was particularly used in the sense of apprehending the purposes of the research. The questionnaire was administered on a face-to-face basis with the employees involved in the pre-contract stage of the sampled four construction projects in Ghana.

The measures for questionnaire were principally obtained from the reviewed literature in Chapter Two of the study. The questionnaire was specifically designed to achieve the purposes of the research. The questionnaire was structured in five parts. The first section collected information such as nature of project; job title of respondent, respondent's academic qualification, type of stakeholder group, and years of respondent experience. The second section was designed to identify the elements influencing the stakeholder administration in the construction work. The third part captured the best practices in stakeholder management at the pre-contract stage. The fourth section sought to identify the characteristics of the construction partners in the construction work. The last section identifies the problems of improper stakeholder management. The 'Likertscaling' type of questionnaire designing was employed to measure all items or statements.

To ensure high level of validity and reliability of the designed questionnaire, the set of questions created from the statements of the interviewees were piloted on twenty construction experts in the construction industry in the Kumasi metropolis. This size of sample is in line with the suggestion of Patton (2002) that a sample size for a pilot study

should at minimum constitute twenty participants. The respondents were required to complete the preliminary study on the basis of the challenges or problems of improper stakeholder management and the best practices in stakeholder management at the precontract stages. The preliminary study lasted for 5 to 10 minutes. Through the conduct of the preliminary test, the investigator made sure that the statements evaluated in the research reflected authentic relations and anticipations from the professionals of construction work studied. Results from the preliminary examination revealed that construction experts in the sector viewed some of the statements as evaluating similar concepts, and that led to slight alterations in the queries and the (wording of) statements. It was decided to maintain every statement in the study in order to ensure a wider measure to be sure that the statements really evaluated the same concepts from the expert's point-of-view.

### **3.7.2 Data Collection Procedure**

The researcher began the administration of questionnaires by sending a prior notice to the Managing Directors of the sampled five stakeholder institutions of construction projects on the 31<sup>st</sup> of October, 2014. In accordance with the response received between the 2<sup>nd</sup> and the 5<sup>th</sup> of November, 2014, three weeks were approved for the administration of the questionnaire to the respondents from the stakeholder institutions of executed construction projects. The administration of the questionnaires was not to last for a maximum of 15 minutes with individual sampled participants of the study. Therefore, to save time and reduce the level of inconvenience to the companies and the other respondents, the researcher hired the services of four well trained enumerators to

assist in the administration of the questionnaires. The questionnaires were administered to the various purposively sampled respondents in three weeks. Between 20<sup>th</sup> and 27<sup>th</sup> of the month of November, 2014; the first batch of the questionnaires were administered to 25 of the sampled stakeholder groups involved the pre-contract phase of construction projects in Ghana. In the ensuing days of 28<sup>th</sup> November to December 4<sup>th</sup>, the second batch of questionnaires was also administered to 25 sampled stakeholder groups of the pre-contract phase of construction projects. Therefore, in all 50 stakeholders of construction projects replied to the questionnaires; producing a reply rate of 100.0%.

### **3.7.3 Data Preparation, Collation and Processing**

Miles and Huberman (1994:56) suggest that differentiating plus coalescing information, and hence reviewing the data, is —the stuff of analysis. This stage in the qualitative study procedure classically comprises transcribing expressive and inferential codes to information (Bryman and Bell, 2007). Considering Miles and Huberman (1994), the examination for the current research commences with a preliminary group of tags relied on the firm outline, the objectives of the study, and the critical issues seeming from the reviewed literature. Robson and Hedges (1993) suggestion of the procedure of reentering the information was employed, where the information was critically reassessed. The investigator hence upgraded and revised the tags as the examination advanced. Some tags were left out, whereas others eventually showed some level of important to be encompassed in the research. Tagged information on answers was processed using the software, SPSS, version 17 for presentation and discussion.

### 3.8 Data Analysis

Descriptive tools were employed to evaluate the objective three of this study. The descriptive analysis involved tabular analysis through percentages and frequencies, and mean values for deliberating the crucial factors employed in the research. However, inferential statistical tools were employed to evaluate the objectives one and two of this study. The problems arising from improper stakeholder management were ranked using Kendall's Rank test. The objective two of the study which has to do with the potential solution to stakeholder problems at the pre-contract stage was however analyzed using the Relative Importance Index (RII). The relative index technique is broadly employed in numerous studies for assessing behaviours with regards to surveyed elements

(Egemen and Mohamed, 2005). Numerous studies including Egemen and Mohamed (2005), Assaf *et al.* (2001) etc. employed the Relative Important Index (RII) in their analysis. The formula below was employed to derive the values of the RII:

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

Where

RII = Relative Importance Index

W = is the weighting given to each factor by respondents ranging from (1 to 5)

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

N = Total no. of respondents

### 3.9 Validity and Reliability

Validity symbolizes the phases in which gauging instruments is really measuring what we envisioned it to gauge (Heffner, 2004). The validity of a device as a willpower of the degree to which the device really reproduces the intellectual concept being inspected (Burns and Grove, 1993). Greater level of validity is the nonappearance of methodical blunders in the gauging device. In the case of the validity of a device; it truthfully reproduces the notion it is hypothetical to gauge. Attaining decent cogency needed the upkeep in the study design and the sampling procedure (Fellows and Liu, 1997). To improve the rationality of the concepts of this research, an experimental research was conducted. Moreover, the researcher's supervisor and three experts in stakeholder management in the pre-contract phase helped develop the corrected questionnaire and the technique of examining the results. It was agreed by the experts that the questionnaire was reliable and appropriate to evaluate the objects that the questionnaire were developed for.

The reliability of a research measuring device is the notch of constancy with which it gauges the quality it is intended to be gauging (Polit and Hunger, 1985). The trial is frequented on the same population subset on dual circumstances and then likens the notches gotten by calculating a reliability factor (Polit and Hunger, 1985). For the most purposes reliability coefficient above 0.7 are considered satisfactory. Time frame of 2 weeks to 1 month is suggested between 2 trials (Burns and Groves, 1987). Owing to complex situations that the contractors were facing at the time being, it was too difficult to ask them to responds to our questionnaire twice within short period. Barakat (2007)

explained that, overcoming the distribution of the questionnaire twice to measure the reliability can be achieved by using Cronbach Alpha coefficient Method through the SPSS software. Therefore, the reliability of the major constructs of the study was tested using the Cronbach Alpha coefficient method.

### **3.10 Ethical Consideration**

Ethics, as defined by De Vos (1998) are a set of principles that borders on morals which is practiced by an individual or group, but is subsequently widely accepted. It outlines guidelines and attitudinal prospects of the best conduct to investigational issues and participants, proprietors, patrons, other scholars, helpers and learners. Moral matters deliberated in this research comprise institutional rights and systematic rectitude of the investigator. The objective of carrying out the study is to provide information via candid behaviour, reportage and study report publication. Burns and Grove (2003) report that the investigator is conscious that information ought not be contrived nor prejudiced so as to uphold the worth of the study (Burns and Grove, 2003). For this to be achieved, an inscribed permission was sought from the suitable quarters of the selected five construction projects, informing them of the purpose and design of the study. Furthermore, the researcher disclosed to the respondents that the study is purely meant to satisfy an academic requirement and not for any other reason. Respondents did not write their names in the questionnaires and confidentiality was observed.

# KNUST

## CHAPTER FOUR

### PRESENTATION OF RESULT AND DISCUSSION

#### 4.1 Introduction

This chapter presents the collated data, and analyses the data to address the specific objectives in Chapter One of the study. The major areas the chapter discusses include respondent's background; the factors affecting stakeholder management in the construction industry, stakeholder management practices, response strategies for dealing with stakeholder claims, and the major problems of improper stakeholder management practices in the construction industry.

#### 4.2 Socio Demographic Characteristics of Respondents

This section of the study elaborates on the socio demographic background of the respondents of the study. The major socio demographic characteristics discussed included the nature of the construction project, the job title of the respondents, the academic

qualification of the respondents, years of working experience and the type of stakeholder group. The result is presented in Table 4.1.

# KNUST

**Table 4.1: Socio Demographic Information**

<b>Socio Demographics</b>	<b>Frequency</b>	<b>Percent</b>
<b>Nature of project</b>		
Governmental	33	66.0
Semi-governmental	9	18.0
Municipalities	5	10.0
NGOs	3	6.0
Others	0	0.0
<b>Job title of respondent</b>		
General manager	7	14.0
Project manager	27	54.0
Supervisor engineer	14	28.0
Others	2	4.0
<b>Academic qualification</b>		
HND	2	4.0
PDG	5	10.0
BSc/B. Tech	39	78.0
MSc/MPhil	4	8.0
Others	0	0.0
<b>Years of working experience</b>		
Less than 5	5	10.0
5-10	3	6.0
11-15	6	12.0
16 +	36	72.0
<b>Type of stakeholder group</b>		
Client	9	18.0
Consultant	11	22.0
Contractor/subcontractors	19	38.0
Funding body/donor	2	4.0

Government	2	4.0
General public	4	8.0
Local landowners	3	6.0

Source: Field Survey, 2015

From Table 4.1, out of the total respondents surveyed (n=50), the nature of the projects undertaken by the majority (66.0%) was governmental. Also, 18.0% and 10.0% of the surveyed respondents undertake projects that were semi-governmental and municipal in nature. The majority (54.0%) of the surveyed respondents were project managers of various construction companies in the Greater Accra region. Also, 14.0% and 28.0% of the surveyed respondents of the study were General Managers and Supervisory

Engineers respectively.

Furthermore, the academic qualification of the majority (78.0%) of the surveyed respondents from the construction industry was Bachelor of Science (BSc) or Building Technology. The surveyed HND certificate holders were 4.0%, PDG holders were 10.0% and MSc/MPhil holders were 8.0%. From Table 4.1, the study is believed to have sought information from construction professionals with in-depth knowledge about the activities of the construction industry. The majority (72.0%) of the surveyed respondents have been in the construction industry for more than 16 years. However, 10.0% of the surveyed respondents have less than 5 years of working experience in the construction industry. Moreover, out of the total surveyed respondents (n=50), 18.0% were clients, 22.0% were consultants, 38.0% were contractors/subcontractors, 4.0% were funding bodies or donors, 4.0% were governmental bodies or agents, 8.0% were the general public and 6.0% were local landowners.

### 4.3 Factors Affecting the Stakeholder Management in the Construction Project

This section of the study assessed the factors influencing the stakeholder management practices in the construction. The sub-categorical factors including management support factors, information input, stakeholder assessment, decision making, action and evaluation and continuous support factors were ranked based on the extent of the effect of each factor on stakeholder management. Table 4.2 presents the result of the stakeholder management factors through the Relative Importance Index (RII) by presenting ‘weights’ and ranks.

**Table 4.2: Factors Affecting Stakeholder Management**

Factors	Responses					RII		
	1	2	3	4	5	weight	RII	Rank
Frequent Communication with the engaging stakeholder	0	0	0	3	47	247	0.9880	1 <sup>st</sup>
Analyzing conflicts and coalitions among stakeholders	0	0	0	5	45	245	0.9800	1 <sup>st</sup>
Ensuring effective communication between the project stakeholder	0	0	0	5	45	245	0.9800	1 <sup>st</sup>
Stakeholder involvement in decisionmaking	0	0	0	5	45	245	0.9800	1 <sup>st</sup>
Project manager competence	0	0	0	6	44	244	0.9760	1 <sup>st</sup>
Formulate appreciate strategy to deal with stakeholder	0	0	0	7	43	243	0.9720	6 <sup>th</sup>
Implementing the strategy based on schedule plans	0	0	2	3	45	243	0.9720	6 <sup>th</sup>
Access to resource and knowledge	0	0	0	7	43	243	0.9720	6 <sup>th</sup>
Flexible project organization	0	0	0	9	41	241	0.9640	9 <sup>th</sup>
Transparent evaluation of the alternative solution based on stakeholder concern	0	0	0	10	40	240	0.9600	9 <sup>th</sup>

Keeping and promoting an ongoing relationship with stakeholder	0	0	0	10	40	240	0.9600	9 <sup>th</sup>
Managing stakeholder with corporate social responsibilities	0	0	0	12	38	230	0.9520	12 <sup>th</sup>
Assessing stakeholders' attitude	0	0	2	8	40	238	0.9520	12 <sup>th</sup>
Flexibility in the implementing strategy to deal with stakeholder' reaction	0	0	4	4	42	238	0.9520	12 <sup>th</sup>
Obtain support assistant from higher authorities	0	0	0	12	38	238	0.9520	12 <sup>th</sup>
Evaluation the stakeholder satisfaction in terms of achievement of the stakeholder pre-project expectation	0	0	5	4	41	236	0.9440	16 <sup>th</sup>
Analyzing the change of multiple stakeholder engagement and the relation	0	0	0	15	35	235	0.9400	17 <sup>th</sup>
Mutual trust and respect amongst the stakeholder	0	0	0	18	32	232	0.9280	18 <sup>th</sup>
Evaluate the stakeholder power	0	0	5	9	36	231	0.9240	19 <sup>th</sup>
Determine the stakeholder Knowledge	0	0	8	9	33	225	0.9000	20 <sup>th</sup>
Reduce the uncertainty	0	0	5	17	28	223	0.8920	21 <sup>th</sup>
Understanding area of stakeholders' interests	0	0	10	10	30	220	0.8800	22 <sup>nd</sup>
Setting common goal and objective of the project	1	3	6	7	33	218	0.8720	23 <sup>rd</sup>
Predicting the influence of stakeholders	0	0	14	10	26	212	0.8480	24 <sup>th</sup>
Identifying stakeholders	3	4	7	9	27	203	0.8120	25 <sup>th</sup>
Exploring the stakeholder need and expectation	5	4	7	11	23	193	0.7720	26 <sup>th</sup>

Rank: [1= No extent, 2= Very low extent, 3= low extent, 4= high extent, 5= Very high extent]

Source: Field Survey, 2015

The result of the Relative Importance Index (RII) shows that the 15 factors highly ranked by the studied stakeholders to affect stakeholder management in the order of ranking include: (1) Frequent Communication with the engaging stakeholder; (1) Analyzing conflicts and coalitions among stakeholders (RII = 9800); (1) Ensuring effective

communication between the project stakeholder (RII = 9800); (1) Stakeholder involvement in decision-making (RII = 9800); (1) Project manager competence (RII = 9800); (6) Formulate appreciate strategy to deal with stakeholder (RII = 9760); (6) Implementing the strategy based on schedule plans (RII = 9760); (6) Access to resource and knowledge (RII = 9760); (9) Flexible project organization (RII = 9760); (9) Transparent evaluation of the alternative solution based on stakeholder concern (RII = 9760); (9) Keeping and promoting an ongoing relationship with stakeholder (RII = 9760); (12) Managing stakeholder with corporate social responsibilities (RII = 9520); (12) Assessing stakeholders' attitude (RII = 9520); (12) Flexibility in the implementing strategy to deal with stakeholder' reaction (RII = 9520); and (12) Obtain support assistant from higher authorities (RII = 9520).

Through analysis of all forms of conflicts and coalitions among stakeholders enhances better communication and project success. The conflicts and coalitions among stakeholders could be analyzed based on the information about stakeholders (Yang *et al.*, 2009). Communication is deemed the most common and effective way of addressing project challenges, and thus influencing the participation and commitment of stakeholders throughout the duration of a project (Archer, 2003). Therefore, stakeholder engagement and effective communication are essential or good practices of stakeholder management in the construction industry. Consistent with the finding of this study is the study of Yang *et al.* (2009) that ranked communicating with stakeholders properly and frequently among the top three ranked best practices of for stakeholder management. Project success is tied

to effectively communicate and managing relationships with the various stakeholders of the project (Assudani and Kloppenborg, 2010). Therefore, increasing the degree of communication among project participants increases the participant satisfaction level (Takim, 2009; Leung, 2004).

Furthermore, the interview with the general and project managers of the Ghana Highways, VRA, Bui Power Authority, Ghana Gas and the Micheletti Company revealed some pertinent critical success factors of stakeholder management practices that ensured the success of construction projects. The revealed critical success factors included top management support, stakeholder assessment and communication with stakeholders. Top management must endorse the principle of stakeholder consistently and wholeheartedly (Brooke and Litwing, 1997). Moreover, for a successful stakeholder management there is also the need for identification of stakeholders involved in the project and potential stakeholders who will also improve the support and ownership to the stakeholder management process (Karlsen, 2002). To ensure the success of a project much information, including expectations, goals, needs, resources, status reports, budgets and purchase requests, need to be communicated on a regular basis to all major stakeholders. Project success is tied to effectively communicate and managing relationships with the various stakeholders of the project (Assudani and Kloppenborg, 2010). Therefore increasing the degree of communication amongst the project participants increases the satisfaction level of the participants of the project (Takim, 2009; Leung, 2004). Although lowly ranked, all the other factors are also deemed as significant factors affecting stakeholder management in the construction industry.

### 4.3.1 Multiple Regression Result of the Factors Affecting Stakeholder

#### Management

This section of the study employs multiple regression analysis to assess the factors affecting stakeholder management in the construction industry. The result of the regression analysis is presented in Table 4.3. The regression model exhibits very good fit of the model as shown by the diagnostic test. The adjusted R-squared value of 0.6227 indicates that about 62% of the changes in the dependent variable (Stakeholder Management) is attributed to the all the explanatory variables combined.

**Table 4.3: Multiple regression of the factors affecting stakeholder management**

<b>Stakeholder Management</b>	<b>Coeff.</b>	<b>Std. Error</b>	<b>t</b>	<b>P&gt; t </b>
Frequent Communication with the engaging stakeholder	0.748	0.154	4.87	.000
Analyzing conflicts and coalitions among stakeholders	0.308	0.109	2.82	.007
Ensuring effective communication between the project stakeholder	0.306	0.129	2.38	.022
Stakeholder involvement in decision-making	0.622	0.166	3.75	.001
Project manager competence	0.427	0.206	2.07	.045
Formulate appreciate strategy to deal with stakeholder	0.376	0.148	2.53	.015
Implementing the strategy based on schedule plans	0.876	0.162	5.41	.000
Access to resource and knowledge	0.882	0.195	4.53	.000
Flexible project organization	0.112	0.130	0.87	.392
Transparent evaluation of the alternative solution based on stakeholder concern	0.168	0.087	1.93	.060
Keeping and promoting an ongoing relationship with stakeholder	0.285	0.068	4.20	.000
Managing stakeholder with corporate social responsibilities	0.090	0.040	2.26	.027

Assessing stakeholders' attitude	0.174	0.057	3.05	.003
Flexibility in the implementing strategy to deal with stakeholder' reaction	0.398	0.102	3.92	.000
Obtain support assistant from higher authorities	0.750	0.176	4.27	.000
Evaluation of the stakeholder satisfaction in terms of achievement of the stakeholder pre-project expectation	0.707	0.116	6.10	.000
Analyzing the change of multiple stakeholder engagement and the relation	0.314	.0736	4.26	.000
Mutual trust and respect amongst the stakeholder	0.386	0.171	2.26	.029
Evaluate the stakeholder power	0.218	0.089	2.46	.015
Determine the stakeholder Knowledge	0.193	0.143	1.35	.184
Reduce the uncertainty	0.057	0.055	1.04	.302
Understanding area of stakeholders' interests	0.072	0.109	0.66	.511
Setting common goal and objective of the project	0.279	0.197	1.42	.164
Predicting the influence of stakeholders	0.109	0.087	1.26	.208
Identifying stakeholders	0.187	0.126	1.49	.145
Exploring the stakeholder need and expectation	0.003	0.078	0.03	.975
Constant	0.672	0.610	1.10	.277
<b>Test statistics</b>				
Number of obs.	50			
F(16, 72)	57.79			
Prob> F	0.000			
R-Squared	0.6278			
Adj. R-squared	0.6227			

Dependent Variable: Stakeholder Management Practice

Source: Field Survey, 2015

A careful study of the results obtained in the above table (table 4.3) shows that frequent communication with the engaging stakeholders is crucial. This finding is consistent with the study of Archer (2003) that also reported positive relationship between communication and stakeholder management in the construction industry. Communication is regarded as the most conjoint and efficient method of resolving project barriers, and thus affecting the involvement and commitment of stakeholders through the

period of a project (Archer, 2003). Stakeholder involvement and efficient communication therefore regarded as crucial practices of construction partner administration in the construction sector.

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The study also reveals a similarity with Tjosvold (2006) that also reported positive relationship between conflict evaluation and stakeholder management. According to Tjosvold (2006) conflict can improve choice making results and team efficiency by improving the value via positive reproach and by persons employing a devil's advocate function (Knippen and Green, 1999). Conflict has positive aspects relating to commercial risk taking – the very basis of free enterprise and competition.

Table 4.3 is consistent with the study of Archer (2003) that also reported stakeholder involvement as crucial practice of construction stakeholder's management in the construction sector. This finding is consistent with the report of Basu *et al.* (2009) that showed that there is positive effect of project manager's competence on stakeholder management. To begin with, Project Managers are required to classify and interrelate with crucial organizations and persons in the project schemes setting and hence their competency is essential for the success of the schemes of construction firms. In the T5 project the stakeholder appointment and commitment procedure is aided by the project managers, to involve with project leadership and dealers in order to announce a right first time quality idea and to get their buy-in and commitment (Basu *et al.*, 2009) and hence the necessity for their competence. Efficient and competent project managers devote 90 percent of time connecting with the squad associates and other project stakeholders,

whether they are core or exterior to the group and this efficient interaction generates a link amid varied stakeholder's part of the project, linking numerous social and structural circumstances, diverse heights of know-how, and numerous viewpoints and concerns in the project performance (Čulo and Skendrović, 2010).

Implementing strategies based on schedule plans and making resources accessibility are consistent with the study of Brooke and Litwing (1997) that showed that schedule plans and availability of adequate resources positively influence stakeholder management. Therefore, to ensure a successful stakeholder management, participants must be keen to participate in control of resources that could profit the general company's goal (Brooke and Litwing, 1997).

Keeping and promoting an ongoing relationship with stakeholders is positively related with stakeholder management practices of construction firms at a statistical significance level of 1%. This therefore implies that a unit improvement in construction firms keeping and promotion of an ongoing relationship with stakeholders is associated with 0.285 unit improvement in the stakeholder management practices of firms in the construction industry. This finding is consistent with the study of Archer (2003) that also revealed positive relationship between better relationship with stakeholders and stakeholder management. Archer (2003) posits effective and frequent communication between stakeholders as crucial factor for stakeholder management success.

In 2003, Reason and Hobbs reported on the positive relationship between evaluation of stakeholder's attitude and stakeholder management success. This is perceived essential because the construction blunders of some kind, whether a deviation from an envisioned sequence of action, parting from a trail of actions premeditated toward an anticipated objective, or nonconformity emanates from stakeholders attitude (Reason and Hobbs, 2003).

Our findings revealed the importance of support from higher authorities—and the achievement of pre-project expectation as crucial. These findings are consistent with the study of Olander and Landin (2008) that also report positive relationship between management and authority support and stakeholder management. Olander and Landin (2008) assert that there is the need for the support of higher authorities if stakeholder management practices are to yield positive result. The authorities' allocation of adequate resources for carrying out stakeholder management practices would ensure greater performance. Olander and Landin (2008) further reported positive influence of the evaluation of stakeholder satisfaction on stakeholder management .Olander and Landin (2008) request for the need for the evaluation of the stakeholder satisfaction in terms of achievement of the stakeholder pre-project expectation since such activities could have positive influence on the performance of stakeholders in the pre-project phase of the construction process.

It is essential to evaluate the power of each stockholder since the various stakeholders have different power that influence the construction project (Fewings 2005). Such

evaluation is therefore posited by Fewings (2005) to have positive influence on the stakeholder management practices of construction firms.

#### 4.3 Best Practices of Stakeholder Management in the Construction Industry

This section of the study assesses the extent of the best practice of firms the construction industry considering the perception of three major stakeholders in the industry. The section achieves this by investigating the predominant methods of analyzing stakeholder's concerns and engagement in the construction industry. To achieve this, the various practices have been weighted and ranked through the use of the Relative Importance Index (RII) statistical tool and the result presented by Table 4.4. A variable needs an RII value of 0.700 or more to be regarded as important. The relative importance threshold of 0.700 is given by the study of Tam and Le, 2006).

**Table 4.4: Best Practices of Stakeholder Management**

	Consultant		Client		Contractors	
	RII	Rank	RII	Rank	RII	Rank
<b>Management practices</b>						
Study the legislation relating to the land ownership system	0.796	1	0.872	1	0.862	2
Identify the risk associated with each identified stakeholder	0.780	2	0.763	5	0.721	4
Identify stakeholder	0.764	3	0.701	6	0.783	3
Identify the land ownership system at the area identified	0.732	4	0.872	1	0.871	1
Review contract document and scope	0.732	4	0.781	4	0.711	6
Identification of site and assessment on its suitability	0.724	6	0.811	3	0.716	5

Begin construction	0.708	7	0.700	7	0.703	7
<b>Methods of analyzing stakeholders' concern &amp; need</b>						
Personal past experience	0.880	1	0.784	1	0.810	1
Interviews	0.868	2	0.784	1	0.710	3
Workshops	0.864	3	0.701	2	0.723	2
Professional services	0.760	4	0.241	3	0.231	5
Questionnaires and surveys	0.444	5	0.123	4	0.355	4
<b>Engagement methods for the stakeholders</b>						
Meetings	0.816	1	0.736	2	0.841	1
Negotiations	0.800	2	0.871	1	0.752	2
Workshops	0.784	3	0.711	3	0.701	3
Interviews	0.732	4	0.681	4	0.231	5
Social contacts	0.700	5	0.234	3	0.521	4

Source: Field Survey, 2015

From Table 4.4, it is evident that the surveyed consultants and clients predominantly are engaged in studying the legislative part relating to land ownership system, whereas the contractors are predominantly concerned with the identification of the land ownership system at the area identified for the project as these factors ranked first by the respective stakeholders. The second and third important management practice of the surveyed consultants was the identification of the risk associated with each identified stakeholder and the identification of stakeholders with RII values of 0.780 and 0.764 respectively. The second and third ranked management practices of the surveyed contractors was the studying of the legislation relating to the land ownership system and the identification of stakeholders with RII values of 0.862 and 0.783 respectively. Therefore, these practices

were deemed by the three major considered stakeholders as the major best practices of the various firms in the construction industry. The perception of these three major stakeholders is consistent with the best practices revealed in studies by Egan (1998) and Latham (2007) that required construction stakeholders to seek the permission of the authority of land owners before beginning developmental projects to avoid conflicts.

In support of these findings, the interview with the general and project managers of the Ghana Highways, VRA, Bui Power Authority, Ghana Gas and the Micheletti Company revealed several best stakeholder management practices towards the success of construction projects including the identification of site and assessment on its suitability, identification of the land ownership system at the area identified, study of the legislation relating to the land ownership system, identification of stakeholder, undertake massive sensitization, identify the risk associated with each identified stakeholder, identification of a clear mission for a project, review contract document and scope and begin construction. The interviewees further revealed several stakeholder management practices including engaging stakeholders in the planning and decision making process of the construction projects, partnering workshops at the start of projects, negotiating with important stakeholders to ensure consensus, supervising shareholders with communal tasks, evaluating the shareholders' requirements and obstacles to the construction scheme, collaborating with shareholders effectively and regularly, and structuring stakeholder conflicts in their decision making processes. Prior to all shareholder administration activities, the administration team of the project are required to be well equipped on the issues and aims of the specific phase of the construction scheme lifespan, comprising the matters of program, cost, budget (Yang *et al.*, 2009) and hence the need for better

stakeholder management practices. To enhance the understanding of project managers on stakeholders, their attributes, behavior, and potential influence need to be assessed and estimated. The conflicts and coalitions among stakeholders also could be analyzed based on the information about stakeholders (Yang *et al.*, 2009).

The result of table (4.4) showed that all the considered three major stakeholders in the construction industry predominantly rely on personal past experience as a major method of analyzing stakeholder's concerns and needs as it is ranked first by all stakeholders. The surveyed consultants further ranked interviews second, clients ranked it first, whereas the contractors ranked it third. This therefore implies that the clients are relatively more concerned with the usage of interview in analyzing stakeholder's concerns and needs than the other stakeholders. Other major best practices of the firms are the adoption of interview and workshops as methods in analyzing stakeholder needs and concerns. These practices are assumed best practice in the construction industry since based on the study of Lathan (2007) that showed that a good practice of stakeholder management necessitates associating workshops and interviews at the initial stages of the projects. Furthermore, Jergeas *et al.* (2000) in their studies proposed interviewing method of stakeholder management for construction projects as part of the best stakeholder management practices.

The result of table (4.4) further showed that the predominantly preferred stakeholder engagement method of the contractors and the consultants is meetings, whereas that of the clients is negotiations. The consultants and the contractors ranked negotiations second

in terms of their importance as a tool in engaging stakeholders in the construction industry, whereas the clients ranked second meetings. A good practice of stakeholder management requires partnering workshops, meetings and negotiations at the start of projects, although the majority are often organised by contractors, not the client organisations, suggesting that the contractors have recognised the need more than the clients (Egan, 1998; Latham, 2007). Renegotiations with stakeholders take place a number of times during the project process and this is necessary in order to redefine deliverables and scope precisely. This best practice is evidenced by the report of Sir John Egan that indicated that by the end of 2004, some 20% of all projects by value were constructed by integrated project team and integrated supply chains, and 50% at the end of 2007 (Egan, 1998; Latham, 2007). The least ranked stakeholder engagement methods were social contacts by consultants, workshops by clients and interviews by contractors.

#### **4.3.1 Strategies for Dealing with Stakeholder Claims**

Stakeholders differ in terms of claims and interest and hence the need to adopt the appropriate strategies to avoid conflicts. In the interview with the Contractors, it was found that they required resources including materials, equipment and funds to be made available when needed, and also require all designs to be made available by client to ensure their impute at the pre-project stage. The clients also require the work to be completed in the agreed time period with the agreed volume of resources. The consultants also require the needed resources to be made available by the clients, absence of delays in payment and avoidance of frequent changes in scope of the project.

**Table 4.5: Response Strategy to Deal with the Stakeholder Claims**

Strategy to deal with the stakeholder claims	Consultant		Client		Contractors	
	RII	Rank	RII	Rank	RII	Rank
<b>Compromising strategy:</b> Negotiating with the stakeholders, listening to their claims related to the project and offering possibilities and arenas for dialogues	0.864	1	0.782	2	0.866	1
<b>Adaptation strategy:</b> Obeying the demands and rules that are presented by stakeholders	0.776	2	0.845	1	0.783	2
<b>Influence strategy:</b> Shaping proactively the values and demands of stakeholders	0.700	3	0.702	3	0.731	3
<b>Avoidance strategy:</b> Loosening attachments to stakeholders and their claims in order to guard and shield oneself against the claims	0.643	4	0.634	4	0.421	4
<b>Dismissal strategy:</b> Ignoring the presented demands of stakeholders. Not taking into account the stakeholder related pressures	0.367	5	0.563	5	0.321	5

Source: Field Survey, 2015

Based on these claims, the strategies proposed by the surveyed stakeholders to be employed in dealing with their respective claims ranked using the Relative Importance Index (RII) statistical tool. The result is presented in Table 4.5.

The result of table (4.5) shows that the surveyed consultants believe that the claims of the client's needs to be approached with the compromising strategy as this strategy produced the highest RII value of 0.864. This implies that the consultants believe that under certain circumstances, the projects could be delayed or there could be the need for additional

funds that could be a source of conflict with clients and hence recommends negotiation with stakeholders, listening to their claims related to the project and offering a negotiable possibilities and arenas for dialogues. Furthermore, the consultants also believe that the claims of the clients could also be obeyed through the adaptive strategy to avoid any form of conflict with the clients as this strategy with the RII value of 0.776 is also ranked second. The perception of the consultants are quite similar that of the contractors who also perceive that the best strategy for the claims of the clients is through negotiation, listening and offering better alternatives to clients claims, and also probably obeying the demand and rules presented by the clients to avoid any form of conflict.

However, the Clients principally believe that the claims of the other stakeholders (Consultants and Contractors) can be dealt with through the adaptive strategy that involves the clients obeying the demands or claims presented by the consultants and the contractors. This therefore implies that the clients believe that they need to ensure that the needed resources required for the completion of the projects in the required or agreed time are made available in timely manner and in the required proportion.

#### **4.4 Problems of Improper Stakeholder Management**

The problems of improper stakeholder management practices have been assessed in this section of the study by paying attention to the various causes of errors in construction documents and major constraints of improper stakeholder management practices in the construction industry in the Accra metropolis. The result is presented in Table 4.6 and

Table 4.7.

#### 4.4.1 Causes of Errors in Construction Documents

Respondents were presented with a list of 7 causes of errors in construction documents usually reported in the literature as hindering proper stakeholder management in the construction industry. The task of each respondent was to rank the causes of errors from most to least considered as a cause to construction documentation. The Table 4.6 displays the mean ranks and by extension, the ranks of the causes as adjudged by the 50 construction professionals in the construction industry.

**Table 4.6: Causes of errors in construction documents**

Causes of construction errors	Mean Rank	Rank
Design error	6.34	1
Employing the wrong procurement method	5.67	2
Lack of quality management	5.47	3
Insufficient planning and design work	5.03	4
Non availability of information	4.78	5
Professional's inexperience	4.56	6
Negligence of the professional	3.09	7
<b>Test Statistics</b>		
N		50
Kendall's W <sup>a</sup>		0.587
Chi-Square		130.12
Df		6
Sig. Level		0.000

Rank: [1= No extent, 2= Very low extent, 3= low extent, 4= high extent, 5= Very high extent]

Source: Field Survey, 2015

This was obtained following the non-parametric test for k-related samples in SPSS 17. The level of agreement between the 50 construction professionals was tested using the Kendall's coefficient of concordance since there are three or more judges or construction professionals.

A design error was ranked first by the 50 surveyed construction professionals whereas negligence of professionals was adjudged the last or more specifically, the 8th on the list. Design and construction errors can have serious consequences in construction project systems, including various failures (Love et al. 2004). This error was equally noted by Mohammed (2007) as being common in Saudi Arabian construction documents. Employing the wrong procurement method, lack of quality management, and insufficient planning and design work fell in second, third and fourth positions respectively with mean ranks of 5.67, 5.47 and 5.03 respectively. These causes of errors are predominantly human related and so can be controlled and managed. The fifth and sixth ranked causes of construction errors were non-availability of information and the professional inexperience of constructors with mean ranks of 4.78, and 4.56 respectively. This implies that construction documents in the study area are also sometimes distorted by lack of communication between stakeholders which leads to non-availability of information and the inexperience of the professionals.

Kendall's coefficient of concordance (W), testing the null hypothesis that there is no agreement (construction professionals differ significantly) among the construction professionals with respect to the causes of errors in construction documents was rejected

at a 1% significance level. The degree of unanimity as measured by the Wstatistics is about 59% since the score is zero for random ranking and 1 for perfectly unanimous ranking. Construction professionals in the study area can therefore, be said to unanimously agree that the predominant cause of errors in construction documents are more related first to design and secondly to wrong procurement methods and then to quality management and through insufficient planning.

#### 4.4.2 Challenges of Improper Stakeholder Management

**Table 4.7: Challenges of Stakeholder Management Practices**

<b>Challenges of Stakeholder Management Practices</b>	<b>Mean Rank</b>	<b>Rank</b>
Relationship conflict	7.65	1
Insufficient project sponsorship/resources	7.53	2
Weak personnel and/or team issues	7.06	3
Ineffective communication	6.72	4
Insufficient planning	6.45	5
Inadequate design	6.23	6
Contractor failure	5.89	7
Lack of user involvement	5.56	8
Process conflict	5.34	9
Task conflict	5.12	10
Costly process	5.09	11
Information disclosure and improper documentation	4.23	12
Inadequate experience and knowledge stakeholder in management	4.17	13
Insufficient risk management	3.89	14
Questionable commitment of stakeholders	3.67	15
Time consuming process	2.80	16
Gaps in the goals of all stakeholders	2.16	17
Poor requirements determination	1.89	18
<b>Test Statistics</b>		
N	50	
Kendall's W <sup>a</sup>	0.641	

Chi-Square	615.45
Df	17
P-Value	<u>0.000</u>

a. Kendall's Coefficient of Concordance

Rank: [1= No extent, 2= Very low extent, 3= low extent, 4= high extent, 5= Very high extent]

Source: Field Survey, 2015

Respondents were presented with a list of 18 challenges usually reported in the literature as hindering proper stakeholder management in the construction industry. The task of each respondent was to rank the problems from 'no extent' to 'very high extent' in hindering proper stakeholder management. The Table 4.7 displays the mean ranks and by extension, the ranks of the problems as adjudged by the 50 construction professionals surveyed. This was obtained following the non-parametric test for krelated samples in SPSS 17. The level of agreement between the 50 respondents was tested using the Kendall's coefficient of concordance since there are three or more judges or respondents.

From Table 4.7, a relationship conflict was ranked first by the 50 construction professionals whereas insufficient project sponsorship/resources were adjudged the second challenge on the list. This finding is consistent with existing literature as Jehn (1997) also asserted that a major challenge of improper stakeholder management is relational conflict. Relationship conflict (RC) is a perception of interpersonal incompatibility, and includes annoyance and animosity among individuals (Jehn, 1995). According to Acharya *et al.* (2006), conflicts that are not clearly managed can lead to claims, and claims not effectively resolved can lead to disputes. The third and fourth ranked challenges of stakeholder management practices by the surveyed respondents

were weak personnel and/or team issues and ineffective communication with mean ranks of 7.06 and 6.72 respectively. Weak personnel or team issues and ineffective communication are major breeders of conflicts and misunderstandings among stakeholders at different phases of a construction project. The fifth and sixth ranked challenges of the stakeholder management practices by the surveyed respondents were insufficient planning and inadequate design with mean ranks of 6.45 and 6.23 respectively. However, the least ranked challenges in the stakeholder management process or practices as perceived by the surveyed respondents were time consuming process, gaps in the goals of all stakeholders, and poor requirements determination as shown in Table 4.8.

Kendall's coefficient of concordance (W), testing the null hypothesis that there is no agreement among the respondents with respect to the challenges of improper stakeholder management was rejected at a 1% significance level. The degree of agreement as measured by the W-statistics is about 64% since the score is zero for random ranking and 1 for perfectly unanimous ranking.

## **CHAPTER FIVE**

### **SUMMARY OF MAIN FINDINGS, CONCLUSION AND RECOMMENDATION**

#### **5.1 Introduction**

In this chapter, the summary of findings from the study and policy recommendations is presented. The limitations of the study and suggestions of future research are also provided.

#### **5.1 Summary of main findings**

##### **5.1.1 Factors affecting Stakeholder Management**

The study found a significant relationship between stakeholder management and the combined factors that influence it. The study revealed that communication with stakeholders was critical to stakeholder management as well as the implementation of strategy on schedule. The study found that access to resources significantly affected stakeholder management. However, some other factors such as identifying stakeholders, predicting the influence of stakeholders, understanding the area of stakeholder influence were not important to stakeholder management.

Most of the factors that were found to affect stakeholder management were factors that ensure that stakeholders are involved in the project management process such as frequent communication with stakeholders, effective communication between stakeholders and stakeholder involvement in decision making. Again other factors that influence stakeholder management were factors that suggest the need to adhere to best practices

such as transparency, access to resources, flexibility in the implementation of strategies to dealing with stakeholder reaction as well as mutual trust and respect amongst stakeholders. Generally the study found that flow of information among stakeholders and stakeholder participation are central to stakeholder management.

### **5.1.2 Stakeholder Management Practices**

The study identified three key stakeholder management practices as effective management practices, methods of analysing stakeholders concern and need and engagement methods for stakeholders. The findings of the study suggest that as part of best stakeholder management practices project team study and understand legislation relating to land ownership system, identify stakeholders and their risk, review contract document and its scope as well as identification of construction site as well as its suitability for projects.

To analyse stakeholder concerns and needs the study revealed that the best stakeholder management practices is to rely on personal past experience, conduct interviews and organize workshops, rely on professional services and the questionnaires and surveys to collect data for analysis. However in analysing concerns of clients and contractors the study showed that professional services and the use of questionnaires and surveys are not a potent method. Again as part of method used to engage stakeholders the study showed that best practices require that meetings are organised for dialoguing and briefing, negotiations are initiated as well as workshops. However interviews and social contacts are not part of best practice methods in engaging stakeholders.

### **5.1.3 Challenges of Improper Stakeholder Management**

The study found that improper stakeholder management are a source of conflict between stakeholders and can result in insufficient project sponsorship and weak personnel as well as creating weak team. Communication which is essential for the success of stakeholder management and project success are compromised when there is improper stakeholder management. Generally the study found that improper stakeholder management results in situations which does not elicit the support of stakeholders and subsequently cause project failures.

### **5.2 Conclusion**

The study therefore concludes that stakeholder management are influence by cross cutting factors that range from stakeholder involvement, formulation of strategies, competence of personnel manning the project. The study therefore concludes that stakeholder management is a multi-task as it is affected multiple of variable.

Based on the findings of the study it is conclude that best practices in stakeholder management requires that critical attention be paid to three key areas such as management practices, method of analysing concerns and needs of stakeholders and method employed in engaging stakeholders.

The study also concludes that improper stakeholder management challenges the success of construction projects as it is identified as a source of conflict between stakeholders and

causes insufficient project sponsorship. Generally the study concludes that improper stakeholder management reduces cohesion and stakeholders.

### **5.3 Recommendation**

Based on the findings of this study, several managerial and policy recommendations have been made. To begin with, since effective communication was found to affect stakeholder management in Ghana, it is imperative to ensure effective communication among all stakeholders in the construction industry during the execution of projects. This is expected to give all stakeholders the opportunity to put across their grievances if there are any and provide the channel project team to brief stakeholders on issues related to the project. It is important to recall that stakeholder involvement is important to stakeholder management and conflict resolution in project. It is therefore imperative that communication among stakeholders be improved. It is also important that project management team acknowledge the fact that project sponsors will want to ensure there is transparency in the execution of project to ensure the security of funds injected into the project. These are only guaranteed when there is constant communication among project stakeholders and the project management team.

Given that factors such as identifying stakeholders and exploring the stakeholder need and expectation affects stakeholder management, it is imperative to put in place structures and strategies to help managers to identify the stakeholders that may influence the organizations' decision making, the types of claims they have, and how the stakeholders can forward their claims. Based on an in-depth knowledge of stakeholders and their capabilities and objectives, managers are able to develop strategic actions in order to

manage stakeholders. In this regard it is recommended for the consideration of project team management to organise workshop best practices in collating the concerns of stakeholders such as relying on past experience, conducting interviews, organizing workshop and employing the use of questionnaire and surveys. By this the expectation is that the project management team will have an idea on what the concerns of the stakeholders are so measures are taken to address them. It is however, important that project team managers recognise that not all the concerns raised by all the stakeholders can be addressed at the same time it is therefore important that stakeholder power analysis be conducted to determine the weight of the stakeholders to form the basis in deciding which stakeholders' concern is given priority.

To ensure smooth execution of construction project in Ghana, it is essential that conflicts and coalitions among stakeholders, stakeholder's attitude, power, interest and knowledge are critically assessed. This will ensure that stakeholders are apportion the right roles and effectively communicated and aided to contribute effectively to successful construction projects.

Based on the revealed errors plaguing construction documents in Ghana, it is recommended that documents, stakeholders should always allow adequate time for the preparation of construction documents so that there would be comprehensive information to use for the design of construction documents, constructability and design reviews. Designers should also be encouraged to partner with other designers while preparing

construction documents and clients are advised to use the right procurement methods for construction projects.

#### **5.4 Limitations and Areas for Further Studies**

The current study was limited to providing insight to determine stakeholder management strategies at pre-contract stage of a project. Therefore, any further study could be widened to capture stakeholder management strategies at the post-contract stage of construction projects. Furthermore, the current study was limited to a small sample size of 50 construction professionals 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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# KNUST



## APPENDIX A QUESTIONNAIRE

### Dear Respondent,

I am a Post-Graduate Construction Management Student of KNUST undertaking a study to assess stakeholder management in the construction industry. This study forms part of the requirement for the program of Master of Philosophy (MPhil.) in the College of Arts and Built Environment, KNUST. Please, read each question carefully before responding, and then circle or tick the appropriate answer in the designated space. Please answer to the best of your ability. You are rest assured that the study is for only academic purposes; all and every information provided will therefore be treated with the utmost confidentiality. Thank you for your help.

### PART I: Socio Demographic Characteristics

#### Nature of project

- Governmental
- Semi-governmental
- Municipalities  NGO's
- Others (Please specify) .....

**Job title of respondent**

General Manager   
Project manager  Supervisor  
engineer   
Others (Please specify) .....

**Respondent’s Academic Qualification**

HND   
PDG   
BSc/B. Tech   
MSc/MPhil   
Others (Please specify) .....

**Years of respondent experience**

Less than 5   
5-Less than 10   
10-Less than 15   
15 and more

**Type of stakeholder group**

Client   
Consultant   
Contractor/subcontractors   
Funding body/Donor   
Government   
General public   
Local landowners/neighbourhood

**PART II: Factors affecting the stakeholder management in the construction project** Based on your experience in the field of project management, please give feedback to the following questions

<b>To what extent do you think that the following factors are effective in managing the stakeholders?</b>					
<b>1= No extent, 2= Very low extent, 3= low extent, 4= high extent, 5= Very high extent</b>					
<b>Factors</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Management Support</b>					
Managing stakeholder with corporate social responsibilities					
Flexible project organization					
Project manager competences					

<b>Information input</b>					
Setting common goal and objective of the project					
Identifying stakeholders					
Exploring the stakeholder need and expectation					
<b>Stakeholder assessment</b>					
Assessing stakeholders' attitude					
Understanding area of stakeholders' interests					
Predicting the influence of stakeholders					
Analyzing conflicts and coalitions among stakeholders					
Evaluate the stakeholder power					
Determine the stakeholder Knowledge					
<b>Decision making</b>					
Transparent evaluation of the alternative solution based on stakeholder concern.					
Ensuring effective communication between the project and its stakeholder					
Formulate appreciate strategy to deal with stakeholder.					
<b>Action and evaluation</b>					
Implementing the strategy based on schedule plans.					
Flexibility in the implementing strategy to deal with stakeholder' reaction					
Evaluation the stakeholder satisfaction in terms of achievement of the stakeholder pre-project expectation					
<b>Continuous support</b>					
Communication with the engaging stakeholder properly and frequently					
Stakeholder involvement in decision-making					
Keeping and promoting an ongoing relationship with stakeholder					
Analyzing the change of multiple stakeholder engagement and the relation					
Obtain support assistant from higher authorities					
Mutual trust and respect amongst the stakeholder					
Reduce the uncertainty					
Access to resource and knowledge					

### PART III: Stakeholder management practice

1= No extent, 2= Very low extent, 3= low extent, 4= high extent, 5= Very high extent					
To what extent do you think the following methods are effective to analyze stakeholders' concern and need?					
	1	2	3	4	5
<b>Methods of analyzing stakeholders' concern and need</b>					
Personal past experience					
Interviews					

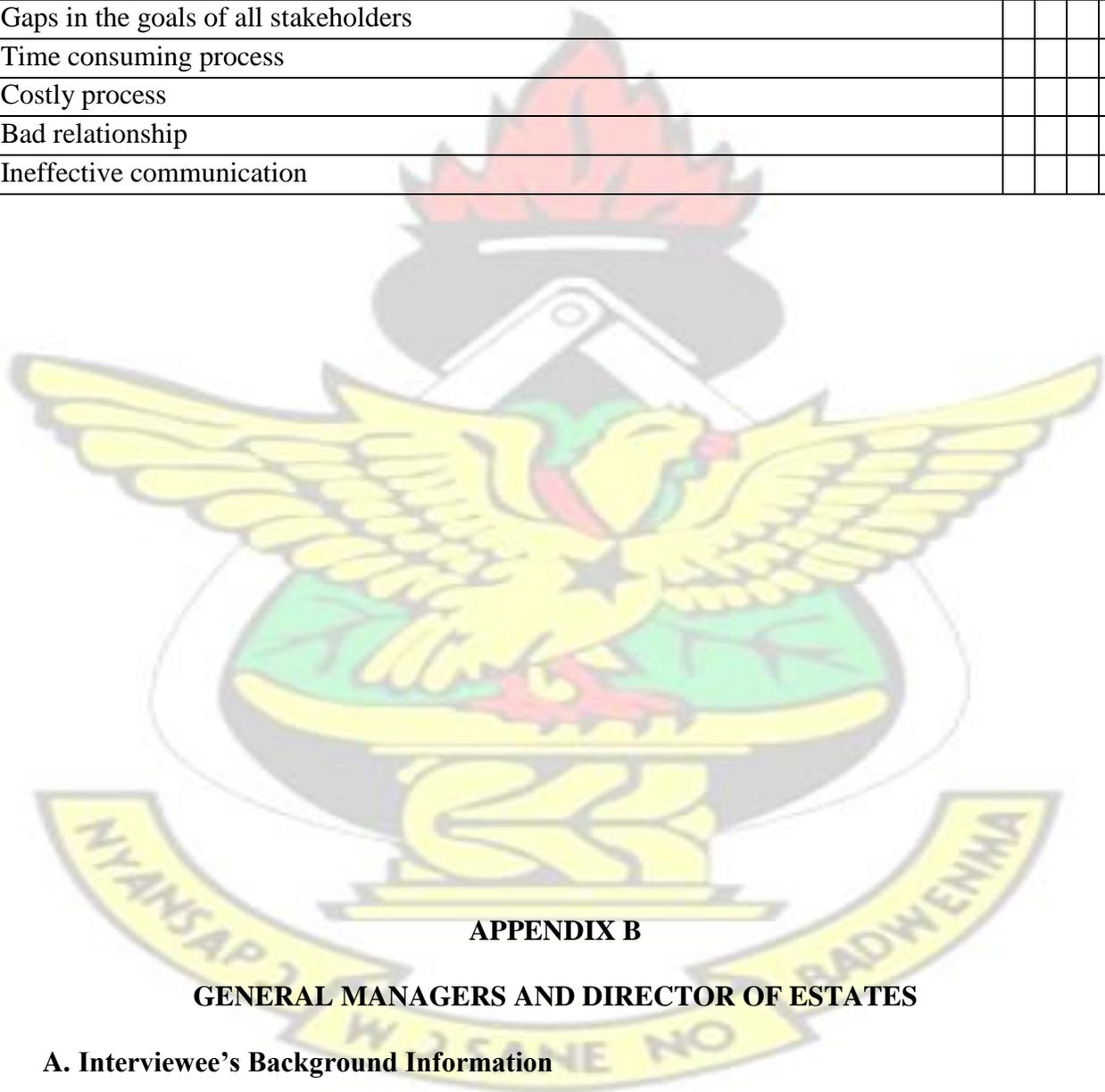
Questionnaires and surveys					
Professional services					
Workshops					
<b>To what extent do you think the following methods are effective to engage with stakeholders?</b>					
<b>Engagement methods for the stakeholders</b>					
Meetings					
Social contacts					
Negotiations					
Workshops					
Interviews					
<b>To what extent do you think the following Response strategy types are effective to deal with the stakeholder claims?</b>					
<b>Response strategy to deal with the stakeholder claims</b>					
<b>Adaptation strategy:</b> Obeying the demands and rules that are presented by stakeholders.					
<b>Avoidance strategy:</b> Loosening attachments to stakeholders and their claims in order to guard and shield oneself against the claims.					
<b>Compromising strategy:</b> Negotiating with the stakeholders, listening to their claims related to the project and offering possibilities and arenas for dialogues.					
<b>Dismissal strategy:</b> Ignoring the presented demands of stakeholders. Not taking into account the stakeholder related pressures					
<b>Influence strategy:</b> Shaping proactively the values and demands of stakeholders.					

#### **PART IV: Problems of Improper Stakeholder Management**

<b>To what extent are the following collective causes of errors in construction documents</b> 1= No extent, 2= Very low extent, 3= low extent, 4= high extent, 5= Very high extent					
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Professional's inexperience					
Non availability of information					
Lack of quality management					
Negligence of the professional					
Insufficient planning and design work					

Design error					
Employing the wrong procurement method					

<b>To what extent are the following factors problems of improper stakeholder management 1= No extent, 2= Very low extent, 3= low extent, 4= high extent, 5= Very high extent</b>					
<b>Problems</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Task conflict					
Process conflict					
Relationship conflict					
Gaps in the goals of all stakeholders					
Time consuming process					
Costly process					
Bad relationship					
Ineffective communication					



**APPENDIX B**

**GENERAL MANAGERS AND DIRECTOR OF ESTATES**

**A. Interviewee’s Background Information**

1. Sex:

2. Age:

3. Educational qualification:

4. Working experience:

### **B. Main Interview Questions**

1. What are the best stakeholder management practices of your outfit during construction projects?
2. What factors does your outfit deem critical to stakeholder management to ensure successful construction projects?
3. What are some of the challenges confronted by your outfit in the desire to ensure better stakeholder management practices?

