

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

**KUMASI**

**COLLEGE OF ARCHITECTURE AND PLANNING**

**DEPARTMENT OF BUILDING TECHNOLOGY**

**INVESTIGATING CRITICAL STAKEHOLDER MANAGEMENT ISSUES IN  
CONSTRUCTION PROJECT MANAGEMENT**

**BY**

**QUARSHIE FAROUK NII LARTEY (BSc. Building Technology)**

**A THESIS SUBMITTED TO THE DEPARTMENT OF BUILDING  
TECHNOLOGY, KWAME NKRUMAH UNIVERSITY OF SCIENCE AND  
TECHNOLOGY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS**

**FOR**

**THE AWARD OF  
MASTER OF SCIENCE**

**IN**

**PROCUREMENT MANAGEMENT**

**JUNE, 2014**

## DECLARATION

I hereby declare that this submission is my own work towards the M.Sc. Procurement Management and that, to the best of my knowledge, it contains no material previously published by another person or 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.

# KNUST

Quarshie Farouk Nii Lartey .....

(Student's Name)

Signature

Date

Certified by:

Dr. Theophilus Adjei-Kumi .....

(Supervisor)

Signature

Date

Certified by:

Prof. Joshua Ayarkwa .....

(Head of Department)

Signature

Date

## ABSTRACT

Projects in whatever form they are executed affected or are affected by persons/individuals or groups who have a direct or an indirect interest or stake in them. Actions or inactions of these groups or individuals may impact positively or negatively on the successful implementation/execution of the project. Construction projects have suffered Time and Cost Overruns as a result of inadequate communication between policy makers, implementation agencies and groups or individuals who have diverse interest in the projects. In some case scenarios projects have not left the drawing tables at all. It is often the case that the needs of communities or interest groups are not taken into account when choosing, designing or scoping a project to serve them. Such projects may either suffer opposition or abandonment when completed. A case in point is the Overhead Steel Bridge situated in Nima a suburb of Accra. This foot bridge though completed several years ago has largely been turned into a place of convenience. The community definitely would have preferred some other facility other than the overhead Foot Bridge. Another case in point is the newly constructed Walker Bush Highway (N1). The locations of the Pedestrian Bridges on this highway have not served their intended use to the fullest. This is evidenced by the number of accidents resulting in deaths on the road due to the refusal of the surrounding community members to use the bridges. Across the length and breadth of the country one would witness a number of projects at various stages of construction all abandoned because interest groups in one way or the other were not consulted to make inputs into or to know their needs and concerns and how these could be managed to fit into the project implementation programme. These interest groups or individual who impact or are impacted positively or negatively on the successful implementation of projects may be classified as stakeholders. Stakeholder

management is therefore crucial to the successful implementation of construction projects. In managing these groups it is important to know what to communicate, how to communicate, when and where to communicate and most importantly to whom the communication is to be directed. The research therefore identifies some of the critical issues involved in managing the needs and concerns of external stakeholders and their relative importance and ranking. The study aims at developing a framework for the engagement of external stakeholders in Road Construction project in Ghana; to identify the stakeholder management practices of Ghana Highway Authority and to identify the key components required for the development of a framework for stakeholder management. The research focused the study on selected Road projects of the Ghana Highway Authority in the Ashanti region. The population project consultants, contractors, and key identifiable stakeholders involved in the selected projects were requested to fill out the questionnaire forms. A semi structured interview was also conducted where convenient. This was undertaken in an attempt to solicit their views and understanding of the whole concept of stakeholder management. The survey showed that project implementation officials did not consider stakeholder management as an issue for an effective project success story. Those consultants who had undertaken to consult with stakeholders had done so not as a process requirement but an individual basis. It is therefore recommended that the frame work that has been developed would be adapted as part of a project implementation process that would involve all stakeholders. Key works: Critical Issues, Stakeholder Management, Construction Projects, relative importance and rankings.

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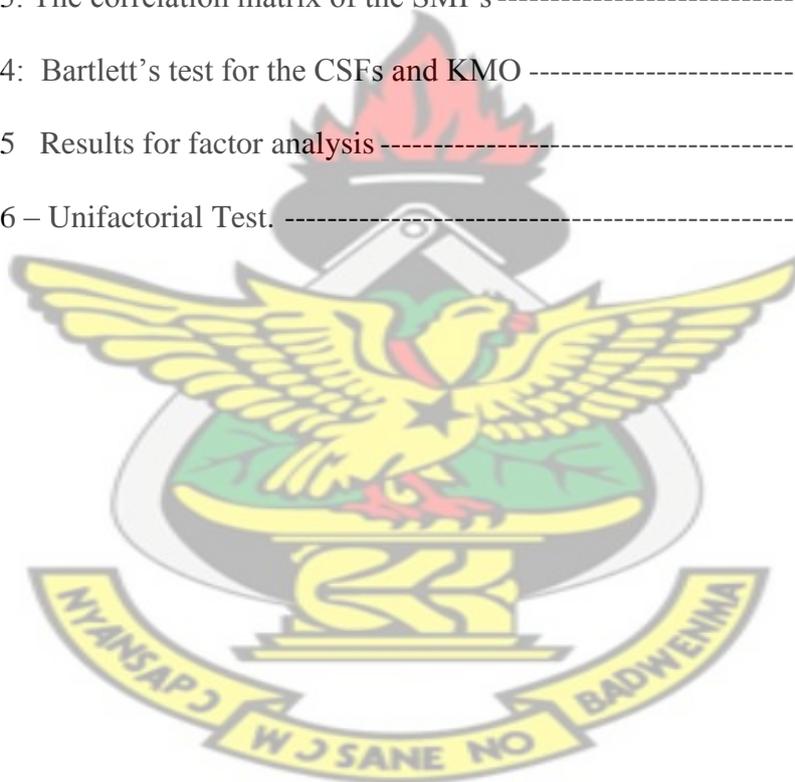
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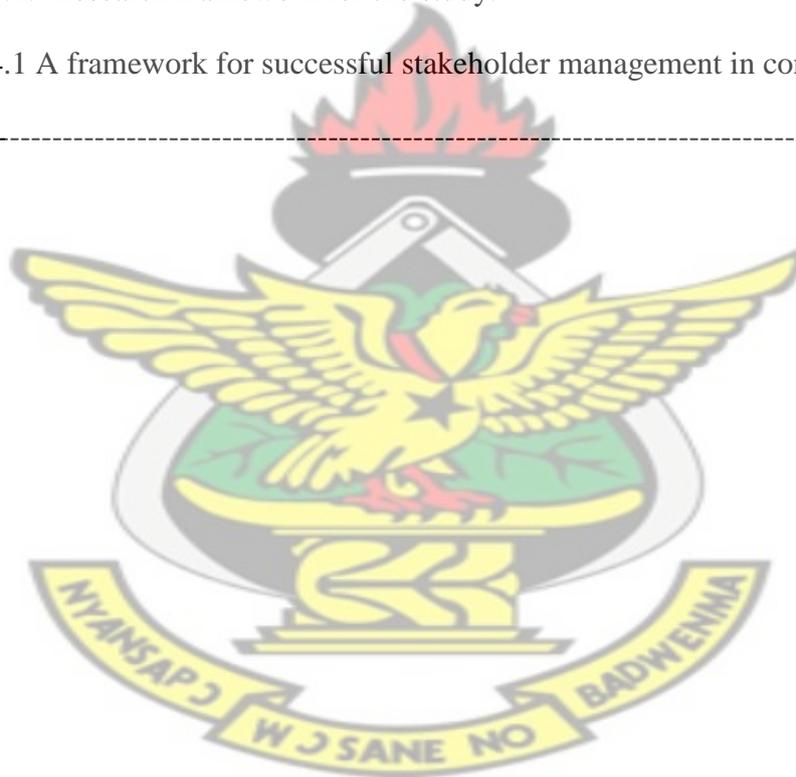
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## LIST OF ABBREVIATIONS

Dist:	District
RA:	Road Area
Fig. :	Figure
G.H.A.:	Ghana Highway Authority
SM :	Stakeholder Management
SMI (S):	Stakeholder Management Issue
KMO :	Kaiser Meyer Olkin



## DEDICATION

This research work is dedicated to my wife Mariam and two daughters Nura and Mutia whose patience and love has seen me through this programme.

I also wish to dedicate this research works to the Ghana Highway Authority and especially the Quantity Survey Division and its staff from whom I have gained so much professional experience to enable me understand some of the issues regarding this project work.

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## ACKNOWLEDGEMENT

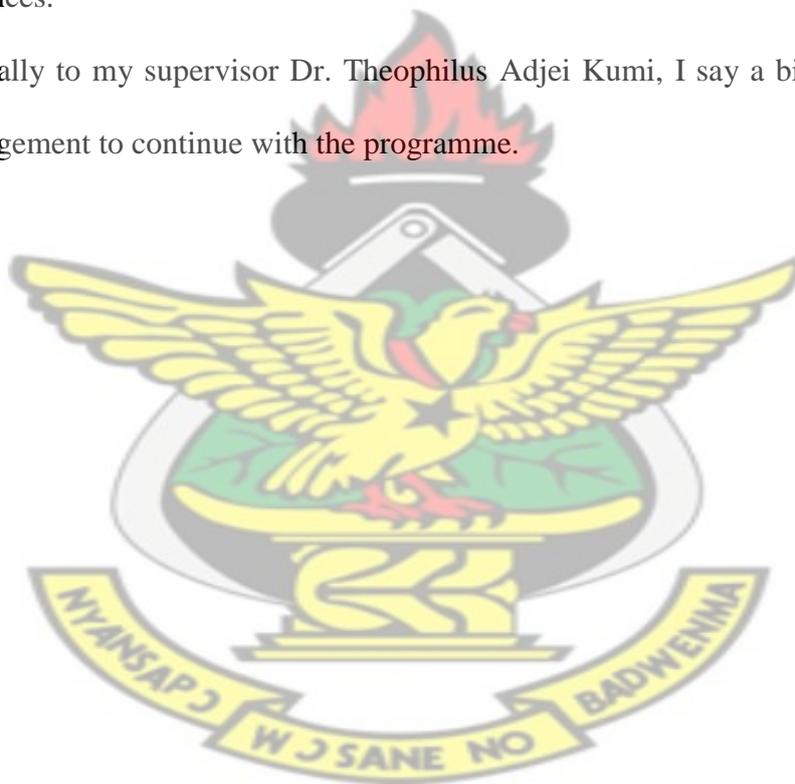
I wish to express my profound gratitude to all who have in diverse ways helped and encouraged me to see this project to its logical conclusion.

To the All knowing and wise God I give the glory.

My sincere thanks and appreciation also goes to my members of staff especially Mr. Jephthah Akomea Sackey and Miss Caroline Botchway who have tirelessly and patiently endured all the pressures of work to help me put together this project.

Many thanks also go to my year mates from whom I have added on to my life experiences.

And finally to my supervisor Dr. Theophilus Adjei Kumi, I say a big thank you for encouragement to continue with the programme.



# CHAPTER ONE

## INTRODUCTION

### 1.1 BACKGROUND

Our everyday activities directly or indirectly affect or are affected by our close associates, neighbours, love ones etc. Invariably whatever undertaking we find ourselves involved in, be it on a personal or institutional level, the process or the end product may affect others either positively or negatively.

The planning and execution of construction projects has the same effect as stated above.

It's execution can impact positively or negatively for every community it is intended for. Positive effects may for instance be, better communication, housing, enhanced economic activity and subsequently a higher standard of living.

The facility may also in fact negatively on the community. Capital investment projects have seen whole communities displaced, and people losing their means of livelihood etc.

The construction of Road Infrastructure has no different character. It tends to “create” new communities along its way, improves the economic life of the towns though which traverses, opens up hitherto isolated settlements. And yet at the same time others may be affected by the relocation of their places of abode, lost of farm lands by the same Road Infrastructure project.

All these groups who are affected by the project either directly or indirectly are referred to as the projects stakeholders.

A project stakeholder can be defined as a person (or group of people) who have vested interest in the success or otherwise of a project and the environment within which the project operates (Olander, 2006). Vested interest as in the above definition may be defined as possession of one or more of the stakeholder attributes of Power, Legitimacy or Urgency for their claims upon the project.

In view of the wider dimension of stakeholder theory and concept, there have been various definitions depending on the circumstance inter alia;

- A stakeholder is any group or individual who can affect, or is affected by the achievement of an organizations purpose (Freeman, 1984).
- Stakeholders can be divided into internal and external ones (Gibson, 2000) external stakeholder being those affected by the project in a significant way, but not directly involved in execution of the project (such as neighbours, the community, the general public, as well as trade and industry)
- A third party who temporarily holds money or property, which its owner is still being, determined (stakeholder-law).

Traditionally it is believed that the formal planning (ie. Going by the rules and laws) concerning the design, scope and location of a project, represents the management of external stakeholder interest. The formal planning process has been determined to insufficiently deal with claims and issues of external stakeholders, thus culminating in conflicts and controversies (Heneke and Olander, 2003). Many examples abound of technically and economically well planned projects, managed in a formal setting and going by all the technicalities, that were nevertheless by political consideration based on the views and interest of external stakeholders to the extent that huge amounts of resources committed and invested become obsolete (Anlaggnings forum, 1998).

If the potential impact of a proposed project on external stakeholders is not sufficiently communicated in the early stages of a project, it may lead to controversy and conflict regarding the projects location, size and design, cost and completion periods.

Technocrats are quick to explain problems in technical and economic terms, which may not be sufficient to address the needs and concerns of external stakeholders. In arriving at Public Policies Technocrats present data to audiences that do not share the values of the technical culture that they represent (Hynds and Martin, 1956).

There is no under scoring the fact that, for projects to be successfully planned and executed there is the need to Identify, Involve, Communicate with and consider the varying interest of stakeholders.

Stakeholder Management therefore includes the processes and activities performed to identify all people or organizations impacted by the execution of a project.

It also involves the assessment of the power and influence of the various stakeholders. Stakeholder Management also deals with the Analysis of stakeholders which is the process of systematically gathering and analyzing quantitative and qualitative information to determine whose interests should be taken into account throughout the project (PRMBOK Guide).

## 1.2 PROBLEMS STATEMENT

In every infrastructural development effort (Roads, Railways, Housing Development, etc.) some external stakeholder's will be impacted negatively by the infrastructure or by the implementation of the primary preparations leading up to it.

This therefore suggests that in the implementation of projects, not all needs and concerns of external stakeholders can be met; stakeholders have different concerns, needs and perceptions about impending projects.

The challenge therefore is for the implementing body or Project Manager to plan and execute the project in a such a way as to meet as many needs and aspirations of the stakeholders as possible whilst at the same time keeping mile stones of the project within focus.

An understanding of the technical details of a project is not enough guarantees for a successful implementation and completion of the project.

Information about project location, community, environment, customs are all pertinent factors to be in co-operated in the planning and execution stages.

These issues are best dealt with by external stakeholder participation and management efforts.

In order to undertake an external stakeholder management process adequately, there is the need for a thorough analysis of the needs and concerns of the stakeholders' vis-à-vis the purpose of the project.

Implementing Agencies/Project Managers hardly conduct any External stakeholder management exercise.

In situation where an external stakeholder management or analysis has been conducted, it often has been due to personal initiatives rather than status quo or a legal frame work (i.e., Policy) of the project.

### **1.3 AIM AND OBJECTIVES**

#### **AIM**

Develop a frame work which will form a baseline for the improvement and inculcation of Stakeholder Management as part of the project management process.

The study aims at developing a framework for the engagement of external stakeholders on Road Construction project in Ghana.

#### **OBJECTIVES**

In order to meet the above aim the following are the set objectives:

1. To document the characteristics of a typical Stakeholder Management process for construction projects.
2. To identify the Stakeholder Management Practices of G.H.A.
3. To gauge the perception of Road project implementation agencies on the essence of Stakeholder Management.
4. To identify the key components/factors required for the development of a framework for Stakeholder Management.
5. Develop a framework for Stakeholder Management for the Road Sector of Ghana.

#### **1.4 BENEFIT OF THE STUDY**

It is the hope of the researcher that, internal stakeholders in the construction industry (i.e Funding Agencies, employers, project managers, Civil Engineers, Quantity Surveyors, etc) would be enlightened and sensitized on the advantages, benefits and savings to be gained by taking the issues of External stakeholders seriously.

There is no gain saying the fact that stakeholders play a pivoted role in the planning, implementation and execution of infrastructural projects irrespective of their nature and scope.

The frame work to be developed would serve as a check list for Project managers during the management process of external stake holders.

### **1.5 SCOPE OF THE STUDY**

Issues concerning the subject of stakeholders are as broad and wide as far as every human endeavor is concerned.

This research focuses on the study of External Stakeholder Management in the construction industry. The industry includes among others Housing and Infrastrural projects (Roads, Railways, etc).

The study is further narrowed to the Road sector of the industry and more particularly activities concerned with the Ghana Highway Authority.

The Ghana Highway Authority was initially established under NRC Decree 298 in December 1974. The Decree has however been suspended by Act 540 of December 1997 to reflect changes which have occurred in the road sub-sector since 1982.

Since the mission of the GHA is to provide and maintain a safe and reliable trunk road network at optimal cost to support socio-economic development in Ghana. Its activities cuts across all categories of stakeholders within the industry; Both Internal and External Stakeholders who are in diverse ways affected and impact on the successful delivery of trunk roads.

The study does not involve stakeholder analysis neither does it delve into Stakeholder Impact Analysis.

It is only concerned with the management of stakeholders who are affected or affect the activities of the authority with respect to road works.

The research work is further narrowed down to the Ashanti Regional Branch of the Authority whose activities involve stakeholders such as;

- a) The Regional Coordinating Council
- b) District Assemblies
- c) Regional Security Council
- d) Chiefs and Traditional Authorities
- e) Road end users
- f) Business owners
- g) Media
- h) Residents
- i) Consultants etc.

## **1.6 STRUCTURE OF THE THESIS**

### **Chapter 1: Introduction**

The Chapter relates to the background of the research and the research question. It covers the aims, objectives and limitation of the research and other related activities, also defines the scope of the research.

### **Chapter 2: Literature Review**

The chapter discusses issues related to the research topic by other authors.

The chapter also threw light on various commentaries and current knowledge on the topic as a foundation and support to the research.

### **Chapter 3: Research Methods**

This chapter gave a step by step approach to how the research was conducted. It introduces the reader to the various stages of the research activity.

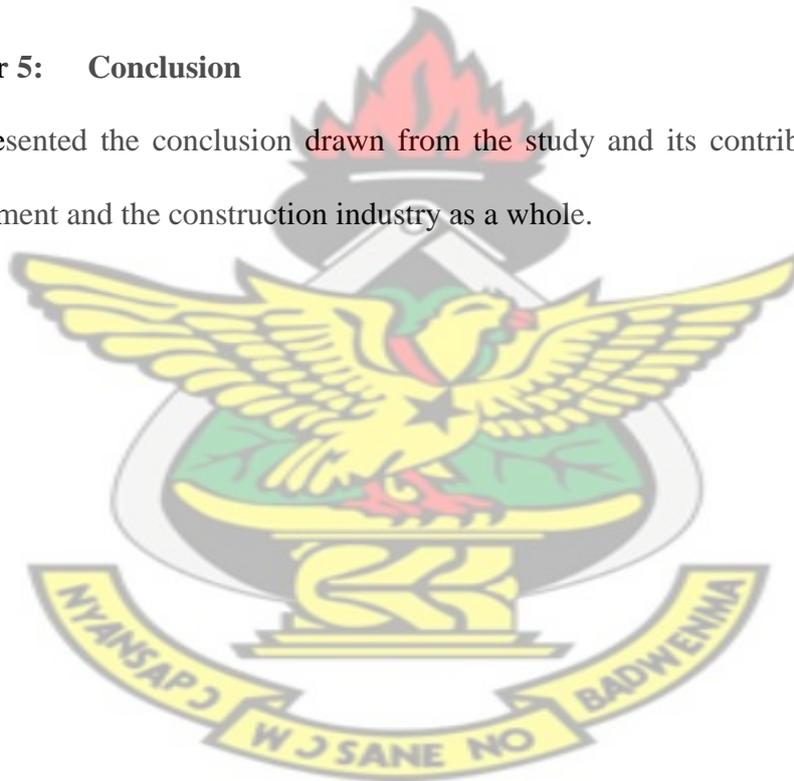
The chapter also discussed the questionnaire to be developed and data to be collected incidental to the questionnaire.

### **Chapter 4: Discussions**

The main findings of the research were discussed in this chapter.

### **Chapter 5: Conclusion**

This presented the conclusion drawn from the study and its contribution to project management and the construction industry as a whole.



## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 INTRODUCTION

For the purposes of understanding the challenges ahead of the research and also to explore various knowledge expressed by others on the subject of stakeholders and their management, an attempt has been made to review of a number of literature by other authors not only directly on the topic but also on other topics that the subject of external stakeholder management relates

The literature review is used as a foundation and support to the research and an attempt to summarize and synthesize the argument and ideas of others without any additions.

The areas of the review have been limited to related issues such as Stakeholder Identification, Impact, Engagement, Needs and Management. It is hoped that the review would uncover in great detail the analysis and synthesis of key information required for the research.

#### 2.2 THE CONCEPT OF STAKEHOLDER

Many business concern both private and public making everything possible to meet the expectations and needs of stakeholders today, a few years ago never bothered.

Project stakeholders are a relatively new phenomenon. Legally, the concept is however not new. Neither is the concept of “having a stake” in an enterprise also not new.

Presumably the concept of delivering a satisfactory product to meet the needs and expectations of the end user, customer or client is also not new.

In the past century, it has been the trade mark of many businesses to adopt the concept of customer service or satisfaction. What this means is that the idea of satisfying the needs of people who have stakes

in an undertaking had always existed. The question then is what changed? The origin of a business stakeholder in management literature can be traced back to 1963, the word at that time appeared in an international memorandum at the Stanford research institute. A stakeholder was then defined as “those groups without whose support the organization would cease to exist.”

### **2.3 WHO ARE STAKEHOLDERS**

The definition of a stakeholder comes in many different ways. Different kinds of entities can be stakeholders, such as persons, groups inside as well as outside an organization (Boonstra, 2006).

Stakeholders act depending on their interest and use their power to influence a product in the direction that they wish (Nilson Fagerstroin, 2006). The definition of Stakeholder by Freeman (1984) as “any group or individual who can affect or is affected by the achievement of the organizations objectives” has been widely accepted by many authors (Wheeler and Sillan paa, 1998), (Clement, 2006), (Boonstra, 2006) and (Kolk Pinkse, 2006).

They are also defined as any person or organization that has legitimate interest in project (EL-Gohary, et al, 2006) who can affected or be affected by organizations with their managerial behaviours (Ahn and Hee, 2005) and by the product throughout the product life cycle (Nilson and Fagerstron, 2006); those who share a particular set of understandings and meanings concerning the development of a given technology (Boonstra, 2006) and having material, Political affiliation, symbolic or spiritual

interest in a company and are able to advocate these interests through formal economic or political power (Hostbrugge, et al, 2007).

It has been put forward by Glicken (2000) that all definitions of stakeholders or interested parties are that they identify and define groups relative to a specific issue. Though these groups might have existed over time as formal organizations, they become stakeholders' only inferences to a particular issue and therefore make stakeholders a relative term.

The suggestion is made by Holtbrugge, Berg and Puck (2007) that the success of a firm does not depend primarily on the efficient coordination and control of its operations, but on the establishment and maintenance of a cooperative dialogue with all relevant internal and external interest groups that may influence its activities in a positive and negative ways as mentioned by Clarkson (1995), Frooman (1999) and Mitchell, et al, (1997).

Post, Preston, Sachs (2002) adopts the following definitions of the term "stakeholder". "The stakeholders in a corporation are the individuals and constituents that contribute, either voluntarily or involuntarily, to its wealth-creating capacity and activities, and that are therefore its potential beneficiaries and or risk bearers". This is a deviation from the older definition of the term stakeholder in stakeholder theory (Freeman, 1984) that also includes competitors as stakeholders of a corporation.

## **2.4 STAKEHOLDER IDENTIFICATION**

Stakeholder identification is one of the critical initial approaches in a participatory planning process. Exercises in stakeholder identification provide early and essential information about:

- The individuals, groups and institutions that will be affected by and would benefit from the project to be undertaken.
- The capacities that these individuals, groups and institutions possess.

Failure to identify these stakeholders may result in the project management team not being able to manage the project within Time, Budget and Quality.

Identification of various project stakeholders by project managers requires keen analytical and intuitive skills. They have to work and communicate with them in order to come to terms with their expectations, needs and influence upon the project success. This enhances the management process which seeks to optimize stakeholder positive input and minimize the effect of any potential negative impact on the project (Bourne and Waljer, 2005).

Stakeholder identification draws a line between the parties to be involved and those not involved (Vos and Achterkamp, 2006) and to identify the stakeholder, it is necessary to establish the differences between theory (Kaler, 2003:p72). The stakeholder theory has been modified and justified with different aspects but mutually supportive (Donaldson and Preston, 1995)

Good paster(1991) however makes the point about 3 levels of stakeholder theory viz:

1. The Strategic Level: this advocates “taking into account” the (non – owner) stakeholders’ interest as a means of reaching any moral content.
2. The Multiple Trustee: On a moral level, attributes a fiduciary responsibility to the company’s managers towards all of the stakeholders, be they owners or non – owners.
3. The “New Synthesis”: This distinguishes between some fiduciary responsibilities towards the owners and other restricted, non fiduciary responsibly towards the other stakeholders.

In the process of identifying stakeholders, the key stakeholders must be identified first. According to Salmat and Naguchi(2006), key stakeholders are those who can significantly influence or are important to the successful delivery of the project objectives. They contend that influence is the power that stakeholders have over the project to control what decisions or exert influence that affects the project in a negative way.

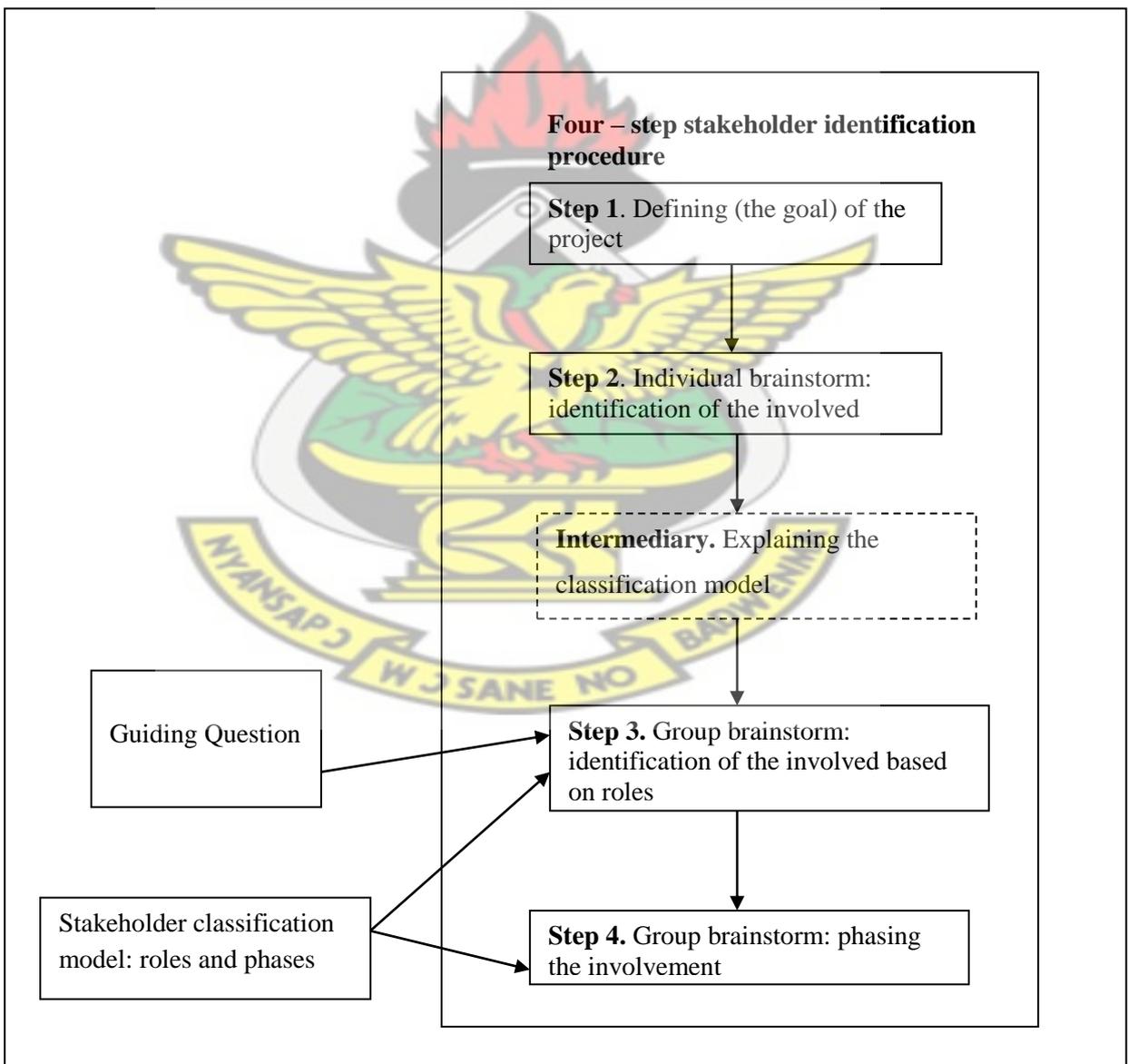
Stakeholder management has been described as the process of identifying “key stakeholders” and to solicit their support. Stakeholders can be defined as key or non-key for strategic planning purposes:

1. Key Stakeholders; they are those individuals or groups whose interest in the project must be recognized if the project is to be successful. Particularly those that will be positively or negatively affected during the project or on the successful completion of the project.
2. Non – Key stakeholders; These are those individuals or groups whose needs do not have to be recognized for the project to be successful, but who will be identified as a result of identifying all stakeholders.

It is imperative to decide on the question of who is and who is not a stakeholder in any undertaking. Stakeholders do not process the same level of importance in the achievement of a project objective (Salam and Noguchi, 2002). Decisions of this nature are influenced by the importance of the stakeholders, which is a function of their power, legitimacy and urgency; distinguishing among Primary-stakeholders, Secondary stakeholders and non stakeholders (Vandekerchove and Dentchev, 2005). Bourne and Walker (2005) have also stated that “legitimate and Valid” stakeholders need to be identified and their power and influence analysed in order to better comprehend their potential impact on projects.

Other literature reviews have shown that the problems of identifying stakeholders have been discussed in depth by Vos and Achterkamp (2006) in an innovation management literature. Vos and Achterkamp argued that classifying stakeholders is not the same as identifying stakeholders and for classification models to be of any use in stakeholder identification, they should fit the stakeholders are interested in, or are attached by.

Identification of stakeholders goes beyond stakeholder classification. This position is illustrated in Figure 2.1.



**Figure 2.1: Stakeholder Identification Procedure (Source: Vos & Achertkamp, 2006)**

The most important reason for identifying and understanding stakeholders is that it allows you to recruit them as part of the effort. A participatory effort that involves representation of as many stakeholders as possible has a number of important advantages:

1. It puts more ideas on the table than would be the case if the development and implementation of the effort were confined to a single organization or to a small group of like-minded people.
2. It includes varied perspectives from all sectors and elements of the community affected, thus giving a clearer picture of the community context and potential pitfalls.
3. It gains buy-in and support for the effort from all stakeholders, by making them an integral part of its development, planning, implementation and evaluation. It becomes their effort and they'll do their best to make it work.
4. It is fair to everyone. All stakeholders can have a say in the development of an effort that may seriously affect them.
5. It saves you from being blindsided by concerns you didn't know about. If everyone has a seat at the table, concerns can be aired and solved before they become stumbling blocks. Even if they can't be resolved, they won't come as a surprise that derail the effort just when you thought everything was going well.
6. It strengthens your position if there's opposition. Having all stakeholders on board makes a huge difference in terms of political and moral clout.
7. It creates bridging social capital for the community. Social capital is the web of acquaintances, friendships, family ties, favours, obligations and other social currency that can be used to cement relationships and strengthen communities.

Bridging social capital, which creates connections among diverse groups that might not otherwise interact, is perhaps the most valuable kind.

8. It increases the credibility of your organization. Involving and attending to the concerns of all stakeholders establishes your organization on fair, ethical and transparent and makes it more likely that others will work with you in other circumstances.
9. It increases the chances for the success of your effort. For all the above reasons, identifying stakeholders and responding to their concerns makes it far more likely that your effort will have both the community support it needs and the appropriate focus to be effective.

Given that, there are a number of ways to identify stakeholders. Often, the use of more than one will yield the best result.

- Brain Storm; Get together with people in your organization , officials and others already involved in or informed about the effort and start calling out categories and names. Part of the point of brainstorming is to come out with anything that comes to mind, even if it seems silly. On reflection, the silly ideas can turn out to be among the best, so be as far-ranging as you can.
- Collect categories and names from informants in the community, particularly members of a population or residents of a geographical area of concern.
- Consult with organizations that either are or have been involved in similar efforts, or that work with the population or in the area of concern.
- Get more ideas from stakeholders as you identify them.
- If appropriate, advertize. You can use some combination of the media through various community Service arrangements – community meetings, community and organizational newsletters, social media, targeted e-mails, announcements

by leaders at meetings and religious gatherings, and word of mouth to get the word out.

## **2.5 CLASSIFICATION AND TYPES OF STAKEHOLDERS**

Stakeholders have been differentiated and grouped in many ways depending on their resources and expectations (Susniene and Vanagas, 2005). In the views of Lim, Ahn and Lee (2005) stakeholders have to be categorized or grouped for an effective utilization of guidelines for generating the required strategies. Freeman (1984) introduced two types of stakeholders that is “Primary Stakeholders” and “Secondary Stakeholders”. Other studies have revealed that other classification of stakeholders should also include Internal and external stakeholders (Nilron and Fagerstrom, 2006, Holtbrugge, et al, 2007).

### **2.5.1 PRIMARY STAKEHOLDERS**

This category of stakeholders are those who have formal, official, or contractual relationships (Gibion, 2000: p245) in which the impacts of relationships are direct and involves human entities, for example, customers, employees, investors (Wheeler and Sillanpaa, 1998), have a direct stake in the enterprise and its success, bear some form risk as a result of having invested some form of Capital, human or financial, something of value, in an organization. These stakeholders are those without whose participation, the entity cannot survive (Hillman and Keinn, 2001: p126; Vandekerckhove and Dentchev, 2005). In addition, Clement (2005) has defined primary stakeholders as those continuity participation is crucial to the survival of the firm, whom can have a substantial, and often times immediate, impact on the firm.

### **2.5.2 SECONDARY STAKEHOLDERS**

These are those group of stakeholders that have a public or special interest in the organization (Nilron and Fagerstrom, 2006) and have less direct involvement but nevertheless sometimes extremely influenced, for example, Civil society; business at large, various internet groups (Clement, 2005). These groups of stakeholders are also capable of influencing and can be influenced by the organization, but not engaged in transactions with the organization are not essential for its survival, example NGOs, activists, communities etc.

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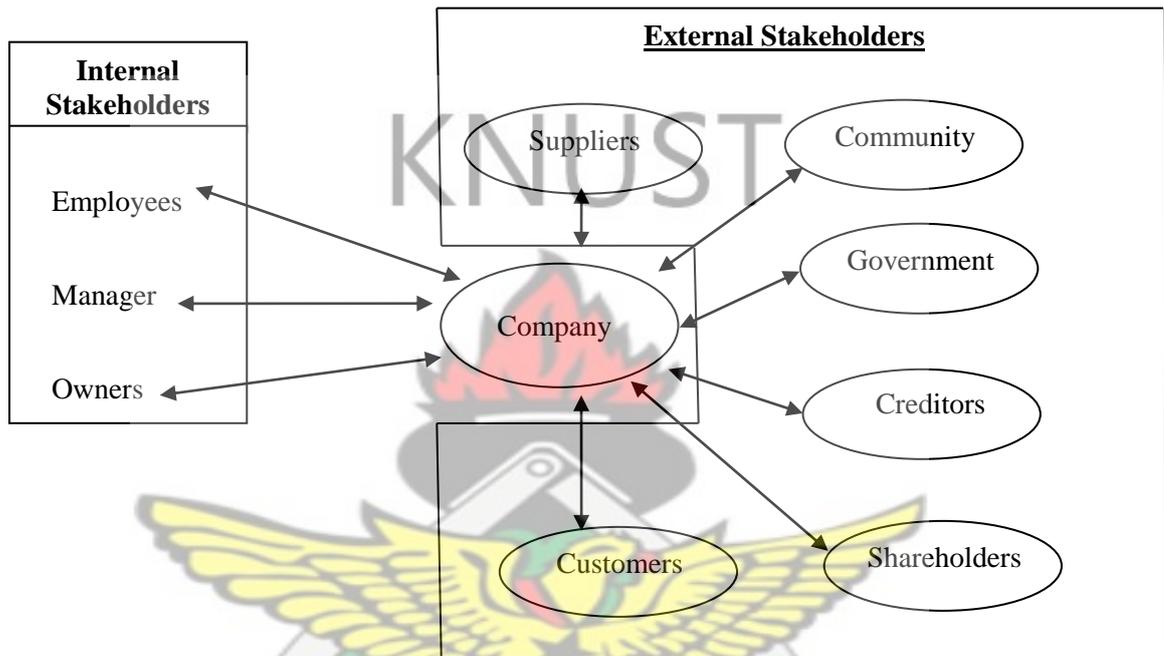
### **2.5.3. NON- SOCIAL STAKEHOLDERS.**

Non – Social stakeholders do **not involve human** relationships, which may also be grouped into primary (direct) and secondary (indirect), for example, natural environment, non – human species, future pressure groups. These are neither influenced by nor a factor in the survival of the organization (Wheeler and Sillanpaa, 1998; Vandekerckhove and Dentchev, 2005). Freeman (1984) argued that it is easy but extremely detrimental for managers to assume that stakeholders who oppose them are irrational and irrelevant.

### **2.5.4 INTERNAL AND EXTERNAL STAKEHOLDERS.**

According to Nilson and Fagerstrom (2006), internal stakeholders are those in the management, marketing experts, designers, purchasing, manufacturing, assembly and sales. They are all affected by wages and job stability. Managers may get bonuses so they want the business to be very successful while external stakeholders are the users/customers, distributors, governments, suppliers, communities, Laws and regulations. They are involved with the company but employed directly by the

company. Customers are interested in prices and quality of the product. Suppliers are interested in the success and stability of the company so they can ensure they will have a customer in the future. The Government is interested in companies (especially large ones) as they pay taxes and employ people.



**Figure 2.2: Relationship between Internal and External Stakeholders.**

### 2.5.5 POLITICAL STAKEHOLDERS

Political stakeholders can be divided into two sub-groups, i.e “National Stakeholders” and “International Stakeholders” (Holtbrugge et al., 2007). National Stakeholders include players such as Central Government, State Government, Local authorities and also NGOs. International Stakeholders on the other hand are those supranational organizations such as the International Monetary Fund (IMF), World Trade Organization (WTO) and also NGOs (Greenpeace, international media etc).

Both Government actors and Supernatural organizations are classified as ‘Public stakeholders’ while NGOs are classified as ‘Private Stakeholders’. Hillman and Hitt

(1999) proposed a typology which distinguishes between three different strategies of political stakeholders:

1. Information Strategy: - This aims to affect the actions of political stakeholders by providing them specific information about preferences for policy or political positions.
2. Financial Incentives strategy: - Seeks to influence the actions of political stakeholders through financial inducements which may include hiring personnel with direct political experience such as managers or community bribery for decision makers.
3. Reputation – building strategy:- This is an attempt to influence political stakeholders in an indirect way through stakeholder support. This is achieved by public relations and codes of conduct.

## 2.6 STAKEHOLDER MAPPING

Having identified the stakeholders and their concerns, now what? The stakeholders now understand what you want to do, you have to respond to their concerns – at least by acknowledging them, whether you can ratify them or not and you have to find a way to carry on with all the support you can garner for them.

Stakeholder mapping is a way of determining who among stakeholders wields the most positive or negative influence on an effort, who is likely to be most affected by the project, and how to go about with stakeholders with different levels of interest and influence.

In order to analyse the influence of external stakeholders sufficiently, it does not suffice to simply identifying them, the dynamics of the environment and the power of

the stakeholder in relation to the organization or project need to be assessed (Mendelow, 1981).

Mendelow further suggests that the stakeholders who possess power relative to the organization are liable to change due to the impact the stakeholder environment can have on the stakeholder's power base (Olander and Landid, 2005).

They indicated that Power and dynamism are relevant factors; Low to High and static to dynamic. This method is also used to develop strategy towards managing the different stakeholders (Winch, 2004) this is made up of two dimensions; the Power of stakeholder to influence the project scope and level of interest they have in that definition which is a benefit function as shown in

Figure 2.

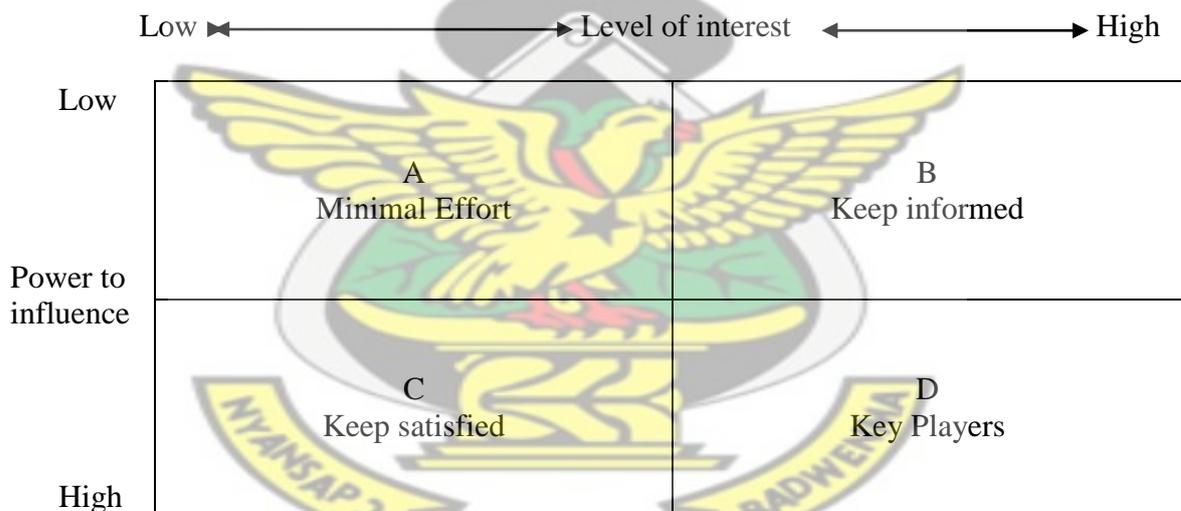


Figure 2.3: Power / Interest Matrix (Source: Winch 2004)

It is possible to understand how the influence of external stakeholders develops in the course of project implementation by locating them in the Power / interest matrix (Winch and Bonke, 2002; Newcombe, 2003).

The problem however with the model lies in the fact that in conducting a comprehensive external stakeholder analysis the comparable levels of power and interest have to be investigated on a broader scale instead of a high or low basis.

It is difficult to determine the Power or interest of a group on the basis of a scalar. Assessing the possibility of the potential impact that external stakeholders wield by virtue of their power and interest is a better and far reaching option.

### **2.6.1 STAKEHOLDER ATTRIBUTES (Power, Legitimacy and Urgency)**

Stakeholders derive their influence from their attributes. These attributes of Power, legitimacy and Urgency have been used to determine / assesses the potential and levels of stakeholder influence (Mitchell et al., 1997). A stakeholder may choose to use the power it has to influence the project. This power of the stakeholder may be derived from their ability to mobilize social and political forces, resources from the project (Post et al., 2002).

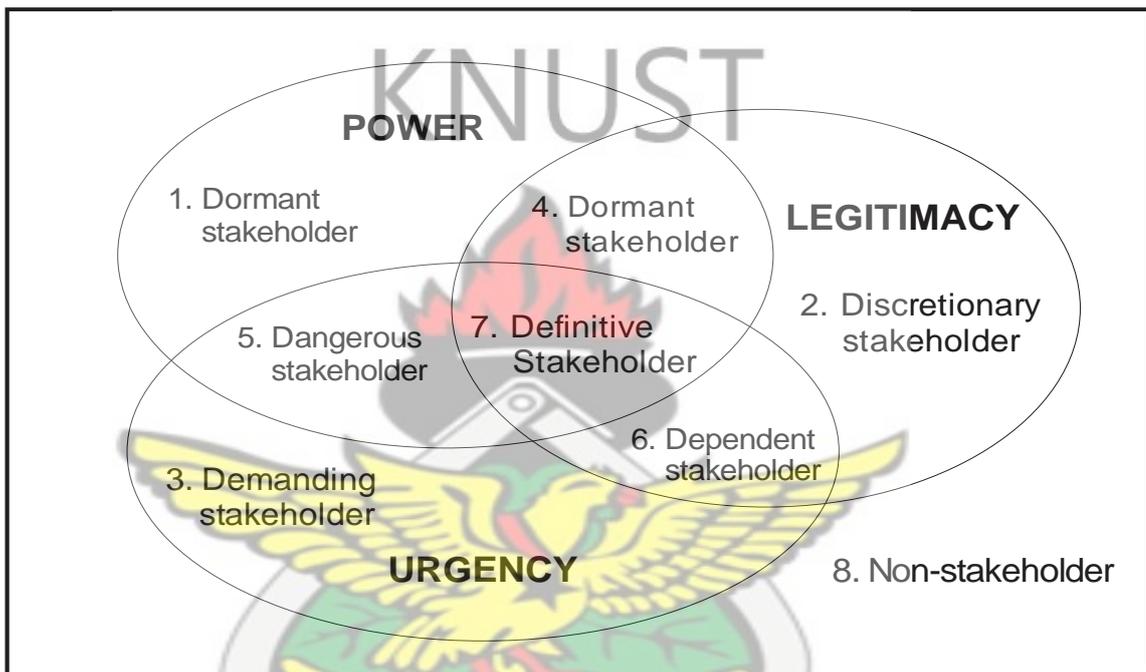
Stakeholder has legitimacy when it's action toward the firm are generally seen as desirable, proper, or appropriate within the norms, values and beliefs of the society. They bear some level of risk in relation to the enterprise, be it beneficial or harmful.

The dynamic character of stakeholder influence is covered by the term urgency, which is defined as the degree to which claims (or stakes) call for immediate attention. That is when the relationship or claim is a time related one and the extent to which stakeholders efforts call for immediate attention by the firm.

At any given period of time, some stakeholders will be more important than others (Jawahar and McLaughlin, 2001). The demands of the stakeholder may not be seen as important if only one of the attributes is present and the stakeholders may be referred to as being "Latent" or low in salience. If however all the variables are present, an

immediate and response is expected and the stakeholder is seen as “definitive” or high in salience.

Eight types of stakeholders develop from the combination of these three attributes (Boonstra, 2006) viz ; Dormant, Discretionary, Demanding, Dominant, Dependent, Dangerous, Definitive and Non Stakeholder as shown in Figure 2.4



**Figure 2.4: Stakeholder Typology (Source: Boonstra, 2006)**

1. Dormant stakeholders:- This group of stakeholders have the power to impose their will on the project or effort. However, because they lack any legitimate relationship or urgent claim, their power remains unused. Dormant stakeholders for that matter have very little or no interaction with the organization or project.
2. Discretionary Stakeholders:- Though they have the attribute of legitimacy, they have no power to influence and no claim on urgency over the organization or project. Managers do not feel any compellation to engage with this group in the absence of power and urgent claims.

3. Demanding Stakeholders:- Demanding stakeholders have urgent claims but do not have any power or legitimacy. Dormant, discretionary and demanding stakeholders are categorized as latent stakeholders, where stakeholder salience is low (Mitchel et al., 1997).
4. Dominant Stakeholders:- This category are both powerful and legitimate. Their influence in the relations ranks very high and its assured.
5. Dependent Stakeholders:- They posses urgent and legitimate attributes but lack power. As their name complies, they rely on others for power in other to carry out their will.
6. Dangerous Stakeholders:- This group of stakeholders are characterized by the fact that they possess the attributes of urgency and power but without any legitimacy. These groups have the tendency of being coercive and sometimes can behave violently, making them literally dangerous.
7. Definitive Stakeholders: - This is a class of stakeholders on their own. They possess all the attributes of power, legitimacy and urgency. Stakeholders who fall under this group have all the attention of managers are given a priority status to all their claims.
8. Non Stakeholders:- These ones possess none of the attributes mentioned above and subsequently has no relationship with the project, organization or with other stakeholders.

Apart from the above assessment criteria used, there is that which takes into consideration the position each stakeholder has towards the project i.e. whether they are opponents to or proponents of the project (Winch and Bonke, 2002).

Five different positions have been suggested to be taken by stakeholders towards a project (McElroy and Mills, 2000) these include; the Active Opposition, Passive Opposition, Not Committed, Passive Support and Active Support. Each stakeholders position as mentioned above determines the degree of the impact the stakeholders has on the decision making process.

Invariably, the position assumed by stakeholders is triggered or influenced by their concerns and needs with respect to the project and how the project manger treats these issues.

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## **2.7 STAKEHOLDER ANALYSIS**

Grimble et al (1955) have defined stakeholder analysis as the identification of a project's stakeholders, an assessment of their interest and the ways in which these interests affect project risk and validity and are used to evaluate stakeholders' capacity development.

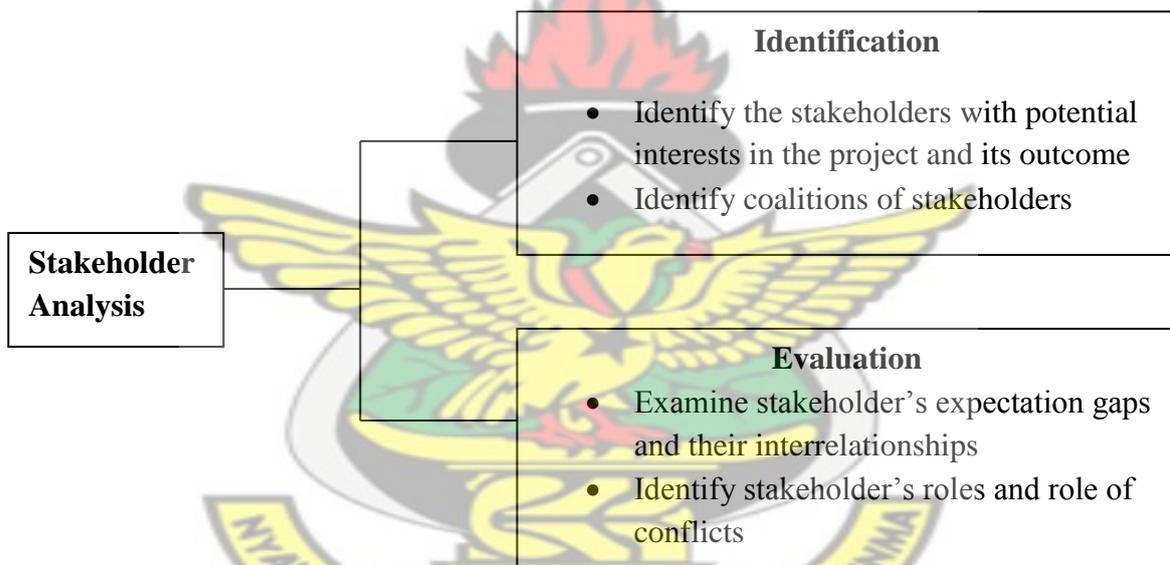
Stakeholder analysis helps to assess project environment to draw out the interests of stakeholders in relation to the problems which the project is seeking to address and, to identify conflicts of interests between stakeholders. The concept of the '4Rs' has been suggested for use (Salam and Noguchi, 2006) in the analysis of stakeholders. The '4Rs' namely, Rights, Responsibilities, Revenues, Relationships as used to analyze stakeholders demonstrates the independency and interactions between them. They are described as follows:

1. Right: To access and use products and access to employment.
2. Responsibilities: Implement decisions and rules, procedures and beneficiaries and abide by rules.

3. Revenue: Accrued from resources accessed, and from employment, as well indirect benefits.
4. Relationships: Includes stakeholders in the conflict and their history with each other.

Freeman (1984) introduced the stakeholder analysis framework which comprises of 2 stages:

Identification and evaluation: The underlying criteria are to identify stakeholders' roles, the conflicts that might possibly exist among these roles and the formation of any negative situations that could hinder the project implementation.



**Figure 2.5: Stakeholder Analytical Framework (Source: Freeman 1984)**

The process of stakeholder analysis may be broken down into the following components:

1. Stakeholder Identification
2. Stakeholder needs and concerns
3. Stakeholder impact analysis
4. Evaluation of alternative solutions
5. Level of acceptance

These processes are fluid and interdependent, the various components interact with each other during the project life cycle.

## **2.8 STAKEHOLDER ENGAGEMENT**

Stakeholder Engagement is the process by which an organization involves people who may be affected by the decisions it makes or can influence the implementation of its decisions. They may support or oppose the decisions, be influential in the organization or within the community in which it operates, holds relevant official positions or be affected in the long term.

Stakeholder engagement is a key part of corporate Social Responsibility (CSR) and achieving the triple bottom line. Companies engage their stakeholders in dialogue to find out what Social and environmental issues matter most to them about their performance in order to improve decision making and accountability.

It is a tool used by Private and Public Sector Organizations, especially when they want to understand and agree to solutions on complex issues of concern.

Stakeholder Engagement focuses on the necessity for engagement to be “far reaching, inclusive and balanced” (Amareshi at Crane, 2006).

Stakeholder engagement has also been defined as the process of involving individuals and groups that are affected by the activities of the company in a positive way (Greenwood, 2007; Sloan, 2009).

Stakeholder relationship management is effectively reached by engaging in a dialogue and building relationships with as many different groups with the objective of finding better means of undertaking a project (Preble, 2005).

Engagement is the act of managing the relationship among organization and stakeholders in order to achieve the effectiveness of the decisions and strategies

concluded on (O' Riordant Fairbrans, 2008; Swift, 2001). An organization success hinges on creating proper dialogue with its diverse stakeholders, (Freeman, 1984).

Hughes and Demetrious (2006) argue that dialogue is at the heart of Stakeholder engagement due to the fact that the process allows managers to access ways of evaluating, addressing and balancing stakeholder demands (O' Riardant Fairbrass, 2008).

According to Sloan (2009), Stakeholder activities such as dialogue are means by which to assess stakeholder engagement. Greenwood (2007) concludes that stakeholder engagement is a process of "Consultation, Communication, dialogue and exchange).

## **2.9 STAKEHOLDER MANAGEMENT STRATEGY**

Stakeholder management is defined as the effective management of relationships with stakeholders (Lim, Ahn and Lee, 2005). This includes the processes and activities performed to identify all people or organizations impacted by the project.

It is critical for project success to identify stakeholders early in the project implementation stage and to analyse their levels of interest, expectations, importance and influence. Following from the above a strategy can then be developed for approaching each stakeholder and determine the level and timing of stakeholder's involvement to maximize positive influences and mitigate potential negative impacts.

According to Hillmant and Keim (2001), effective stakeholder management is associated to financial performance and leads to shareholder value creation. Kolk and Pinkse (2006) maintain that stakeholder management focuses on three main themes: Identifying the nature of stakeholders, investigating their circumstances and their

influence on organizational decisions and operations and identifying various approaches to handle stakeholders.

There are two basic strategic levels in the management of external stakeholders. Either simply to fulfill the formal elements that is required by law or tries to find solutions and consensus for the project. The strategy to be adopted may depend on the extent of the stakeholder involvement. Jackson (2002) indentifies five strategies, informing, education, testing reactions, seeking ideas and alternative solutions, and seeking consensus, in the process of involving stakeholders (see fig 2.6)



**Figure 2.6 Levels of External Stakeholder Involvement (adapted from Jackson 2002)**

The traditional method of involving external stakeholders has basically been to keep them informed about project decisions, which may be the most rational strategy for the majority of the stakeholders and for the majority of projects. This decision however cannot be reached by management without a thought through identification of stakeholders.

For each identified stakeholder, the project management must determine a strategy to manage and involve each stakeholder in the project decision process. For public construction projects, in which the public is a relevant stakeholder a consensual approach towards the public should probably always be the way forward.

Studies by Jawahart and Mclaughlin (2001) indicates that organizations will use different strategies to manage different stakeholder groups whereby at each stage, interests of different stakeholder groups will not be met equally, but will be prioritized to group that are particularly important at that stage.

Many scholars have developed different methods and postures of stakeholder's management. For instance, Frooman (1999) proposes 4 types of stakeholder management based on resource dependency theory namely Direct Usage, Indirect Usage, and Indirect withholding. Savage et al. (1991) also has proposed 4 different strategies: Collaborate, Involve, Defend and monitor.

Bunn, Savage and Hollowawy (2002) suggests 6 strategies i.e. Lead, Collaborate, Involve, Defend, Educate and Monitor, while Oliver (1991) proposes a typology of organizational response strategies i.e. Acquiesce, Compromise, avoid, Defy and Manipulate.

The latest style in managing stakeholder is formulated by Lim, Ahn and Lee (2005), with 4 possible postures namely Reactions, Defensive, Accommodative and Proactive as shown in Fig. 2.7

Strategy	Posture	Action for Stakeholders
Reactive	Deny Responsibility	Doing less than required No support or involvement of employees and top management
Defensive	Admit Responsibility (but fight it)	Doing the least required Piecemeal involvement of employees and top management
Accommodative	Accept Responsibility	Doig all required Some involvement of employees and top managers
Proactive	Anticipate Responsibility	Doing more than required Most involvement of employees and top managers

**Figure 2.7: Formulation of Stakeholder Management Strategies (source: Lim, Ahn and Lee, 2005)**

### 3.0 CONCLUSION

#### Issues in Stakeholder Management

The stakeholder management approach helps to integrate managerial concerns that are frequently treated separately, such as strategic management, marketing and human resource management, and organizational; management as well as corporate social responsibility. This thus enables us to relate important issues to the development of strategies, handling potential conflicts for effectiveness and efficiency of various stakeholders.

In Stakeholder Management, issues such as relationship communications, Leadership, Commitment, Interest and Influences, Incentives and motivations should be identified and addressed earlier by the firm or organization for better cooperation among stakeholders and mutually defined understanding towards project success.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 INTRODUCTION

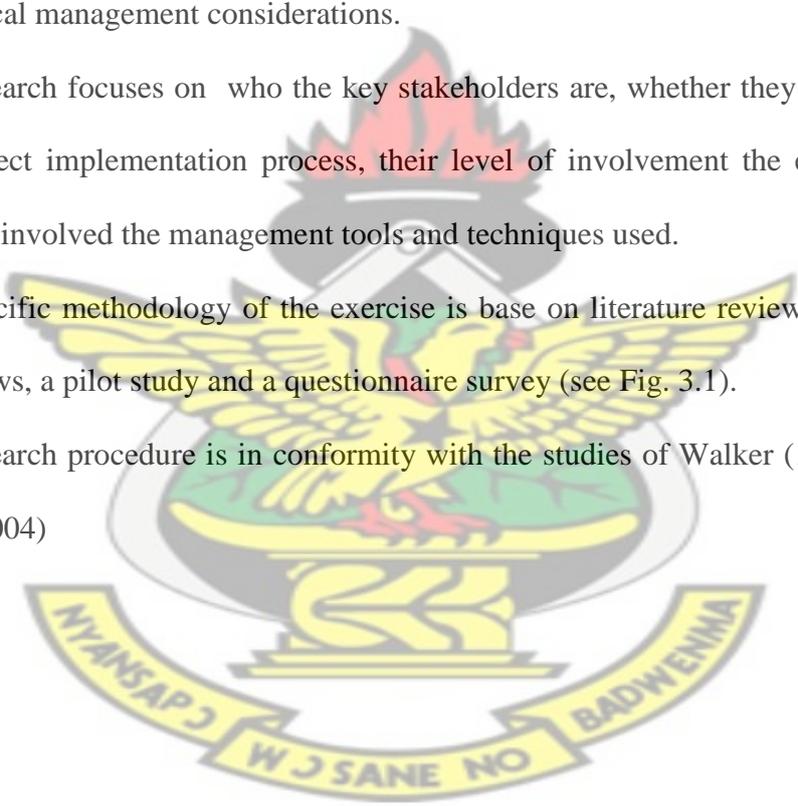
This chapter gives an outline of the proposed research philosophy, the methodology to be adopted, the design process and the possible limitations of the research.

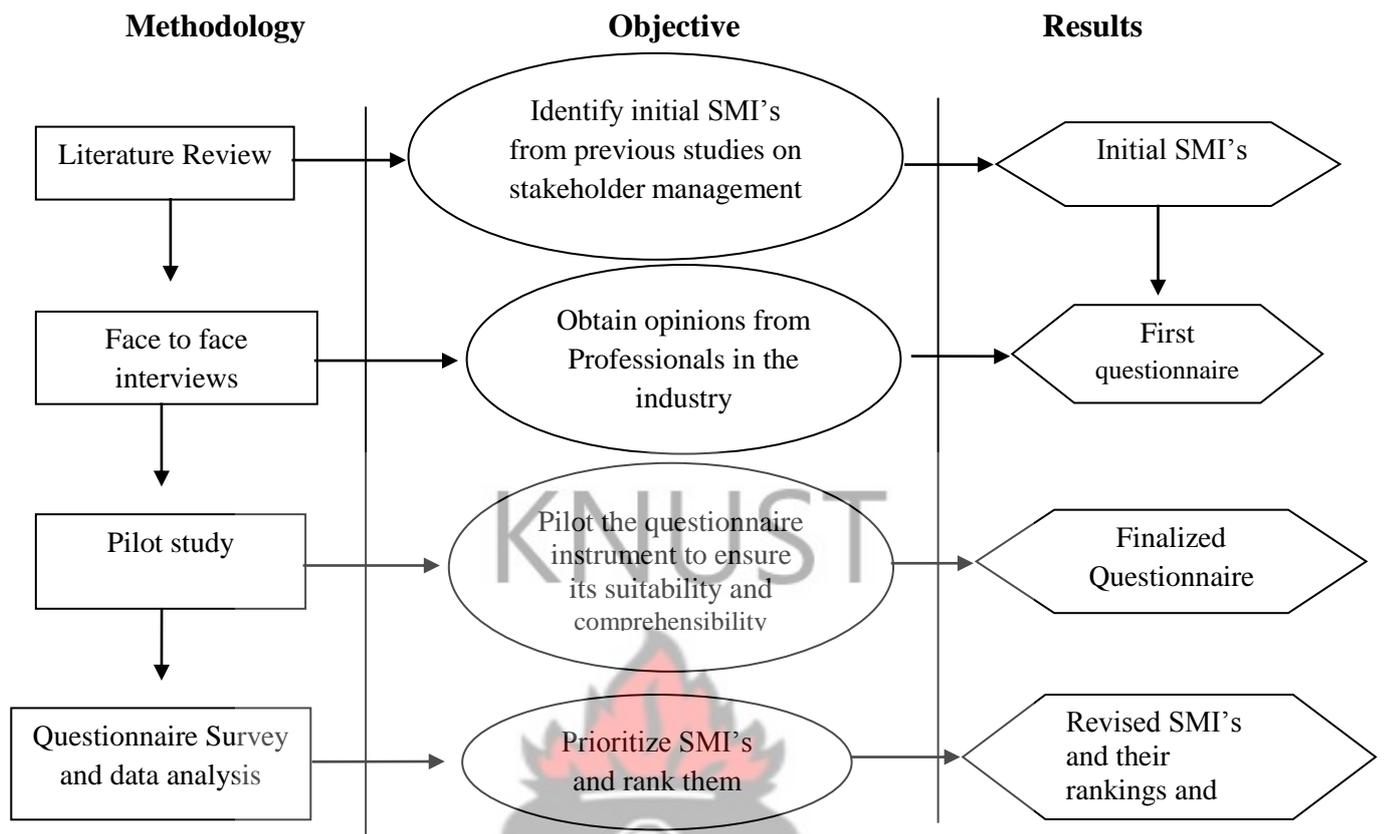
It targets to critically investigate the stakeholder management process and issues considered in the management of stakeholders within the project corridors of the Ghana Highway Authority of the Ashanti Region, with a view of identifying some of the critical management considerations.

The research focuses on who the key stakeholders are, whether they are involved in the project implementation process, their level of involvement the extent to which they are involved the management tools and techniques used.

The specific methodology of the exercise is base on literature review, 6 face to face interviews, a pilot study and a questionnaire survey (see Fig. 3.1).

The research procedure is in conformity with the studies of Walker (1997) and Chan et al. (2004)





**Figure 3.1. Research Framework for the Study.**

The techniques used would be tested against those identified in the literature review.

In this regard the proposed research design will be of a qualitative and descriptive approach.

This choice is based on the literature study conducted and the research questions to be answered.

Varvasovsxky and Brugha (2000) contend that qualitative studies are best when used to analyze complex issues such as policy issues as the methodology adopted eliminates premature focusing on a few aspects while neglecting other issues that may emerge in the collection and analysis of data. The Qualitative research also enables the researcher to gain a better understanding of the nature of the problem (Zikmund, 2003).

This is in tune with the objectives of this research in which identified stakeholder management issues were to be set against the levels of engagement of external stakeholders of the Ghana Highway Authority.

Zikmund (2003) again perceives descriptive research as that which is designed to describe characteristics of a population or a phenomenon. Such a process is implemented in situations where there is some levels of understanding of the form of the research problem and answers to the questions of “who, what, when, where and how” (Zikmund, 2003).

This research focused on answering the following questions:

- Who are the external stakeholders engaged by G.H.A. during project implementation?
- What is their level of engagement during the project implementation?
- At what point in the project have they been involved?
- How have the stakeholders been managed?
- What do stakeholders perceive as most important issue in their management.?

### **3.2 POPULATION, SAMPLE AND UNIT OF ANALYSIS**

#### **3.2.1 POPULATION:**

Zikmund (2003: P369) has defined population as “a complete group of entities sharing some common set of characteristics”.

The relevant target population is made up of all stakeholders who had an interest in the implementation and construction of the six (6) selected projects in the Ashanti Region under the Ghana Highway Authority. Two each of the projects were sampled from each of the three (3) road demarcated areas of the region under GHA. The roads are as shown in the Table 1 below:

NO.	ROAD AREA	SELECTED PROJECTS	ROAD LENGTH	CONTRACT DURATION	STATUS	GEOGRAPHIC DIST.
1	Mampong	Upgrading of Besoro-Agogo Rd.	14km	18 months	Ongoing	Sekyre-Afram Plains Dist. Asante-Akim North Dist.
		Rehabilitation of Kumawu-Timati-Drobonsu Road	17km	24 months	Ongoing	Sekyre-Afram Plains Dist. Drobonso Dist. Drobonsu Dist.
2	Kumasi	Rehabilitation of Obogu-Ofoase-Gyadem-Adansi-Asokwa Rd.	57.30	36 months	Ongoing	Asante-Akim South Bosomefreho Dist. Bekwai Dist
		Partial Reconstruction of Bomfa Junction-Asiwa Bekwai Road	36.20	36 months	Ongoing	Ejisu-Yuaben Dist. Bosomefreho Dist. Bekwai Dist.
3	Bekwai	Rehabilitation of Anwiankwanta Abore-Adumasa Road	47km	36 months	Ongoing	Amansie West Dist. Amansie CentralDist. Atwima Nwabiagy Dist.
		Upgraing of Aggyenkwanso-Anomabo -Gyadem Road	15km	24 months	Ongoing	Adansi North Dist. Adansi South Dist.

**Table 3.1 : Projects within the Research Scope**

### 3.2.2 PROJECT SELECTION CRITERIA

A purposive sample commonly called a judgmental sample is one that is selected based on the knowledge of a population and purpose of the study.

The stratified random sampling method was used to select the roads under each of the Road Areas.

The three Road Areas i.e. Mampong, Kumasi and Bekwai covers the entire areas of operation of G.H.A. (Ashanti). All GHA, Ashanti Region road projects fall within these RA's. The three (3) RA's were therefore selected based on the purposive sampling method.

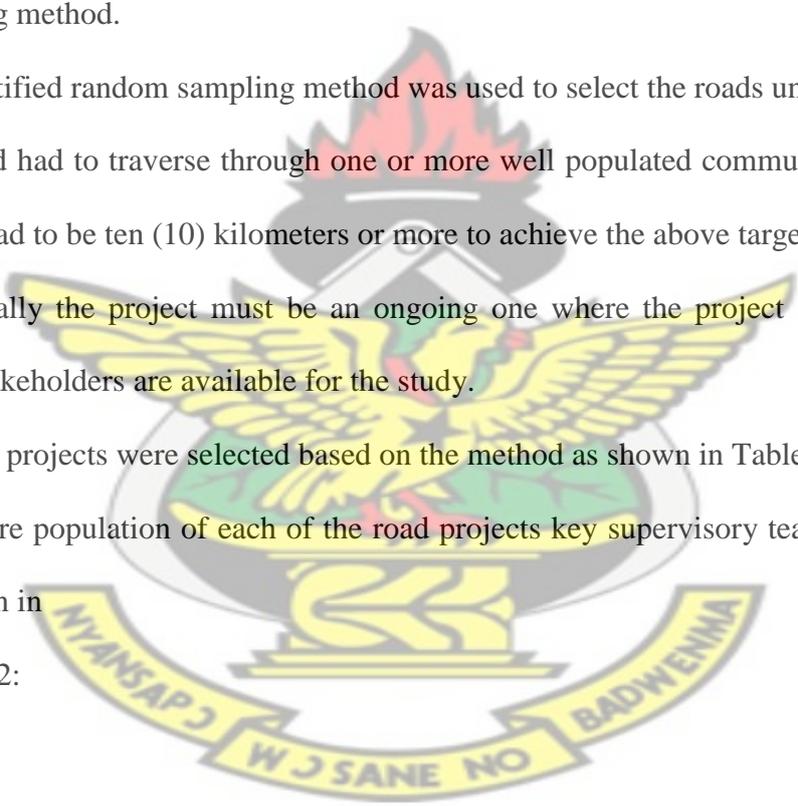
The stratified random sampling method was used to select the roads under the survey. The road had to traverse through one or more well populated communities. The road length had to be ten (10) kilometers or more to achieve the above target.

And finally the project must be an ongoing one where the project supervisors and other stakeholders are available for the study.

Six road projects were selected based on the method as shown in Table 3.1.

The entire population of each of the road projects key supervisory team was selected as shown in

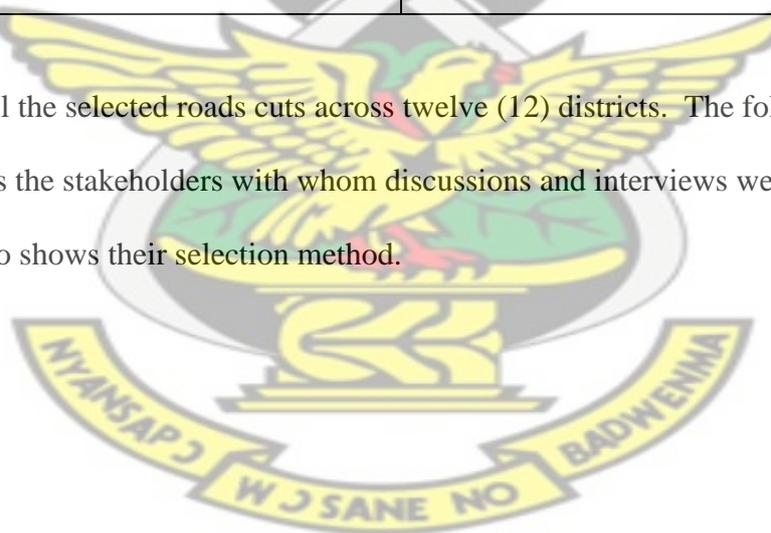
Table 3.2:



**Table 3.2: Project Supervisory Team. (Experts)**

ITEM	ROLE IN PROJECT	POSTION
1	Client	Chief Project Manager
2	Client	Senior Project Manager
3	Consultant	Site Project Manager
4	Consultant	Quantity Surveyor
5	Client	Site Project Manager
6	Client	Quantity Surveyor
7	Contractor	Senior Project Manager
8	Contractor	Quantity Surveyor
9	Contractor	Site Project Manager
	<b>9 x 6 = 54</b>	

4.0 In all the selected roads cuts across twelve (12) districts. The following Table 3.3 shows the stakeholders with whom discussions and interviews were held. The Table also shows their selection method.



**Table 3.3: Research Project Stakeholders**

ITEM	STAKEHOLDER	STAKEHOLDER TYPE	INTEREST
1	District Chief Executives	Key	Political
2	District Assembly	Key	Political/Social
3.	Representatives	Primary	Social
4	District Police Commander	Primary	Economic/Social
5	(Security)	Primary	Social
6	Chiefs	Primary	Environment
	Youth Leaders		
	Environmental Protection		
	Representative		
	<b>Total = 6 x 12 (districts) = 78</b>		

### 3.2.3 SAMPLE:

The research has been designed in two parts and therefore two sampling methods were used. The Table 3.4 below shows the data collection method, sampling technique and sample size used for this research.

**Table 3.4: Data Collection Method**

<b>Sampling Information</b>				
<b>Stage</b>	<b>Aim</b>	<b>Data Collection method</b>	<b>Sampling Technique</b>	<b>Sample Size</b>
1	Identification of Stakeholder Management Issues form Secondary Data	Content Analysis of Literature Reviews	Non Probability Convenient	54 (Table 3.2)
2	Identification of Stakeholder Management issues from selected interviews (Primary)	One-on-one Semi Structured interviews	Non Probability- Purposive & Snowballing	78 (Table 3.3)

The sample for stage 1 involved a review of scholarly articles, papers, journals etc. on the research area. The sampling technique is non-probability and convenient as the researcher used arbitrary selection and personal judgment.

The primary method of sampling for the second stage was non-probability, purposive sampling.

This is described by Zikmund (2003) as a technique in which an experienced individual selects the sample based on his or her judgments about some appropriate characteristic required of the sample members.

The sample for the in-depth interviews was selected from the respective project participant target population group.

These stakeholders were also requested to suggest other stakeholders to interview thus leading to snowball criteria was most appropriate at this level of the research.

The researcher also relied on personal contacts and networks to identify other potential candidates for the research. Thirteen categories of potential stakeholders were initially identified on each Project/district that met the sampling criteria.

The criteria being that;

- The stakeholders have themselves been directly involved in the implementation of the project.
- They have directly been impacted (negatively or positively) by the project implementation process.
- They have been indirectly impacted by the Project

The respondents were e-mailed (ie the project management team) outlining the objective of the research and a request was made for their participation in the interview. All the invitations were accepted.

The other category of respondents who were the direct beneficiaries of the projects was on the other hand contacted directly in person and the requisite information of the interviews.

Some of the respondents were forthcoming with the setting up of the interviews.

#### **3.2.4 UNIT OF ANALYSIS:**

The unit of analysis for the research was the theme expressed as a word or parts of a sentence.

According to Zhang and Wildermuth (Zhang & Wildermuth, 2006) the adaptation of themes as coding units is appropriate when one is “primarily looking for the expression of an idea” (P.3). The researcher was targeting words or parts of a sentence that could give an indication of the themes of the issues under the research.

### **3.3 RESEARCH INSTRUMENT:**

The second stage research instrument was a semi-structured interview questionnaire that highlighted the findings from the literature review and the research question. Semi Structured interviews assist in structuring data collection while at the same time being adequately, broad in focus to encourage the emergence of other themes (Varvasovsxy et al., 2000).

The questionnaire encompassed the fifteen Stakeholder Management issues identified in the literature review.

These issues were tested by way of opens ended questions.

### **3.4 DATA COLLECTION:**

An internet engine search was conducted using the keywords of “Stake Holder Management”; Stake Holder Analysis, Engagement and Identification”. The search was not limited to any publication date as all available data on the subject was searched. The researcher managed to accumulate almost sixty (60) articles. These articles and publications were then thoroughly scanned for relevance on the research topic. Those found irrelevant were discarded. According to Stemler (2001), “inappropriate records” that are not within the research context and analysis be discarded. The relevant ones were however included in the study and analyzed.

The second method used was that of a personalized semi-structured interview. Fossey et al. (2002) argue that semi structured interviews are used when attempting to facilitate a more focused exploration of a specific topic accompanied by an interview guide. The research instrument for used for this purpose is as earlier described.

The interviews were conducted in two parts; the first part being a classical semi structured interview where the interviewer introduced the questions to the stakeholder being interviewed.

This was undertaken by open ended questions giving the respondents enough flexibility to answer the question the way they wanted to.

In the second part, the researcher went ahead to pose questions to the respondents to text their position and solicit their views on the issues of stakeholder management as was identified during the literature review stage.

A total of forty face-to-face interviews were conducted at the respondent's offices and at their convenience. The interviews lasted between thirty minutes and sixty minutes depending on the interviewee's available time slots and the extent of their contribution.

During the interview notes was taken (written) of what was said by the respondents. These later on were used for analysis. The interviews were also electronically recorded with the aid of the voice recording function on the interviewer's smart phone. These recorded interviews were subsequently given to an independent transcriber who transcribed each recording verbatim. In doing so any biases was thus eliminated as Mckracken (1988) states "investigators who transcribe their own interviews invite not only frustration but also a familiarity with the data that does not serve the later process of analysis."

### **3.4.1 INTERVIEWS AND PILOT STUDY:**

Since the 15 (SMI's) were identified in the literature review, they should be further confirmed by professionals of construction industry before developing the questionnaire instrument. The preliminary list of SMI's was presented to 6 industrial experts during face-to-face interviews. These experts were selected because they all

had more than 10 years overall experience in stakeholder management of construction projects, and they played different roles in projects and on different levels of position (Table 3.1). All interviewees agreed that the proposed 15 factors were critical and comprehensive, and meanwhile some interviewees provided valuable comments on the scope and language of factor statement. For example, the first factor was changed from “Undertaking social responsibilities” to a more detailed description “Managing stakeholders with social responsibilities (economic, legal, environmental and ethically), the last factor was changed from “Ensuring effective communication:” to “Communicating with and engaging stakeholders properly and frequently”, since the interviewees thought “engaging stakeholders” should be emphasized. Another important comment is that regarding the attributes of stakeholders’ the interviewees thought that the attribute of legitimacy was imprecise and difficult to operationalize, and they all preferred using the attribute “proximity” which is easier to explain. Considering the comment, and also since the definition of legitimacy is more related with the “normative core” for stakeholder theory (Mitchell et al. 1997), which has been considered in the factor about social responsibilities, legitimacy is not included as stakeholders’ attributes. These comments were significant for questionnaire development since they promoted description of the factors for better comprehension. The first version of the questionnaire was developed after these interviews.

**Table 3.5. Expert Profiles**

<b>Expert</b>	<b>Role in projects</b>	<b>Position</b>	<b>Experience (Years)</b>
1	Client	Chief project manager	21
2	Client	Senior project manager	15
3	Consultant	Site project manager	12
4	Consultant	Quantity Surveyor	15
5	Client	Site project manager	15
6	Client	Quantity Surveyor	18
7	Contractor	Senior project manager	13
8	Contractor	Quantity Surveyor	15
9	Contractor	Site project manager	11

Prior to sending the questionnaires, a pilot study was conducted. Two project managers, one is client representative and the other is a contractor, were prompted to answer the preliminary questionnaire. The aim of the pilot study was to pre-test the suitability and comprehensibility of the questionnaire. There were no adverse comments proposed, so the finalized questionnaire is the same as that of the first version.

The statements of the 15 SMI are as follows:

- S1. Managing stakeholders with social responsibilities (economic, legal, environmental and ethical);
- S2. Formulating a clear statement of project missions;
- S3. Identifying stakeholders properly;
- S4. Understanding area of stakeholders' interest;
- S5. Exploring stakeholders' needs and constraints to projects;
- S6. Assessing stakeholders' behavior;
- S7. Predicting the influence of stakeholders accurately;

- S8. Assessing attributes (power, urgency, and proximity) of stakeholders;
- S9. Analyzing conflicts and coalitions among stakeholders;
- S10. Compromising conflicts among stakeholders effectively;
- S11. Keeping and promoting good relationships;
- S12. Formulating appropriate strategies to manage stakeholders;
- S13. Predicting stakeholders' reactions for implementing the strategies;
- S14. Analyzing the change of stakeholders' influence and relationships during the project process;
- S15. Communicating with and engaging stakeholders properly and frequently.

### **3.5 DATA ANALYSIS:**

Qualitative content analysis is defined as a “research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes and patterns” (Zhang and Wildlelrmuth, 2006). According to Anderson (2007), qualitative data has the potential to mirror interview transcripts or other texts that reflect experimentally on the research topic.

The data therefore collected from the interviews was analyzed using content analysis. Content analysis has been defined as a “Systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding “(Stember, 2001). It “offers an accessible and theoretically flexible approach to analyzing qualitative data” (Braun and Clark, 2006).

Content analysis may be seen as a descriptive presentation of qualitative data (Anderson, 2007) and is applied as means for identifying analyzing and reporting patterns within the data set (Braun and Clark, 2006) notes that “content analysis research is motivated by the search for techniques to infer from symbolic data what

would be either too costly, no longer possible, or too obtrusive by the use of other techniques”.

The process involved a detailed examination of the content of the data collected or interview transcripts. The data both from the public sourced secondary data and primary data from the interviews made up the raw data for the analysis.

A number of steps were involved in the performance of the content analysis as detailed in Krippendorff (1980) and Stemler (2001). The process is made meaningful by the “reliance on Coding and Categorizing of data” (Stemler, 2001).

The process begin with the researcher being very conversant with the data and transcripts by thorough reading the articles and transcripts as well as the notes jotted down during the interview sessions. In all the data must be transcribed and in written form before any analysis can commence (Zhang and Wildermuth, 2006).

Coding and Categorization of the data was done “a priori, in which the categories for coding are determined prior to the analysis based on a theoretical foundation from the literature review (Stemler, 2001). Zhang and Wildermuth (2006) has described this process as directed content analysis”; a process in which the coding starts with prior research findings or prior literature survey followed by a process where the “coders immerse themselves in the data and allow themes to emerge”.

The aim of this approach is to authenticate or further develop an existing conceptual frame work.

Having identified the themes from the statements collected and in accordance with the results of the literature review, the data were imputed and analyzed with the aid of the statistical package for Social Sciences (SPSS) computer software.

Three types of analysis were undertaken. These methods had been used by other similar survey studies carried out by a kintoye (2000), Chan et al. (2004), Wong and Aspinwall (2005), and Aksoru and Hadikusumo (2008).

Pallant (2001) argues that, only when the parametric assumptions (normal distribution and homogeneity of Variance) are full filled, the matched parametric testing methods can be employed. Since those assumptions are not fulfilled in this survey, the parametric methods were not used.

The process of data analysis included the following;

- The relative importance of the SMI's was explored based on responses. This type of scale has been found to be acceptable in several construction management researches by Wang et al. (1999); Chang et al. (2003). Kendall's coefficient of concordance was calculated for measuring the agreement of respondents on their rankings of the SMI's,. The spearman's rank correlation test was used to examine the general similarity on the rankings of SMI's between respondents from Client, Contractor, Consultant and the other stakeholders.
- A factor analysis was used to determine the underlying relationships among the 15 SMI's. The principal component analysis for factor extraction was applied to categorize the SMI's into a fewer number of groupings.
- Wong and Aspin Wall (2005) have pointed out that validating and refining the SMI's is important for data analysis, reliability and validity test of the raw data were conducted depending on the overall data and results of factor analysis.

### 3.6 RELIABILITY AND VALIDITY:

Reliability is defined as the “degree to which measures are free from error and therefore yield consistent results “(Zikmund, 2003). Reliability requires repeatability of results; that researchers working at different points in time and under different circumstances on the same set of data should achieve the same results (Krippendorff, 1980; Zikmund, 2003). Zhang and Wildermuth (2006) argue that the knowledge and experience of the Coder can have a significant influence on the research results.

The researcher is conscious of his current position as a member of staff of GHA may bring in potential bias for the results.

In an attempt to ensure reliability therefore the coding of the statements gathered were checked by an independent coder that had no links or interest with the construction industry.

Zhang and Wildermuth (2006) argue that in order to ensure the validity and reliability of inferences from the data, qualitative analysis requires a “set of systematic and transparent procedures for processing data”. The data percentage of agreement between the coding results done by the researcher and the independent ‘Coder’ was 80 percent.

### 3.7 LIMITATIONS OF STUDY

- The use of judgment (purposive) sampling may bring, bias according to (Zikmund, 2003) this could have resulted in bias due to expert’s belief and this may lead to the sample being unrepresentative of the population.
- The use of the qualitative interview method could lead to interviewer bias with the interviewer making his owns vested interest known.

- There is potential for sample bias as snowball sampling has a higher probability of respondents that are similar (Zikmund, 2003).
- The research is dependent on the respondent's ability to provide adequate insights during interviews.
- The research is focused on Stakeholder Management issues of selected Construction projects of GHA in the Ashanti region and the results may not be representative for the whole country since cultures are varied.



## CHAPTER FOUR

### DATA PRESENTATION ANALYSIS

#### 4.1 INTRODUCTION

The data collected were imputed and analyzed with the used of the statistical package for Social Science (S.P.S.S) computer software.

In all three types of analysis were conducted. The processed of the data analysis is as set out below:

- The relative importance of the 15 management issues was identified using the responses as a basis. Several construction management researches have used this scaling method and has been found to be acceptable (eg. Wang et al. 1999, Chan et al., 2003). Kendall's Coefficient of Concordance was calculated to measure the degree of agreement of respondents on their rankings of the issues. The spearman's rank correlation test was also used to examine the general similarity on the rankings of the SMI's between respondents from the client, Contractor and Consultant outfits.
- Secondly a factor analysis was used to identify the relationships among the 15 SMI's. The principal component analysis for factor extraction was used to categorize the SMI's into a smaller number of groupings.
- Thirdly, reliability and Validity tests of the raw data were conducted based on the overall data and results of factor analysis.

#### 4.2 RANKINGS OF SMI's

An analysis of the survey data indicated the means for the 15 SMI's to range from 3.6 to 4.5, which showed that all the respondents agreed that the 15 SMI's identified were important stakeholder management issues in construction project management. The

rankings and Kendall's coefficient of concordance for the SMI's are shown in Table 4.1 below.

**Table 4.1 Ranking of Results.**

SR	SMI'S	MEAN	RANK
S1	Managing stakeholders with social responsibilities (economic, legal, environmental and ethical)	4.5	1
S5	Exploring stakeholders' needs and constraints to projects	4.3	2
S15	Communicating with and engaging stakeholders properly and frequently.	4.3	2
S4	Understanding the area of stakeholder's interests	4.2	4
S3.	Identifying the area of stakeholders' interests	4.19	5
S11	Keeping and promoting a good relationship	4.17	6
S9	Analyzing conflicts and coalitions among stakeholders	4.04	7
S7	Predicting the influence of stakeholders accurately	4.02	8

S12	Formulating appropriate strategies to manage stakeholders	3.97	9
S8	Assessing attributes (urgency, and proximity) of stakeholders	3.91	10
S10	Compromising conflicts among stakeholders effectively	3.88	11
S2	Formulating a clear statement of project missions	3.85	12
S13	Predicting stakeholders' reactions for implementing the strategies	3.83	13
S14	Analyzing the change of stakeholders' influence and relationships during the project process	3.83	13
S6	Assessing stakeholders' behaviour	3.75	15

Notes: Kendall's coefficient of concordance = 0.12; Level of significance: 0.00 or

'Means scores': 1 = least important and 5 = most important.

The respondents considered "managing stakeholders with Social responsibilities (economic, legal, environment and ethical) with a mean of 4.5 to be the most critical.

This therefore is considered as the most important factor to the success of stakeholder management.

"Exploring stakeholder needs and constraints to project" and "communicating with and engaging stakeholders property and frequently" both with a mean of 4.3 were

valued as the second most influential issues. The fourth ranked issue was “understanding area of stakeholder’s interest” with a mean of 4.2.

‘Identifying stakeholders properly’ and ‘keeping and promoting a good relationship’ were ranked as the fifth and sixth with means of 4.19 and 4.17 respectively. These were the six top most critical SMI’s the respondents consider to be crucial for stakeholder management practices (GHA projects in Ashanti Region).

The respondents did not perceive “predicting stakeholder’s reactions for implementing the strategies”, “analyzing the change of stakeholder’s influence and relationships during the project process” and a “assessing stakeholders’ behaviour” a crucial management technique as they were ranked in the bottom three.

Kendall’s coefficient of concordance was assessed in order to examine whether the respondent ranked the 15 SMI’s in a similar order. According to Yeung et al. (2007), where the concordance coefficient was equal to 1, it means that all the respondents ranked the SMI’s identically; if however the concordance coefficient is equal to 0, it infers that all the respondents rank the SMI’s differently. The Kendall’s coefficient of concordance for ranking the 15 SMI’s in Table 4.1 was 0.122, which is statistically significant at 1% level. This gives an indication that there was a general consensus among all the respondents on the rankings; that is to say the respondents shared similar ideas about the relative importance of these 15 SMI’s.

In investigating the general similarity of the rankings of SMI’s between respondents, the Spearman’s rank correlation test was significant.

The results of the test were interpreted by correlation coefficients (r). The value of the coefficients was indicative of the strength of the correlation between 2 variables.

Where r is significant at a 5% level, it means the two variables have a strong correlation.

Table 4.2 shows the correlation coefficients (r) of different pairs of respondents, ie r is 0.62 between respondents from Client and Contractor organizations. These statistical results show a general consensus of the rankings of the SMI's among different groups of respondents.

SMI's among different groups of respondents. It therefore means that, it doesn't matter if the respondents were from the Client, Contractor or Consultant, they ranked the management issues similarly in general.

**Table 4.2 Spearman rank Correlation Coefficients**

<b>Respondents</b>	<b>Client/Contractor</b>	<b>Client/Consultant</b>	<b>Contractor/Consultant</b>
r	0.62	0.85	0.88

\* Correlation is significant at 0.05 levels.

### **4.3. FACTOR ANALYSIS OF THE SMI'S**

Factor analysis has been described by Norusis (1992) and li et al. (2005) as “analysis used to identify a relatively small number of factor groupings that can be used to represent relationships among sets of many inter-related variables”. This method was therefore used to determine the groupings of the 15 SMI's.

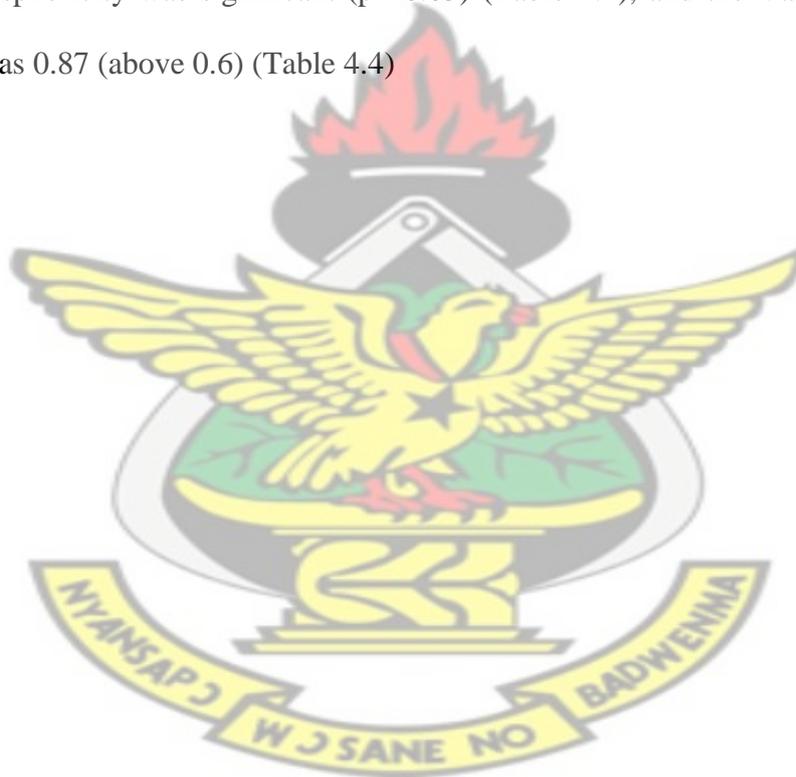
Pallant (2001) states 2 main issues that have to be taken into consideration in determining whether or not a data set is suitable for factor analysis;

- (1) Sample Size
- (2) Relationship strength among the factors.

With respect to sample size, Nunnaly (1978) recommends a 10 to 1 ration, which is “10 cases for each item to be factor analyzed”. Least number for factor analysis by Pallant (2001) is 150. 15 factors were identified in this survey, therefore according to Nunnalyy's recommendation (1978), 150 respondents have to be obtained in this

study. 175 respondents have been obtained in this study which is obviously larger than the 150.

The sample size was therefore enough for the factor analysis. In terms of the strength of relationship among the factors, the correlation matrix (Tabachnils and Fideth 1996), the Bartletts test of sphericity (Bartlett 1954), and the Kaiser-Meyer (Kaiser 1970) were recommended. Most of the figures in the Correlation matrix are high than 0.3, the Bartlett's test of sphericity is significant ( $P < 0.05$ ) During the survey, more than 50% of the correlation coefficients (See Table 4.3) were above 0.3, the Bartlett's test for sphericity was significant ( $p < 0.05$ ) (Table 4.4), and the Value of the KMO index was 0.87 (above 0.6) (Table 4.4)



**Table 4.3. The correlation matrix of the SMI's**

SMI	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15
S1	1.00	245	266	331	322	115	265	243	217	243	357	322	313	248	266
S2	245	1.00	420	352	274	153	210	063	220	331	307	314	240	192	105
S3	266	420	1.00	489	406	307	316	255	270	300	302	373	427	327	192
S4	331	352	489	1.00	586	408	412	324	413	248	331	357	302	390	279
S5	322	274	406	586	1.00	280	365	256	414	194	396	257	229	358	354
S6	115	153	307	408	280	1.00	534	430	410	286	323	262	292	429	232
S7	265	210	316	412	365	534	1.00	545	463	433	365	377	487	437	217
S8	243	063	255	324	256	430	545	1.00	419	254	292	219	329	298	076
S9	217	220	270	413	414	410	463	419	1.00	358	270	306	320	520	237
S10	243	331	300	248	194	286	433	254	358	1.00	347	416	471	276	160
S11	357	307	302	331	396	323	365	292	270	347	1.00	459	339	345	347
S12	322	314	373	357	257	262	377	219	306	416	459	1.00	459	471	411
S13	313	240	427	302	229	292	487	329	320	471	339	512	1.00	489	125
C14	248	192	327	390	358	429	437	298	520	276	345	471	489	1.00	414
S15	266	105	192	279	354	232	217	76	237	160	347	411	215	414	1.00

**Table 4.4: Bartlett's test for the CSFs and KMO**

Bartlett's test of sphericity	Approx. Chi-Square	960.363
	df	105
	Sig.	.000
Kaiser-Meyer-Olkin measure of sampling adequacy		870

Based on the Varimax rotation of Principal component analysis, a 4 – component solution was reached (See Table 4.5)

**Table 4.5 Results for factor analysis**

Components	Eigen value	% of Variation	Name of components'	CSFs	Factor loading
1	5.618	38	Stakeholder estimation	C8	760
				C6	727
				C9	649
2	1.347	8.978	Information inputs	C2	713
				C3	676
				C4	678
				C5	636
3	1.181	7.872	Decision-making	C13	727
				C10	713
				C12	617
4	1.084	7.227	Sustainable support	C15	873
				C14	535
				C11	501

a. Components were named based on the characteristics of its CSFs in that group.

b. The meanings of C2 to C15 are given in the list of CSF in section 4.

These 4 factor groupings with eigenvalues greater than 1.000 explain 625% of the variance. Each of the SMI's belonging to only one of the groupings, with the value of factor loading exceeding 0.5 (Norusis, 1992.)

It was observed that SI "Managing Stakeholder's with social responsibilities" do not belong to any of the factor groupings.

The remaining 14 SMI's were grouped into principal components, and the corresponding importance ranking of the extracted components was;

- (i) Stakeholder Estimation
- (ii) Information Inputs
- (iii) Decision-marking
- (iv) Sustainable Support,.

#### **Component 1: Stakeholder Estimation**

This component which makes up 38% (See table 4.5) of the total variances between the SMI's showed a more relative importance than the other 3 components. It showed that project stakeholders considered "estimating stakeholders" a significant factor for stakeholder management in construction projects.

In order to better understand stakeholders, project managers need to take care of their attributes, behavior and potential influence. All these need to be assessed and estimated by project managers. Conflicts and Coalitions among stakeholders could also be analyzed depending on the information available about stakeholders.

This component therefore could be illustrated by S8, S6, S7 and S9.

#### **Component 2: Information Inputs**

Among the 4 components this ranked second (Table 4.5). This component comprise of 4 elements regarding information input.

Information concerning the project and its stakeholders need to be obtained for a good management activity. This information may include but not limited to the Project Mission, full list of stakeholders (it possible), area of stakeholder interests, and their needs and constrains to the project. These inputs enhance the stakeholder management.

### **Component 3: Decision Making**

This component comprised of three SMI's relating to decision-making. It is the responsibility of Project Managers to compromise conflicts amongst stakeholders, and formulate the right strategies to manage stakeholders. In taking decisions, Project Managers always attempt to predict the reaction of stakeholders and subsequently take the optimal solution for stakeholder management.

### **Component 4: Sustainable Support**

This component is ranked the least of the 4 components (Table 4.5). However its importance in the management process is indispensable. This is largely due to the fact that the management of stakeholders needs to be sustained to the end of the project. Construction projects are transient (Bourne 2005), but organizations are permanent. It is the care that many stakeholders such as government, local communities, NGO's and the media would be involved later on in the projects life or in future projects, in view of this project managers have the responsibility to realize the change of their influence and relationships, promote a steady relationship and to communicate with them constantly.

## **4.4. VALIDATION OF THE SMI's**

### **4.4.1. TESTING FOR RELIABILITY**

Cronbach's Coefficient Alpha was used to examine the internal consistency of the scales under the headings of the SMI's. In order to test for reliability.

Cronbach's alpha is a measure of internal Consistency, that is, how closely related a set of items are as evidence that the items measure an underlying construct. It is a coefficient of reliability (or consistency).

The formula is represented as;

$$\frac{X = N \cdot \bar{C}}{\bar{V} + (N-1) - \bar{C}}$$

Where;

N = Number of items

$\bar{C}$  = average inter-item covariance among the items

$\bar{V}$  = average variance

Alpha values greater than 0.7 are regarded as sufficient (Pallant 2001). The results of Cronbach's coefficient Alpha from this survey ranged from 0.862 to 0.88. This proves that all the factors have a high internal consistency and are reliable.

#### **4.4.2: TESTING FOR CONTENT VALIDITY**

Ahire et al (1996) argue that if the measured items in the survey “adequately cover the content domains or aspects of the concept being measured, an instrument has content validity.

Gotzamani and Tsiotras (2001), Wong and Aspinwall (2005) have also maintained that ‘it is not assessed numerically, but can only be subjectively judged by the researchers’.

As discussed in the earlier chapters the SMI's listed in the survey were identified by a thorough literature review and validated by numerous interviews with professionals and stakeholders in the construction in Industry. It is therefore believed that the whole questionnaire has valid contents.

#### **4.4.3: TESTING FOR CONSTRUCT VALIDITY**

Construct validity was used to check for unifactoriality (Black and Porter 1996).

Antony et al (2002) explained that ‘unifactoriality means that single factor is extracted for each test “Each of the factor groupings was evaluated by factor analysis for construct validity. Table mm shows results of the unifactorial test.

The KMO values were greater than 0.5, and the percentage of variance explained by each component exceeded 56% therefore all 4 components were demonstrated to be unifactorial.

**Table 4.6 – Unifactorial Test.**

COMPONENT	KM VALUE	FACTOR LOADING	EIGEN VALUE	PERCENTAGE VARIANCE
1	0.78	0.73-0.83	2.41	62.13
2	0.72	0.73-0.83	2.28	58.11
3	0.65	0.74-0.81	1.82	61.56
4	0.60	0.69-0.85	1.79	59.55

#### 4.4.4: RESULTS OF THE 3 TESTS

Since all the factors have high internal consistency, the whole questionnaire has valid contents and all the 4 components were demonstrated to be unifactorial, the SMI's developed in this research were both reliable and valid.

#### 4.5 DISCUSSIONS

The research findings point to the fact that SHMI “Managing Stakeholders with Social responsibilities (economic, legal, environmental and ethical)” ranked first in the 15 Stakeholder Management issues identified in the construction projects (i.e. within the scope of this research).

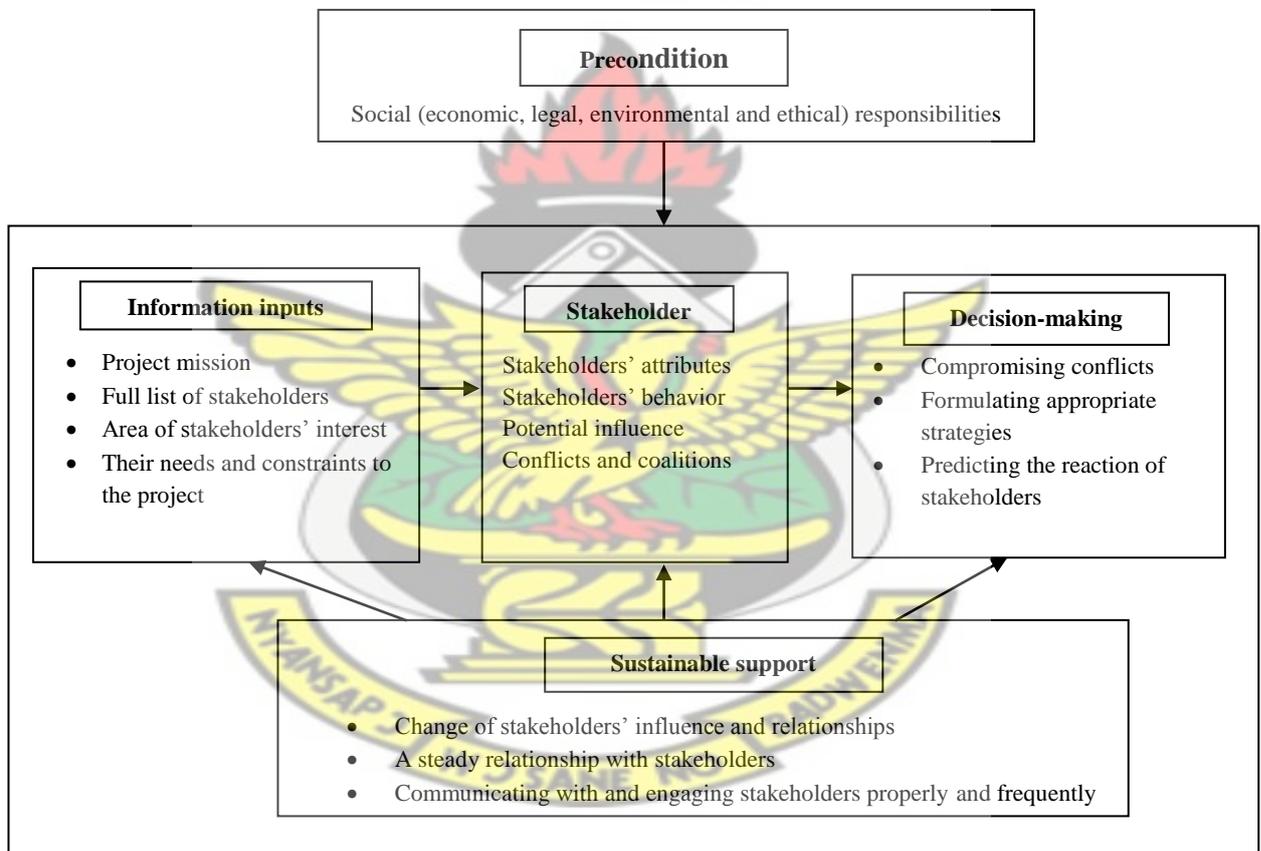
This indicates that both project managers and project affected persons considered this issue as the most paramount in the quest for a successful stakeholder management.

As elaborated in the overview (i.e. Section 3), these research findings has been collaborated by other researchers (e.g. Wood, 1991; Carroll, 1991; and Donaldson and

Preston, 1995). According to the results of factor analysis, however, this issue could not be placed in any of 4 components.

Due to the importance of this factor, the researcher has titled it as the “Precondition Issue” for stakeholder management: that is, stakeholder management must be undertaken with Social (economic, legal, environmental and ethical) responsibilities.

This precondition together with the other 4 components extracted by factor analysis has been used to develop a proposed frame work for successful stakeholder management in construction projects within the road sub sector or (see Fig 4.1 below)



**Figure 4.1 A framework for successful stakeholder management in construction projects**

#### 4.6 THE FRAMEWORK

The framework in Fig.4.1 which represents 5 factor (issues) groupings, serves as a contributory process towards the success of stakeholder management and their interdependency.

These five (5) groupings are;

- (i) “Precondition factor”
- (ii) Stakeholder Estimation
- (iii) Information Inputs
- (iv) Decision Making
- (v) Sustainable Support

The order of the framework was developed premised on the argument that;

Social Responsibility is a precondition for any stakeholder management activity to take place.

In accordance with general management practice, Information should be captured first during the process of stakeholder management, stakeholders are then estimated on the basis of the information gathered.

Having thoroughly assessed the stakeholders, Decisions are then made. Sustainable supports are conducted throughout the whole process of Stakeholder Management.

This is to ensure that Project Managers are able to monitor the changes in stakeholder’s Influence and relationships, and also to maintain continuous relationships with them and above all communicate properly and frequently with them.

#### 4.6.1 FRAME WORK VALIDATION

The framework developed was tested for validation. Since the study focused on the road sub sector of the construction industry, some of the key industry participants from the Department of Feeder Roads, Department of Urban Roads, Ghana Highway Authority, Consultants and representatives of some road contractors were organized in a group discussion to comment and share their views on the applicability of the framework.

Though some of the participants (Contractors Reps.) expressed doubt about the effectiveness of the framework on the project management process, the overall consensus from the Client (i.e. GHA, DFR, DUR and Consultants) was that operationalized, it would help to reduce most of the bottle needs associated with project of the implementation regarding external stakeholders.

The efficiency of the framework was therefore endorsed.



## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATION

#### 5.1 INTRODUCTION:

These chapter summaries the findings of this research in the context of achieving the research objectives outlined in the earlier chapters. The chapter also offers recommendations for stakeholder management in the road construction sub sector of the construction industry base on the research findings and discussions.

KNUST

#### 5.2 SUMMARY

Content Analysis of interviews conducted with various stakeholders within the scope of the research and an in-depth discussions with various levels of management within the Ghana Highway Authority has revealed a number of issues.

Most projects have been procured on emergency basis. In this regard and due to time constraints external stake holders have not been involved during the planning and preparation stages of most projects.

Stakeholders have only been actively involved in projects during the implementation stages. Even then, they have been involved to the extent that compensations have to be paid them for the demolition of buildings and farmlands to make way for the projects. They are not involved in the design and preparation of the projects.

District Chief Executives, the assembly and various opinion leaders have been involved only when they are invited to site meetings.

In the management of stakeholders, the Ghana Highway Authority has no blue print on issues to be taken into consideration. Different project managers have managed stakeholders the way they deem appropriate. There are no documents regarding the factors to take into consideration when dealing with the management of stakeholders.

During the research, a number of factors have been determined to be critical for the management of stakeholders on contraction projects. The five most important being;

1. Managing stakeholders with social responsibilities
2. Exploring stakeholders' needs and constraints to projects
3. Communicating with and engaging stakeholders properly and frequently.
4. Understanding the area of stakeholder's interests
5. Identifying the area of stakeholders' interests

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### 5.3 CONCLUSIONS

The importance of Stakeholder Management in construction projects cannot be over emphasized. This activity has been recognized by several scholars and the industry participants.

During the literature review various categories of Stakeholder Management issues were proposed and explored.

These stakeholder management issues were grouped and their relative important ranked. The results shown in this research was obtained from interviews and questionnaire survey of stakeholders on some selected projects in Kumasi of the Ashanti Region of the Ghana Highway Authority.

The main contribution of this research study was to identify an ordered set of critical factors for stakeholder management in construction projects in Ghana especially within the road sector and also to develop a framework for stakeholder management within the rod sub sector. 15 critical Issues were identified through a literature review, face-to-face interviews and pilot studies.

The results of a questionnaire survey helped in the ranking of these critical factors in order to ascertain their order of priority. The top ranked issues of concern to stakeholders were;

- (i) Managing Stakeholders with social responsibilities
- (ii) Exploring the stakeholders' needs and constraints to the project and
- (iii) Communicating with and engaging stakeholders properly and frequently.

Going by the factor analysis and bearing in mind the importance of the factor “managing stakeholders with social responsibilities” the 15 critical issues were categorized into 5 dimension namely; precondition factor, Stakeholder estimation, information inputs, decision-making and sustainable support.

These 5 groupings formed the basis for the framework for successful stakeholder management in construction project.

The research also revealed that though project managers of the Ghana Highway Authority have in the past, on their own, engaged stakeholders during project implementation stages, there is no official policy or In-house Stakeholder Management tools and techniques.

There is no officially documented Standard Stakeholder Management process to be followed. Each project has been managed depending on the individual project manager's perception of stakeholder issues.

In each of the six (6) projects within the scope of this study, the stakeholders were only informed when the contractors maligned equipment to the site.

#### **5.4 RECOMMENDATIONS**

This study has been limited to activities of the Ghana Highway Authority in the Ashanti of the Ghana Highway Authority in the Ashanti Region. The observations

and conclusions drawn as a result of this survey may not necessary therefore represent what pertains in all the Regions and on all the projects that the Authority Super-intends on. The above notwithstanding the following recommendations are suggested;

- The adaptation of the framework by road sector agencies (esp. MMDA'S) as part of a project implementation process.
- Establishment of divisions or departments within the various MMA's that would attend to issues related to stakeholders.
- The development of a data base of all issues that arise during project implementation and how the issues have been resolved. This is important because it would also help predict in advance the issues that are likely hinder the progress of the project and therefore possible solutions and found before they arise.
- Stakeholders must be involved in the early stages of the design. In the early stages of the design of projects to ensure that their needs and concerns are captured before the implementation. This would help to avoid unnecessary Cost Overruns associated with design reviews and delays.
- Establishment clear guidelines on Stakeholder Management by Project Implementation agencies to be used by Project Managers.
- Since the results of the research are based on a questionnaire survey, the respondents may have different understandings about the statements posed. This is likely to impact the direction of the scoring of the critical issues; it is therefore recommended that these research findings be further validated by other case studies.

## REFERENCES

1. Aaltonen, K. Jaakko, K; Tuomas, O. 2008, Stakeholder salience in global projects, *International Journal of Project Management* 26:509-516
2. Aaltonen, K; Sivonen, R. 2009. Response strategies to stakeholder pressures in global projects, *International journal of Project Management*
3. Ahire, S.L. Golhar, D.Y; Walker M.A. 1996. Development and validation of TQM implementation constructs, *Decision Sciences* 27(23-56).
4. Akintoye, A. 2000. Analysis of factors influencing project cost estimating practice, *Construction Management and Economics* 18:77-89.
5. Aksorn, T. Hadikusumo, B.H.W. 2008: Critical success factors influencing safety program performance in Thai construction projects, *Safety Science* 46:709-727.
6. AlWaer, H; Sibley, M. Lewis, J. 2008. Different stakeholder perceptions of sustainability assessment, *Architectural Science Review* 57(I): 48-59.
7. Antony, J.; Leung, K; Knowles, G; Gosh, S.2002 Critical success factors of TQM implementation in Hong Kong Industries, *International Journal of Quality & Reliability Management* 19(5): 551-566.
8. Bana e Costa C.A.; Nunes da Silva, F.; Vansnick, J.C.2001, Conflict dissolution in the public sector: A case-study, *European Journal of Operational Research* 130: 388-401.
9. Barlett, M.S. 1954. A note on the multiplying factors for various chi square approximations, *Journal of the Royal Statistical Society* 16(Series B); 396-398.
10. Black, S.A.; Porter, L.j. 1996; Identification of the Critical Factors of TQM, *Decision Sciences* 27(I): 1-21, dor 10.1111/j.1540-591 1996.tb00841.x

11. Bourne, L.; Walker, D. H. T .2006. Visualizing stakeholder influence-two Australian examples, *Project Management Journal* 37(I): 5-22.
12. Briner, W.; Hastings, C.; Geddes, M. 1996. *Project Leadership* Aldershot, Gower.
13. Carroll, A.B. 1979. A three-dimensional conceptual model of corporate social performance, *Academy of Management Review* 4940: 497-506, doi: 102307/257850.
14. Carroll, A. B 1991. The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business Horizons* 7:39-48. Doi: 101016/0007-6813(91)90005-G.
15. Chan, P.C; Chan, W.M; Ho, S.K. 2003. An empirical study of the benefits of construction partnering in Hong Kong, *Construction Management and Economics* 21:523-533. Doi:10, 1080/0144619032000056162.
16. Chan, P.C.A; Chan, W.M.d.; Y.H; Tang B. S; Chan, H.W.E; Ho, S.K.K. 2004. Exploring critical success factors for partnering in construction projects, *Journal of Construction Engineering and Management* March/April: 188-198; doi; 10. 1061/ASCE:)0733-9364(2004)130:2(188).
17. Cleland, D.L. 1986. Project stakeholder management *Project Management Journal* 174 36-44.
18. Cleland; D.L. 1995. Leadership and the project management body of knowledge, *International Journal of Project Management* 13(2): 82-88, doi 10. 1016/0263-7863(94)00018-8.
19. Cleland, D.I. 1999; *Project Management Strategic Design and Implementation*, McGraw-Hill, New York.

20. Cleland, D.I; Ireland R.L. 2002, Project Management Strategic Design and Implementation New York: McGraw-Hill.
21. Crow, D.A. 2008: Stakeholder behavior and legislative influence: A case study of recreational water rights in Colorado. *The Social Science Journal* Nov. (20): 1-13.
22. Dias. W. P. S. 1999. Soft systems approach for analyzing proposed change and stakeholder response – a case study, *Civil Engineering and Environmental Systems* 17(I): I-17. Doi: 10: 1080/026302599070271.
23. Donaldson, T.; Preston, I.E. 1995: The stakeholder theory of the corporation concepts, evidence, and implications. *The Academy of Management Review* 20(I): 65-88 doi: 10. 2307/258887.
24. El-Gohary, N.M.; Osman, H.; Ei-Diraby, T, .E. 2006. Stakeholder management for public private partnerships, *International Journal of Project Management* 24(7): 595-604. Doi: 10: 10164/j-jproman: 2006.07.009.
25. EI-Sawah, H.M. 2006: Strategies for assessing and managing stakeholders in the Egyptian construction industry, *Journal of Engineering and Applied Science* 53(2): 195-213.
26. Elias, A. A; Cavana, R.Y; Jackson, L.S. 2002. Stakeholder analysis for R&D project management 34(2): 301-310. Doi: 10.1111/1467-9310.00262.
27. Freeman, E.1984. *Strategic Management; a Stakeholder Approach* Pitman Inc. Boston.
28. Freeman, R.E. Harrison, J.S: Wicks, A. C. 2007, *Managing for stakeholders – Survival. Reputation and Success* Louis Stem Memorial Fund, US.
29. Frooman, J. 1999. Stakeholder influence strategies, *Academy of Management Review* 24(2): 191-205.

30. Gotzamani, K.D.; Tsiotras, G .D. 2001. An empirical study of the ISO 9000 standards contribution towards total quality management, International Journal of Operations & Production Management, International Journal of Operations & Production Management 21(10): 1326-1342. Doi: 10.1108/EUM000000005972.
31. Hartmann, F.T. 2002. The role of trust in project management in Frontiers of Project Management Research D.P. Slevin. D.I. Cleland and J.K. Pinto Newtown Square, Penn-Sylvania, PMI, 225-235 Journal of Civil Engineering and Management. 2009, 15(4): 337-348.
32. Jefferies, M; Gameson, R.; Rowlinson, S. 2002, Critical success factors of the BOOT procurement system: reflection from the Stadium: Australia case study, Engineering Construction and Architectural Management 9(4): 352-361. Doi:1046/j.1365-232X.200249.x
33. Jepsen, A.L.; Eskerod, P.2008; Stakeholder analysis in projects: Challenges in using current guidelines in the real world International Journal of Project Management 4(2): 1-9.
34. Jetgeas, G.F.; Williamson, E; Skulmoski, G. J.; Thomas, J.L. 2000, Stakeholder management on construction projects, AACE International Transactions 12: 1-5.
35. Kaiser, II. 1970. A second generation little jiffy, Pyschometrika 35: 401-415: doi: 10 1007/BF02291817.
36. Karlsen, J.T.200: Project stakeholder management. Engineering management Journal 144 19-24.

37. Karilsen J.T.; Graee, K; Massaoud, M.J. 2008. Building trust in project-stakeholder relationships, *Baltic journal of Management* 3(I): 7. Doi: 10.1108/17465260810844239.
38. Kocak, N.A. 2003: RUC Option Development framework and Tools PhD. Thesis. University of Westminster.
39. Landin, A. 2000, Impact of Quality Management in the Swedish Construction process PhD thesis, Department of Construction Management< Lund University.
40. Li. B; Akintoye, A; Edwards, P.J. Hardcastle, C.2005. Critical success factors for PPP/PFI projects in the UK construction industry,. *Construction Management and Economics* 23: 459-471 doi: 10.1080/01446190500041537.
41. Lossemore: M.2006: Managing project risks, in *The Management of Complex Projects. A Relation Approach*, Pryke, S. and Smyth, H. Blackwell UK.
42. Love, P.E.D.; Irani, Z.; Edwards, D.J. 2004; Industry-centric benchmarking of information technology benefits, costs, risks for small-to-medium sized enterprises in construction, *Automation in Construction* 13(4): 507-524 doi: 10.1016/j.auction.2004.02.002
43. Mitchell, R.L.; Agle B.R; Wood, D.J. 1997. Toward a theory of stakeholder identification and salience defining the principle of who and what really counts, *Academy of Management Review* 22(4): 853-88, doi: 10.2307/259247.
44. Moodley, K; Smith N.; Preece, C. N. 2008. Stakeholder matrix for ethical relationships in the construction industry, *Construction Management & Economics* 26(6): 625-632 doi: 10.1080/0144619081965368.

45. Newcombe, R.2003. From client to project stakeholders: a stakeholder mapping approach, *Construction Management and Economics* 22(9/10): 762-784.
46. Olander, S. 2007: Stakeholder impact analysis in construction project management, *Construction Management and Economics* 25(3): 277-287. Doi: 10.1080/01446190600879125.
47. Olander, S.; Landin, A 2005; Evaluation of stakeholder influence in the implementation of construction projects, *International Journal of Project Management* 23(40): 321 doi: 10.1016/j.ijproman 2005.02,002.
48. Plallant, J. 2001.SPSS Survival Manual, Open University Press, Buckingham and Philadelphia.
49. Phillips, R. 2003, Stakeholder. Theory and Organizational Ethics. Berrett-Koehler Publishers, US.
50. Pinto, J.K. 1998. Project Management Handbook. The Project Management Institute, Jossey-bass Inc. san Francisco, California, U.S.A.
51. Reed, M.S. 2008. Stakeholder participation for environmental management: A literature review, *Biological Conservation* 141(10): 2417-2431, doi:10.1016/j.biocon.2008.07.014
52. Rockart, J. F. 1979. Chief executives define their own data needs, *Harvard Business Review* 57(2): 81-93.
53. Rowlinson, S.; Cheung, Y.K.F. 2008. Stakeholder management through empowerment: modeling project success, *Construction Management: modeling project success, Construction Management and Economics* 26(6): 611. Doi: 10.1080/01446190802071182.

54. Saraph. J. V.; Benson, P.G; Schroeder, R.G 1989. An instrument for measuring the critical factors of quality management, *Decision Sciences* 20(4): 810-29
55. Schwager, H.P. 2004. Organization strategies to address stakeholder relationships. A customer portal perspective PhD thesis. Auburn University.
56. Suchman, M. C 1995. Managing legitimacy strategic and institutional approached, *Academy of Management Review* 20(3) 571-610. Doi: 102307/258788.
57. Walker; D.H.T. 1997. Choosing an appropriate research methodology. *Construction Management and Economics* 15(2): 149-159. Doi:10.1080/01446199700000003\
58. Walker, D. H. T: Bourne, L. M. Rowlinson, S.2008. Stakeholder and The supply Chain.
59. Procurement Systems: A Cross-industry: Project Management Perspective Walker, D.H.T.: Rowlinson S; Taylor & Francis.
60. Wang' S. Q.; Tiong, R. L. K.; Ting, S.K.: Ashley D. 1999. Risk management framework for BOT power projects in China, *Journal of Project Finance* 4(4): 56-57.
61. Ward, S.; Chapman, C. 2008: Stakeholders and uncertainty management in projects, *Construction Management and Economics* 26(6): 563-577. Doi: 10.1080/01446190801998708.
62. Yang, J.; Shen Q.; Ho, M.F. 2008. A framework for stakeholder management construction projects I: Theoretical foundation, *International Conference on Construction and Real Estate Management 2008*, 109-113.

**APPENDIX ONE**  
**RESEARCH QUESTIONNAIRE**

**Introduction**

My name is Farouk Quarshie an MSc. Management student of the KNUST.

I wish to have an interaction with you to solicit your views and opinions on Construction Project Stakeholders and how they may be effectively managed to ensure a successful Projection Implementation and Completion.

The objective of this exercise is for a research work I am engaged in entitled “Investigating Critical Stakeholder Management in Construction Project Management under; The Ghana Highway Authority.

The interview session will only take a few minutes of your time and whatever information you provide will be treated as Confidential without you being identified.

After this interview I should be grateful if you could take time off to respond to some few questions by ticking the appropriate box for each one of them.

Thank you.

**Pls.**

You may contact me if need be at the following address;

Farouk Quarshie

Quantity Surveying Division

Ghana Highway Authority

Kumasi-Ashanti region

Tel: 0244381963

Email; faroukquarshie @ yahoo. Comm.

**1.0 SECTION A: PERSONAL DATA**

1.1 Gender: Male  Female

1.2 What is your level of Education?

HND  Bsc  Msc  Phd

1.3 How many years have you been involved in the Construction Industry?

1-5 years  5-10 years  10-15 years

Over 15 years

1.4 What is your present status?

Site supervisor  Site Project Manager  Project

Manager  Quantity Surveyor

1.5 Others specify:

.....  
.....

1.6 Who is your employer?

Client  Contractor  Self employed

## 2.0 SECTION B – (Semi Structured)

Solicitation of views on the issues of Stakeholder, their management and effect of Projects.

- 2.1 What are your views on the ongoing project in your area? (waste, useful, indifferent etc.)
- 2.2. How did you get to know of the project (read about it, Public advert system, your equipment on site?)
- 2.3 How have you been involved with the project (planning, supervision, resident etc?)
- 2.4 Has the project in your view helped the community in any way? Can you give reasons for your answers.
- 2.5 Do you see this project as belonging to you?  
What is the reason for your answers .
- 2.6 Would you have preferred some other project to this one? If yes, which?
- 2.7 Have you been invited to talk on issues concerning the project? Do you have a representative through whom your concerns are channeled?
- 2.8 Do you have any concerns about the implementation of the project? And how do you wish these concerns to be addressed?
- 2.9 At what forum do you discuss issues emanating as a result of the construction process.
- 2.10 If you had the ability to, would you have stopped the project for any reason?
- 2.11 Tell me do, you think that the project supervisor should always hold meetings with you and how frequently do you wish this to be done.
- 2.12 I have heard that some homes and farms have been demolished and destroyed as a result of the project. Is this true?

If this is so how was the problem resolved? Where those involved satisfied with the resolution?

2.13 Do you think there could have been a better way of resolving this and other issues that arise out of the project implementation?

2.14 If I may ask, do you care if the project ends successfully or not?

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### 3.0 SECTION C:

How would you rate, on a scale of 0 – 4, the following factors as part of a Stakeholder Management Process input.

(Please tick your answers)

Scale: 4 = Strongly Agree; 3 = Agree,  
 2 = Neutral, 1 = Disagree, 0 = Strongly Disagree

S.	Issues of Stakeholder Management	0 Strongly Disagree	1 Disagree	2 Neutral	3 Agree	4 Strongly Agree
S.1	Manage Stakeholders with social Responsibilities					
S.2	Clarity of Statements on Project missions					
S.3	Identification of Stakeholders					
S.4	Understanding Stakeholder interest					
S.5	Exploring Stakeholder needs and constraints to project					
S.6	Assessment of Stakeholder behaviour					
S.7	Prediction of Stakeholder influence					
S.8	Assessing the attributes of stakeholders (ie. Power, urgency etc.)					
S.9	Analysis of Conflicts and coalitions among stakeholders					
S.10	Compromising Conflicts among stakeholders					

S	Issues of Stakeholder Management	0 Strongly Disagree	1 Disagree	2 Neutral	3 Agree	4 Strongly Agree
S.11	Keeping and promoting good relationships					
S.12	Formulation of appropriate strategies to manage stakeholders					
S.13	Prediction of stakeholder reaction for implementing the strategies					
S.14	Analysis of changes in stakeholder influence and relationships during the project implementation					
S.15	Communicating with and engaging stakeholders more frequently.					

