# KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI, GHANA

Stakeholders' Perception of Construction Project Success at Asutifi North District Assembly

by

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A Dissertation submitted to the Department of Building Technology, College of Art and Built Environment in partial fulfilment of the requirement for the degree of

MASTER OF SCIENCE

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#### DECLARATION

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

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#### ABSTRACT

Stakeholders in construction projects play important roles which need much emphasis. The high failure rate of major projects has been attributed to lack of attention to stakeholders. Thus, specific aim of this study was to examine the perception of stakeholders on success of construction projects in the District Assembly. With this aim, various objectives were set which included the identification of common stakeholders in a construction project at the District Assembly level, the identification of the key success criteria and the identification of the stakeholders' perception of construction projects success in the district assembly as well as the challenges hindering the achievement of the success criteria. In order to achieve these objectives, the research adopted the use of review of literature and questionnaire survey which was designed for respondents to indicate their views on construction project success as well the challenges. It was revealed that, Internal Stakeholders of the District who have higher stakes when it comes to construction project success classified construction cost performance as the main indicator for determining the success of every project whilst External Stakeholders who are the eventual end users of the project critically considered the quality performance criterion. Interestingly, cost performance criterion was ranked 1st amongst all by both categories of respondents. The research discovered several challenges hindering the achievement of the construction projects success of which 61.81% of the respondents indicated that the revealed challenges really and actually affected the project delivery success. The recommendation made was that leaders of project teams (project manager) must make it a priority to identify the stakeholders in the project, determine and understand their necessities and perceptions of project success and try to meet those needs. Moreover, all relevant stakeholders at the District Assembly level should be well informed and be involved in the planning and implementation of construction projects to ensure its success. Keywords: Stakeholder, Project Success.

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# DEDICATION

I dedicate this piece of work to the Almighty God for His loving mercies and protection throughout the year of studies. Again, to my parents and loved ones.

#### **CHAPTER ONE**

# **INTRODUCTION**

#### **1.1 BACKGROUND OF THE STUDY**

Every country's development directly or indirectly depends on its construction as it provides fixed assets, jobs and serves as the most important aspect of production to other sectors of the economy (Ofori, 2012). The core function of the Building Industry is infrastructure development that improve the life of its citizens and the economy as whole. District Assemblies spend more than 75% of its budget on capital projects which makes them no exception as it contributes to the nation's economy (Crook, 1994). The importance and roles of the industry that various sectors and agencies offer to the economy makes it to have diverse stakeholders with wide range of concerns that need to be addressed and managed.

It is against this background that Farinde and Sillars (2012), stipulated that, the construction industry is a complex and huge industry with several key players with different interests. The success of every construction project depends on these stakeholders and as such, their perception that defines the success of the project needs to understood and taken prospectively. Success in a construction project has been regarded as achieving project objectives, which traditionally have been provision on time, on budget, of a required performance or achievement (Aminu et al., 2014). The fundamental principle of every personnel involved in construction projects is to achieve this objective. Construction project involve numerous stakeholders, long production durations, an open production system, entailing significant interaction between internal and external environments (BS 6079-4:2006). The term project stakeholder refers to, 'an individual, group, or organization, who

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may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project' Project Management Institute (2013). Stakeholders in construction projects play important roles which need much emphasis. Lack of attention to stakeholders has contributed to higher rate of failure in construction projects (Legris and Collerette 2006). According to Olander and Landin (2005), the negative attitude of stakeholders to a construction project can lead to increase in cost of production and sometimes delays because of the difficulty in implementation of project design. A project may not be considered successful if the project stakeholders are not satisfied.

Roxanne et al. (2012) asserted that to ensure good performance, it is essential for all stakeholders in the building industry to have a similar understanding of needs and requirement of the end-users. Both side need to have a shared understanding of the desired outcomes. In other words, industry professionals need to captivate, understand and define user and stakeholder needs before they start thinking about the solution. Construction project are becoming more and more complex and involving many stakeholders of different background and professional expertise.

Clients are more concerned with the overall profitability of project and the accountability of project generally. The attainment of the client's objectives has been substituted and the attention has been geared towards a more technical aspect of managing cost on construction projects instead. There is little or nothing to prove the interest concerning contractor's management of client's cost. With this background, the study seeks to identify the perception of various stakeholders on the success of a project.

#### **1.2 PROBLEM STATEMENT**

The success of every construction project depends on stakeholders and as such, their perception that defines the success of the project need to be identified and set as a bar to be achieved. Unfortunately, different stakeholders have different perceptions of the success criteria of a construction project and they act differently depending on their perception (Ivan and Lam, 2009). Thus, a project may be successful to one project stakeholder but a different stakeholder may see it differently. Stakeholders in construction projects play important roles which need much emphasis. Lack of attention to stakeholders has contributed to higher rate of failure in construction projects (Legris and Collerette 2006). According to Olander and Landin (2005), the negative attitude of stakeholders to a construction project can lead to increase in cost of production and sometimes delays because of the difficulty in implementation of project design.

A project may not be considered successful if the project stakeholders are not satisfied with the cost, time and quality of the delivery. It is therefore very imperative to identify the perception of the different stakeholders of a project and make it a necessity to satisfy all the stakeholders if possible. If their needs are met, a project is automatically deemed successful.

Asutifi North District Assembly is fortunate to have a lot construction projects being implemented all the time due its strategic location. Apart from the usual source of District Assemblies Common Fund (DACF) and the District Development Facility (DDF), most these projects are funded from more regular sources like the Mineral Royalties, Stool Lands Royalties and the Grand Rent. However, the district is faced with problems such as projects completed for years and not been used by the community, abandoned projects at various stages of completion, and contractual disputes on some of the projects. All of these problems are as a result of major or minor issues concern with cost, quality and time of completion of the project. Moreover, environmental factors such as siting of the project is a major reason for communities to refuse use a completed facility like water closet toilet constructed in the District.

This research seeks to identify the perception of selected stakeholders in the Asutifi North District assembly on some success criteria so as to inform decisions made by project executors on how to satisfy the needs of the stakeholders.

# **1.3 RESEARCH QUESTIONS**

Nenty (2009) stated unequivocally that research agenda is operationalized through the use of questions to provide practicable answers to the disquiets raised within the framework of the research problem. Research questions should be clear, concise, and as simple as possible, focused and empirically answerable. They should not be questions that require a yes or no answer (Selamat, 2008). To aid the exploration of the concerns spot lit by the problem statement, the following research questions have been formulated:

- 1. Who are the various stakeholders involved construction projects at the District Assembly level?
- 2. What are the critical success factors perceived by stakeholders on construction projects at the District Assembly?
- 3. What are the challenges perceived by stakeholders in achieving construction project success in the district Assembly?

# 1.4 AIM

The aim of this study was to examine the perception of stakeholders on success of construction projects in the District Assemblies.

# **1.5 OBJECTIVES**

The specific objectives of the study were:

- To identify common stakeholders in a construction project at the District Assembly level;
- 2. To identify how the key success criteria are perceived in the Ghanaian construction industry at the District Assembly; and
- 3. To identify the challenges perceived by stakeholders in achieving construction project success in the district assembly.

#### **1.6 JUSTIFICATION OF THE RESEARCH**

The contribution of the District Assemblies to the infrastructural development of the nation cannot be ignored. This contribution is evidence in that the fact that, most District Assemblies spend more than 75% of the budget on capital projects. The expectations of key stakeholders in construction project implementation at the local levels are critical in determining the success or otherwise of various projects. The determinant of a successful construction cuts across time, quality and cost. Stakeholders are more concern about the cost of construction projects and are therefore very sceptical about and tends to have different perceptions. However, very little is known about perception of stakeholders on the success of construction project in Ghanaian District Assemblies.

### **1.7 SCOPE OF THE RESEARCH**

There is a substantial number of stakeholders in the Ghanaian construction industry. Therefore, this research focused on stakeholders at the district assembly level. This research concentrated on the personnel who work for the District Assembly and are in-charge of project execution, from planning to implementation as well as monitoring and supervision at the district level (Internal Stakeholders) and External Stakeholders who have stakes in the project being executed such as direct users, opinion leaders, custodians of the land and Law makers of the land at the Asutifi North District Assembly.

# **1.8 METHODOLOGY**

This research employs the quantitative research approach because quantitative research method utilizes the deductive method of conducting studies which involves theories, measurement and sampling. It also involved the use of questionnaire to gather data from respondents. The respondents for this research includes Internal Stakeholders and External Stakeholders at the Asutifi North district. Questionnaire survey was used to elicit information which were then organized, analysed and presented in texts and tables.

### **1.9 STRUCTURE OF REPORT**

The research was categorized into five independent but interrelated chapters. They are discussed as follows: Chapter one entailed the introduction which is subdivided into seven sections: Study background, statement of the problem, research questions, aim and objective, justification, methodology and scope of the study. Chapter two entailed the literature review followed by chapter three consisted of three sections namely: research methodology, research design and data collection. Chapter four entailed two sections:

Data analysis and discussion of results. The last chapter was chapter five which dealt with three sections: findings, conclusion and recommendations. The structure illustrated graphically below in Figure 1.1.



Figure 1.1: Structure of the report

#### **CHAPTER TWO**

# LITERATURE REVIEW

#### **2.1 INTRODUCTION**

In this section, we provide an in-depth literature review in construction stakeholders' perception of construction project success at the District Assembly in the Ghana.

# 2.2 OVERVIEW OF THE GHANAIAN CONSTRUCTION INDUSTRY

Ghana had a historical link with Great Britain which is an indication of the early start of construction in Ghana. According to Ahadzie (2010), construction in those days were non-commercial and considered as family business which concerned itself with provision of village shelters of mud and wood. A thorough inspection of the Building Regulations (ROG, 1994) indicates that, the construction industry in Ghana was fabricated using the UK regulatory system. During Ghana's pre-independence and early post-independence era, our construction industry was dominated by huge foreign firms such as Taylor Woodrow Company and A Lang Company. Ghana's first public construction firm was established in 1961. It was called the State Construction Corporation (SCC) and its primary goal was to lay roads (highways, feeder roads, urban roads, and so forth) in the most economical way (Assibey-Mensah, 2008).

The Ghanaian construction industry is complex in existence, constituting of an array of stakeholders (Dadzie et al., 2012). The Ministry of Water Resources, Works and Housing, is the agent responsible for the housing infrastructure and construction throughout the country and classifies building contractors into four categories. The Chartered Institute of Building in Ghana estimates that there are over 1,600 building contractors working in Ghana since October 2012 (Oxford Business Group 2014). Although the building construction industry sustains the country's economy and hence offers a means for social development, the Ghanaian Construction industry is engulfed by amateur and unprofessional practices (Asamoah and Decardi-Nelson, 2014). The industry is subjected to problems such as separated and scattered stakeholders practice or group actions, lack of planning and failure to meet consumer/tenant needs in the industry (Twumasi-Ampofo et al., 2013).

The industry has made major contributions to both industrial output and overall Gross Domestic Product (GDP) in Ghana. Across the whole country, statistics have shown that the construction industry as a whole has a major impact on other sectors including segments of the manufacturing, mining, quarrying, electricity and water sectors. Many construction firms in Ghana most especially the small scale one's face lots of challenges when it comes to application of effective construction management procedures, therefore, it is not surprising that contractors who were involved in the ministry of housing building projects were blamed and criticized in the past by stakeholders and authorities for the project failure (Ahadzie, 2010). According to Ayirebi (2005), Ghana does not have a stable construction operating environment due to the constantly changing economic situations, political instability and a highly competitive environment. Due to the fact that the Government of Ghana is the biggest client in the construction industry, our economy is directly linked to the construction industry (Agyakwa-Baah, 2007; Tuuli et al., 2007). The Ghanaian construction industry has experienced steady growth over the past years which is clearly depicted in the domestic construction sector. This sector happens to be among the quickest developing sector with about 7-8% average growth per year. The basics for faster development is an effective and efficient infrastructural development therefore the construction industry is a very significant sector. According to Abernethy's (1988), local contractors cannot compete effectively with foreign operatives due to the lack or inadequacies of vital capabilities like capital, plants and managerial know-how which are required for effective and successful project tendering and execution.

#### 2.3 CONSTRUCTION PROJECT STAKEHOLDERS

Laplume (2000) defined stakeholder as an individual or group of individuals who has effect on is affected by a construction project. Stakeholders consist of a number of entities which may include the government and other non-profit institutions which can offer support or protest the achievement of project aim (Bagozzi and Yi, 1988). According to Laplume (2000), stakeholders can be classified as internal and external stakeholders. Internal stakeholders consist of clients, customers, employees and suppliers. External stakeholders consist of the government, competition, consumer counsel, environmentalists, and people with special interest groups and the media (Fornell and Larcker, 1981).

In every standard construction project, there are three (3) main stakeholders involved. The performance of these stakeholders is very crucial in successful execution of a construction project. These key stakeholders include the contractor, the client and the consultant. The contractor is in charge of the execution of the construction process in accordance to technical, management and contract specifications. The client is the owner of the project and he selects the contractor. The contractor is selected through bidding in most cases. The contractor is also incharge of providing capital for the project. The project consultant is responsible for technical, organizational, human and insuring the project against time, cost, quality and safety. For a project to be successful, it is essential to have a good relationship between the project organization and its stakeholders (Leana and Rosseau, 2000). Stakeholder relationships is very vital to a construction project because it can add knowledge and support in realizing the objectives and also enhancing the effectiveness of its execution. However, to achieve a better relationship requires negotiation to achieve consensus from key stakeholders about how to go about the project (Savage et al., 1991). Recent studies have indicated that project completion time as well as budget goals are not met or fail to satisfy the customers and company expectation. Roxanne et al. (2012) assert that in order to deliver good performance, it is crucial for the stakeholder in the building process to have a common understanding of the need and requirement of the end-users. Both side need to have a shared understanding of the desired outcomes. In other words, industry professionals need to captivate, understand and define user and stakeholder needs before they start thinking about the solution. Construction project are becoming more and more complex and involving many stakeholders of different background and professional expertise.

Lack of attention to stakeholders has contributed to higher rate of failure in construction projects (Legris and Collerette, 2006). According to Olander and Landin (2005), the negative attitude of stakeholders to a construction project can lead to increase in cost of production and sometimes delays because of the difficulty in implementation of project design. A project may not be considered successful if the project stakeholders are not satisfied. According to Turner (2009), the success of a construction project is seen differently by different stakeholders against different criteria. The owner and operators who are the recipients of the project are very key and thus their perceptions of project success should be taking seriously. If these

stakeholders are not satisfied, the project may not be considered as a complete success.

Some other stakeholders may not be the direct recipient of a project but may be affected by the project in many ways and may the capacity to influence the outcome of the project like the external public stakeholder groups. According to Boonstra (2006), stakeholders will always try to resist or alter design and implementation of project if it is not in line with their interest. They may even try to cancel a project altogether. Stakeholders with greater influence and legitimacy on a project should be given priority in terms of decision makings (Mitchell et al., 1997). Therefore, greater effort must be dedicated into managing these stakeholders.

# 2.3.1 The district assembly Concept

Decentralized departments have been set-up to execute duties formerly performed by the central government and all correspondence must be directed to the District Chief Executive (Ministry of Local Government, 1994). Since the enactment of decentralized models in Ghana there have been reforms which is aimed at giving meaning to decentralization (Ministry of Local Government, 1994). The most current reform is a four-level Metropolitan and three-tier. Municipal/District assemblies model as shown in **fig. 2.1**.

The 1992 Constitution, which paved way to multi-party system at the national level, endorsed the 1988 reforms. It fused the aim of decentralization within the overall setting of a broad democratic constitution. Nevertheless, important democratic factors stayed settled, particularly by maintaining the presidential appointments and non-partisan local elections.



*Figure 2.1: Four–level Metropolitan and three–level Municipal / District Assemblies Structure* Source: Ministry of Local Government and Rural Development (1996)

The aim of decentralization was laid out in chapter twenty (20) of the constitution named "Decentralization and Local Government". It states that local government and administration shall be decentralized by transferring their functions, powers, responsibilities and resources from the Government and its agencies to local government units at the grass roots.

Ghana's current program of decentralization started before to the national democratic shift in the 1990s. In 1988, the PNDC government inaugurated the Local Government Law (PNDC Law 207) which was a major piece of legislative reform the country witnessed. This saw the establishment of 110 designated districts within Ghana's ten regions, with non-partisan District assembly election held ab initio in 1988/89 and thereafter every 4years. In addition to the 2/3 of DA members elected on an individual, non-partisan basis, 1/3 was selected by the government along with a chief executive for each district (Pinkney, 1997).

The promotion of democratic involvement and possession of government machinery by returning power, competence and resource to the district level was the main aim of the 1988 local Government Law (Ministry of Local Government, 1994). Interestingly, the language of involvement and possession, in other words refer to as participation and ownership anticipated the donor speak the 1990s, though it also had some rapport with the revolutionary rhetoric of popular involvement of the earlier PNDC era (Crawford, 2004). A four-level structure of sub-national government was created by 1992 constitution at regional and sub-district levels. This comprises Regional Coordinating Councils (10), District assemblies (110) and urban, zonal, town and area councils (1330), plus unit committees (16,000) (Nkrumah 2000). It was in 2010 that Parliament passed a Legislative Instrument 1967, which indicated that a unit committee shall be equivalent to an electoral area in the country. The 16,000 has been reduced to 5,000 to be at par with the number of electoral areas in the country for year's district level elections.

In the District Assembles, Town Councils and the Area Councils are established for settlements with population between 5000 and 15000. They exist for a number of settlements which are grouped together but whose individual settlements have population of less than 5,000. They are essentially rallying points of local enthusiasm in support of development objectives of the District Assembly. Unit Committees form the base structure of the Local Government System. A Unit is normally a settlement or a group of settlements with population of between 500-1000 people in the rural areas and a population of 1500 for the urban areas.

#### 2.3.1.1 The new local government system

The Local Government (Departments of District Assemblies) (Commencement) Instrument, 2009 L.I. 1961 ("the Instrument") seeks to operationalise the decentralized departments at the district level as the Departments of the District Assemblies (DAs). Under section 161 (1) of the Local Government Act, 1993, Act 462, 22 decentralized departments at the district level are to cease to exist in their present form and then reconstituted through a series of mergers into 16 Departments in the Metropolitan Assemblies, 13 in the Municipal Assemblies and 11 in the District Assemblies under section 38 of the Act. However, under section 164 of Act 462, the Minister of Local Government and Rural Development was vested with the power to determine when the old Departments were to cease to exist and the new Departments come into existence. Section 164 provides as follows: "The Minister of Local Government] shall by legislative instrument prescribe the date for the coming into force of sections 38 and 161 of this Act."

It is significant to note that section 38 (2) of Act 462 envisages the implementation of the composite budget system under which the budget of the Departments of the District Assemblies are to be integrated into the budgets of the District Assemblies. It also provides that "Each District Assembly shall be responsible for the preparation, administration and control of the budgetary allocations of the Departments specified in the First Schedule to this Act".

The Local Government Service comprises of various departments that work together to ensure that the objectives of the District Assembly are met, they do not work at cross purposes.

<b>Table 2.1:</b>	<b>Departments</b>	of the District	Assemblies
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S/N	DEPARTMENTS OF THE DISTRICT ASSEMBLIES UNDER L.I 1961
1	Central Administration
2.	Finance
3.	Education, Youth and Sports
4.	Health
5.	Agriculture
6.	Physical Planning
7.	Community Development and Social Welfare
8.	Works
9.	Natural Resources, Conservation, forestry, game & wild life
10.	Trade & Industry
11.	Disaster Management

Source: Local Government (Departments of District Assemblies) (Commencement) Instrument, 2009 (L.I. 1961)

# 2.3.2 District Assembly as a stakeholder

The District Assembly is required by section 4 (e) of Act, 1993 (Act 462) to monitor the execution of projects under approved development plans, assess and evaluate the impact of projects on peoples' life, development of the local, district and national economy. Furthermore, section 5 of Act 462 requires the District Assembly to coordinate, integrate and harmonize the execution of programmes and projects within the framework of approved development plans to ensure their compliance with laid down norms.

The District Assembly as a corporate entity has several departments, sub-committees and agencies who are main players in project implementation and execution. Most notable ones are the District Works Department, the District Planning Coordinating Unit (DPCU), sub-committees. Other units and sections of the District Assembly including the Audit Unit, Budget Unit and the administration also play major roles in projects. Moreover, external bodies who do not form part of the District Assembly staff but cannot be overlooked their roles and impacts in terms of development and projects in the District. they have over sight responsibilities in every construction project that goes on in the District as empowered by the Assembly in section 15, sub-section (1) of Act 1993 (Act 462 to perform certain functions including the management of project implementation. This is done through the collaborative effects of the subcommittees, specific monitoring teams and the District Planning Coordinating unit (DPCU).

## 2.3.2.1 Assembly members and Unit Committee

Assembly members and unit committees among others are empowered by the District Assembly to contribute in the organization and planning of project implementation in the District. The local government Act, 1994 (Act 462) section 36 of (L.I 1589), paragraph 25, point 6 requires the Unit Committees to monitor and evaluate the implementation of self-help and other development projects in their areas of jurisdiction.

# 2.3.2.2 Traditional Authorities/Leaders

In section 15, sub-section (1) of Act 1993 (Act 462), other bodies or persons can be determined and empowered by the Assembly to perform certain functions including the management of project implementation. This arrangement permits School Management Committees (SMCs), sector Agencies, Opinion Leaders, Traditional authorities among others to contribute in the organization and planning of project implementation in the District.

#### 2.3.2.3 Project Beneficiaries

Another important party in the administrative structure of project management are the Beneficiaries. The Stakeholders being the project Beneficiaries ought to be accorded the opportunity through intermittent site meetings, to share their views concerning the project. The perceptions and opinion of this group on the project will be used by the contractor to evaluate his work and effect adjustments if any. Project beneficiaries are the eventual end users of the outcome or the product of the construction project (Olander, 2007). In cases where public facilities such as clinic and Community Health-Based Planning Services (CHPS) Compounds are built, the nurses, all the health workers and the government agency or department like the Department of Health becomes the project beneficiaries. Department of Education and Teachers are the project beneficiaries to educational projects such as classrooms and teachers' quarters.

#### 2.4 THE CONCEPT OF CONSTRUCTION PROJECT SUCCESS

Construction project success as a concept is complex and very difficult to define. If a firm or an industry does not venture into businesses with a level of uncertainty, we can say that there is no basis with regards to describe the project as a success or failure. Wells (1998) expressed his disgust concerning the little attention given to providing a definition to project success. Defining project success represents a huge challenge to researchers.

It is often assumed by many researchers that the definition of project success and failure is a common knowledge. The only sure thing with regards to project management is that success is unclear and broad concept whose definition is based on where it is being applied. Since project success is connected to the context it is been used, we can propose a complete definition of success in context of efficiency and effectiveness. Project success matches a project's effectiveness and efficiency (Belout, 1998).

According to Atkinson (1999), the success of every construction project is mainly characterized by time, cost and quality. Loosemore et al. (2003) indicated the significance of job satisfaction for the well-being of the construction firms. Performance criteria of commercial projects was pointed out by Fenn (2006). He admitted time, cost quality project delays, delay claims, scheduling, monitoring and control. The following success criteria were selected for the purpose of this study.

# 2.4.1 Cost

Salter and Torbett (2003) stated that, the easiest and common technique of measuring project success is by measuring the cost performance. The cost of project includes the cost from inception to completion and not only the tender sum. Project cost performance usually arise from comprehensive site investigation aided in profound efficient planning which successively clarify the scope. The difference between the actual cost of project and the budgeted cost of project is called the cost variance and it is a good measure of project success (Georgy et al. 2005).

# 2.4.2 Time

Chan and Chan (2004) defines time as the duration for completing a project. Time is one of the major factors that is used to measure the success of a project (Swan and Khalfan, 2007). Thus the component of time may suggest to project managers and all stakeholders that the project was completed smoothly and on schedule. Therefore, project managers prefer contracts with reasonable amount of time to execute completely.

#### 2.4.3 No claims or contractual disputes

Mbachu (2008) mentioned that, a manager's ability to make changes without any additional claims is also a major factor in measuring success. Claims with can lead to contractual disputes on several of construction projects defeats the purpose of success criteria.

# 2.4.4 Quality

Quality as defined in the construction industry is the overall characteristics required by a project to satisfy a given need or requirement (Parfitt and Sanvido, 1993). Thus, in the construction industry, quality is determined by the ability to conform with set standards. An analysis conducted by Prabhakar (2008) indicated that, monitoring and feedback was one the factors leading to project success. Similarly, Papke-Shields et al. (2010) also observed that the chance of achieving project success appeared to be raised among other factors, by always monitoring the progress of the project as cited in Kamau and Mohammed (2015). According to their study, monitoring and controlling was relevant in managing of project scope, time, cost, quality, human resources, communication and risks. In similar accord, Kamau and Mohammed (2015) cited that monitoring and evaluating, budget performance, schedule performance and quality performance could influence project success all times and clear scope definition of users' need are associated to the quality work on site during and after completion as described by Chua et al. (1999).

#### 2.4.5 Safety

Safety is achieved when a project is completed without major accidents and injuries (Bubshait and Almohavis, 1994). According to Chan and Chan (2004), accidents can affect a project in a number of ways. Thus, it can cause cost overruns or delays and

sometimes even affect the reputation of the company. Safety can only be assured by means of effective communication and clearly articulating scope of work. Lack of clarity may lead to failure and thereof classify the project as unsuccessful. Regular monitoring and support from top management and feedback from users must be the core mandate to foster safety performance criterion.

#### 2.4.6 Environment

Problems arising from construction that affects the environment generate a lot of discomfort to public users (Shen et al., 2000). A lot of effort has to go into waste minimization strategies and restrict environmental nuisance (Wong and Chang, 2000). Incorporating sustainable designs and practices into construction projects seemingly satisfy the environmental criterion of project success.

# 2.5 CHALLENGES IN ACHIEVING CONSTRUCTION PROJECT SUCCESS

The construction industry considers a number of factors in determining project success. According to Fenn (2006), time, cost and quality are the factors that determine the success of a project the most. Performance of building projects in Ghana appears to be low in time, cost and quality aspects which is very bad for the reputation of the industry. Many completed projects in Ghana fail in time performance while others fail in cost performance. Other construction projects in Ghana may fail in other performance indicators such as leadership of companies. Other projects consumed too much resources due to internal factors that are not effectively working to expectation. When the project was completed, it was seen successful by their customers and turn out to be basic revenue earnings for the company for a number of years. Wells (1998) identified a number of factors that

poses great challenge to achieving success in a construction project. They are discussed below.

#### **2.5.1 Social and political influence**

Political and social influence most often defeats the purpose of a construction project (Wells, 1998). These sought of influences creates unnecessary delays which can lead to cost overruns. Also, political bureaucratic interference leads the drastic reduction of the probability in achieving construction project success. Wells (1998) stipulated that, social interference can cause a project to delay or halted altogether.

## 2.5.2 Poor planning

Proper planning of construction process is a very important strategy in reducing construction cost and duration (Crittenden and Kolaczkowski, 1995). Poor planning on the part of the project team can lead to failure of construction projects because of cost and time overruns. Poor planning can also lead to reduction in project quality.

#### **2.5.3 Poor communication**

Efficient communication with every benefactor of a construction project including all members of the project team is a very significant enabling factor of project success in terms of cost (Pinto and Slevin, 2001). Poor communication among stakeholders can lead to decrease in the performance of a construction project. Also, stakeholder's inability to give feedback can reduce the probability of achieving higher project success.

# 2.5.4 Unrealistic estimates for construction projects

A number of estimates given by the project are unrealistic to begin with. Lam et al. (2000) stated that, unrealistic estimates at the beginning of a construction project can affect the quality of the project and sometimes bring the whole project to a halt. Lam

et al. (2000) also identified other factors that poses challenge to the achieving success in construction projects as poor control mechanism and lack of stakeholder involvement.

#### **CHAPTER THREE**

# METHODOLOGY

#### **3.1 INTRODUCTION**

The location of the study area and the components of the sample size have been briefly described in this chapter. The chapter highlights on the criteria used in tapping information for the study. The sampling techniques and methods of data collection and analysis are discussed. The sources of data are also identified and variables of investigations specified.

# **3.2 CHOICE OF THE STUDY AREA**

The selected District of study was Asutifi North District in the Brong Ahafo Region of the republic of Ghana. The Brong Ahafo Region now consists of, 8 Municipal Assemblies and 19 District Assemblies which summed up to 27 Administrative Assemblies (districts.ghana-net.com). The decision for the choice of this study area was informed by time and resources constraints. The study area was therefore selected on the basis of easy access to transport, moderate travelling cost and the urgent demand for the completed report of this study. Details of Asutifi North District can be found in the appendix.

# **3.3 RESEARCH DESIGN**

Research design basically talks about a collection of guides or rules or data collection (Adams and Schvaneveldt, 1985). Research design shows structure for collection and analysis of data. According to Baiden (2006) the structure affects the technique for data collection and analysis.

The research adopts a questionnaire survey in the quest to explore the perception of specific stakeholders on construction project success. The questionnaire was

designed for staff of the District Assembly and Community members as they are part of the main stakeholders of construction projects at the district Assembly level. Questionnaire survey enhances consistency of observations and improves replication due to its inherent standardized measurement and sampling techniques (Oppenheim et al., 2003).

# **3.4 POPULATION**

A research population can be defined as the totality of a well-defined collection of individuals or objects that have a common, binding characteristics or traits (Polit and Hungler, 1993). Burns *et al.* (1993) added that a population is defined as all elements (individuals, objects and events) that meet the sample criteria for inclusion in a study. In determining the population, two Communities in the District namely Kenyasi No.1, and Kenyasi No.2 were selected from the area which is the Asutifi North District Assembly. Here, the subject of the study were the stakeholders (both external and internal) who were in construction projects. The basis for the selection is that, amongst the 6 major Communities in the District, these two Communities contained the required pattern of project and people that the researcher wishes to study.

#### **3.5 SAMPLING TECHNIQUE AND SAMPLE SIZE DETERMINATION**

The term "sample" means a part of a whole (population) drawn to reflect the remaining (Naoum, 2003). Thus, sampling refers to the process of selecting a quota of the population to characterise the entire population. A sample, then, consists of a subject of the units that constitute the population (Polit & Hungler, 1999). However, research studies use simply a small fraction of the population, referred to as a sample. This is because using a sample is more practical and less costly than collecting data from the entire population. Polit & Hungler (1999) asserted that, the
major risk of using a selected sample is that it might not adequately reflect the behaviours, traits, or beliefs of the population. The sampling technique for this endeavour based on its purpose, design, and practical implication of the research topic is purposive sampling. Simply put, the researcher decides what needs to be known and sets out to find people who can and are willing to provide the information by virtue of knowledge or experience (Bernard, 2002; Lewis & Sheppard, 2006; Tongco, 2007). In the context of this research, the targeted groups were the Internal Stakeholders (including permanent workers of the Assembly and temporal workers like external consultants for the Assembly) and External Stakeholders (including Community members and traditional Leaders). More so, purposive sampling was utilized in attaining the sample size because of the difficulties encountered in assessing the population size of the class. Purposive sampling refers to strategies in which the researcher exercises his or her judgment about who will provide the best perspective on the phenomenon of interest, and then intentionally invites those specific perspectives into the study. A maximum of 80 questionnaires were distributed in this research. The 80 questionnaires were designed through purposive sampling technique. The summary is shown in **table 3.1**.

The purposive sampling was preferred because, considering the nature of occupation of the people which is predominantly farming and trading, it would be difficult, if not impossible and to meet pre-determined targeted persons through random sampling technique.

#### **3.6 RESEARCH STRATEGY**

This section constitutes the approach that was be adopted for this research. It describes the philosophical position of the research, the strategy that was adopted, and why that strategy was adopted. An insight of the research process was given. This section also describes the quantitative approach to research: what it entails and the main reasons why the quantitative method was selected for this research.

#### **Table 3.1: Categories of respondents**

Group	Number
Administrative staff of the Assembly	4
Assembly men, with at least four from each of the	8
communities that host the projects under study	
Staffs of sector institution who have benefited from	14
construction projects in the District	
Unit Committee members with at least eight	16
representatives from each of the community of study	
Heads of Department/Unit-Senior Officers of the DPCU	8
Staffs of works department of the Assembly	6
Representatives of traditional authority at least four from	8
each community.	
Staff members of sector Departments/Agencies &	6
External Consultants	
Members from sub-committees of the Assembly, with two	10
each from works, development, social services and	
Finance & Administration.	
	Total=80

Source: Field survey (2016)

#### **3.6.1 Quantitative Research**

Quantitative research is a research strategy that emphasizes dimension and quantification in the gathering and analysis of data (Bryman, 2004). It involves a deductive approach to the correlation between theory and research, in which the accent is placed on the testing of theories.

The quantitative research approach was adopted for this research. The justification for this research approach is that, quantitative approach is deductive which implies that it is associated with verification of theories and hypothesis testing and it also employs the use of questionnaires and existing databases. It also involves the use of statistical tools in analysing large sample size from a population to get an outcome that can be generalized. It also obeys all the rules of positivism

#### **3.7 RESEARCH PROCEDURE**

In this research, the approach for gathering data involved both literature review (secondary data) and field survey (primary data). The literature is an essential aspect of the research setting the pace for the development of questionnaire. The field survey deals with a collection of empirical based on the literature reviewed using survey questionnaires. The secondary data obtained from reviewed literature on the area of study includes report, relevant books obtained from libraries, journals, articles, and published works of interest.

#### **3.7.1 Questionnaire Development**

The questionnaire designed had questions that were close-ended in nature. The Likert response scale was employed and it measured the strength of respondent's opinion. Questions in the questionnaire were kept in simple language, devoid of technical terms in order to minimize potential errors from respondents.

#### 3.7.2 Questionnaire Design and Distribution

The questionnaire was designed to suit and answer the specific objectives. The first part of the questionnaire was the respondent profile while the other part was the specific objectives of the study.

## 3.8 DATA PREPARATION AND STATISTICAL TOOLS INTENDED FOR

#### THE ANALYSIS

This section talks about how the quantitative data collected was processed and analysed. Oppenheim (2003) prescribed a way of going about analysing collected data. He proposed that, routines, which should be followed, has to be set. In relation to the above the individual responses collected were processed and entered into the Statistical Packages for Social Sciences (SPSS version 16) and later processed by Excel 2007 for analysis. The statistical tool used to run the analysis were descriptive statistics (percentages and frequencies) and Relative Importance Index (RII). The RII was used to establish the significance levels of the identified challenging and success factors. The weightings within the RII output provided an average summation of respondents' views of a particular variable.

#### **CHAPTER FOUR**

#### DATA ANALYSIS AND DISCUSSION OF RESULTS

#### **4.1 INTRODUCTION**

This chapter is the data analysis and discusses the results obtained from the respondents operating in the Asutifi North District Assembly using Statistical Package for Social Sciences (SPSS). Respondents were Internal and External Stakeholders. Internal Stakeholders are personnel in charge of construction projects and its pricing including monitoring and supervision in the district assembly and they included the engineer, planner, quantity surveyor, auditor and budget analyst. Moreover, they also include external consultants who work for the Assembly as well. It must be noted that, due to the merger of old departments into new departments under the L.I. 1961, Officers like the Planning Officers and Budget Analyst from departments like Agriculture, Health and Education, Youth & Sports were included in the internal stakeholders are members of the community who have stake in the project executed in the assembly and they included the assembly members, staff of sector institution, unit committee members and traditional leaders.

The analysis is pivoted around the objectives of the study, that is, to identify the key success factors of construction projects and the level of satisfaction of stakeholders of completed construction projects. The organization of the data presentation, description and analyses were done using Statistical Package for Social Sciences (SPSS) and Microsoft Excel. The statistical tools used for the analysis were the Frequency Index and Relative Importance Index (RII), which were used to rank the various variables. This chapter also presents the results of the analysis and

discussions in the form of texts, figures and tables. 50 valid questionnaires were retrieved out of the 80 distributed. This represents a response rate of 62.5% which is positive.

#### **4.2 INTERNAL STAKEHOLDERS**

Personnel who are in charge of construction projects and its pricing including monitoring and supervision in the district assembly and they include the engineer, planner, quantity surveyor, auditor and budget analyst.

#### **4.2.1 Demographic/ background information**

This section analyses the responses of the background information from assembly staff who are in charge of construction projects and it's pricing in the district assembly and they include the engineer, planner, quantity surveyor, auditor and budget analyst. The background information included the respondent's profession, the years of experience, the level of education of the respondent and the number of years the respondent has worked with the district assembly. The respondent was also asked to indicate the number of projects he has being involved in. The summary is shown in **table 4.1**.

#### **4.2.1.1 Professional Experience of Internal Stakeholders**

The purpose of this question was to know if the respondent is an engineer, planner, quantity surveyor, auditor or budget analyst. These professionals form the construction team in projects undertaken in Asutifi North District assembly. **Table 4.1** shows a summary of the professional experience of the respondents in the category of Internal Stakeholders. The table vividly shows that 36 percent of the respondents were engineers (including Professional Engineers and sub-Professional such as Technician Engineers), 20 percent were planners (including Development

Planning Officers and Physical Planning Officers), 12 percent were quantity surveyors, another 12 percent were auditors and 20 percent were budget analyst.

INTERNAL S	TAKEHOLDERS	
	Frequency	Percent (%)
Profession		
Engineer (Professional & Sub-Professional)	9	36.00
Planner (Development & Physical)	5	20.00
Quantity surveyor	3	12.00
Auditor	3	12.00
Budget analyst	5	20.00
Total	25	100.00
Years of Experience		
Less than 5 years	6	24.00
5-10 years	13	52.00
11-15 years	4	16.00
Above 16 years	2	8.00
Total	25	100.00
Level of education		
No qualification	2	8.00
HND	3	12.00
BSc.	14	56.00
Postgraduate(MSc/MPhil)	6	24.00
Total	25	100.0
Years of practice with the district assembly	y	
Less than 5 years	7	28.00
5-10 years	13	52.00
11-15 years	4	16.00
Above 16 years	1	4.00
Total	25	100.0
Number of projects		
Less than 5	4	16.00
5-10	7	28.00
11-15	2	8.00
Above 16	12	48.00
Total	25	100.0

 Table 4.1: Demographics of assembly staff

Source: Field survey, (2016)

#### 4.2.1.2 Number of years of practice of respondents

The main intent of this question was to ascertain how long the respondents have worked in their current position. This information will give relevance to the quality of answers given out by the respondents. If respondents have experience in their current position, their responses would authenticate the outcome of this research. **Table 4.1** below represents the respondent's years of service in their current practice. From the table, it is shows that 24 percent of the respondents have worked for less than 5 years. 52 percent of the respondents have worked within 5 to 10 years, 16 percent of respondents have worked within 11 to 15 years and only 8 percent of respondents have worked for above 16 years. The different levels of experience gained by the respondents will make the study very feasible.

#### 4.2.1.3 Level of education

**Table 4.1** shows a summary of the level of education of respondents. The purpose of this background information was to ascertain the respondents' highest level of education which is very significant in terms of the knowledge the respondent will have in construction projects. The table shows that, 8 percent of the respondents had no qualification, 12 percent of the respondents had HND educational qualification, 56 percent had BSc. qualification, and 24 percent had MSc / MPhil qualification.

#### 4.2.1.4 Years of practice with the district assembly

**Table 4.1** shows the summary of analyses of the number of years of practice with the district assembly. The purpose of this question was to ascertain the number of years of practice with the district assembly. Working for a long-time with a particular district assembly generates the kind of experience in projects undertaken in the district assembly. From the Table, 28 percent of the respondents have worked for less than 5 years in the district assembly, 52 percent of the respondents have worked within 5 to 10 years in the district assembly, 16 percent of respondents have worked for above 16 within 11 to 15 years and only 4 percent of respondents have worked for above 16 years.

#### 4.2.1.5 Number of projects

**Table 4.1** shows the summary of analyses of the number of projects the respondents have involved in. The purpose for its inclusion was to link the number of project involved in to how satisfied respondents are. 16 percent of the respondents have been involved with less than 5 projects, 28 percent of the respondents have been involved with between 5-10 projects, 8 percent have been involved with between 11 to 15 projects and the remaining have been involved with above 16 projects.

#### **4.3 EXTERNAL STAKEHOLDERS**

This section analyses the responses from External Stakeholders. These are members of the community who have stake in the project executed in the assembly and they include the assembly members, staff of sector institution, unit committee members and traditional leaders.

#### **4.3.1 Demographic/ background information**

This section presents background information on various respondents. The background information included the respondent role in the community, the number of years of practice, the level of education of the respondent and the number of years the respondent has worked with the district assembly. The respondent was also asked to indicate the number of projects they have been involved in. The summary is shown in **table 4.2**.

#### 4.3.1.1 Role in the community

The purpose of this question was to know if the respondent is an assembly member, staff of sector institution, unit committee member or traditional leader. These positions are the ones with major stake in construction projects undertaken in Asutifi North District assembly. **Table 4.2** shows a summary of the roles of the respondents

in the community. The table vividly shows that 24 percent of the respondents were assembly members, 44 percent were staff of sector institution, 20 percent were unit committee members, another 12 percent were traditional Leaders.

EXTERN	EXTERNAL STAKEHOLDERS				
Role in the community					
Assembly members	6	24.00			
Staff of Sector Institution	11	44.00			
Unit Committee members	5	20.00			
Traditional Leaders	3	12.00			
Total	25	100.00			
Years of Experience					
Less than 5 years	7	28.00			
5-10 years	6	24.00			
11-15 years	5	20.00			
Above 16 years	7	28.00			
Total	25	100.00			
Level of education					
No qualification	4	16.00			
HND	9	36.00			
BSc.	11	44.00			
Postgraduate(MSc/MPhil)	1	4.00			
Total	25	100.00			
Years of practice with the district	assembly				
Less than 5 years	9	36.00			
5-10 years	6	24.00			
11-15 years	3	12.00			
Above 16 years	7	28.00			
Total	25	100.0			

rubic har beingruphies of community members	Tab	ole 4	.2:	Demo	grapl	nics	of	community	members
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Source: Field survey, (2016)

#### **4.3.1.2 Years of Experience**

The main intent of this question was to ascertain how long the respondents have worked in their current district. This information will give relevance to the quality of answers given out by the respondents. If respondents have experience with respect to their roles in the community, their responses would authenticate the outcome of this research. **Table 4.2** below represents the respondent's years of experience acting in that role. From the table, it is shows that 28 percent of the respondents have worked

for less than 5 years. 24 percent of the respondents have worked within 5 to 10 years, 20 percent of respondents have worked within 11 to 15 years and another 28 percent of respondents have worked for above 16 years. The different levels of experience gained by the respondents makes the study very feasible.

#### **4.3.1.3** Level of education

**Table 4.2** shows a summary of the level of education of respondents. The purpose of this background information was to ascertain the respondents' highest level of education which is very significant in terms of the knowledge the respondents have with construction projects. The table shows that, 16 percent of the respondents had no qualification, 36 percent of the respondents had HND educational qualification, 44 percent had BSc. qualification, and 4 percent had MSc / MPhil qualification.

#### 4.3.1.4 Years of practice with the district assembly

**Table 4.2** shows the summary of analyses of the number of years of practice with the district assembly. The purpose of this question was to ascertain the number of years of practice with the district assembly. Working for a long-time with a particular district assembly generates the kind of experience in projects undertaken in the district assembly. From the table 36 percent of the respondents have worked for less than 5 years in the district assembly, 24 percent of the respondents have worked within 5 to 10 years in the district assembly, 12 percent of respondents have worked within 11 to 15 years and 28 percent of respondents have worked for above 16 years.

#### 4.3.1.5 Number of projects

**Table 4.2** shows the summary of analyses of the number of projects the respondents have been involved in. The purpose for its inclusion was to link the number of project involved in to how satisfied respondents are. 24 percent of the respondents

have worked with less than 5 projects, 32 percent of the respondents have worked between 5-10 projects, 8 percent have worked between 11 to 15 projects and the remaining have worked on above 16 projects.

## 4.4 STAKEHOLDERS PERCEPTION OF CONSTRUCTION PROJECT SUCCESS AT THE DISTRICT ASSEMBLY

This section of the questionnaire sought to give respondents the opportunity to show by indicating on a five point Likert scale, the level of importance of the success factors identified. The (**RII**) values ranges from 0 to 1 with 0 not inclusive. It shows that the higher the value of **RII**, the more significant, the critical success factor and vice versa. According to Chen et al. (2010), the comparison of RII with the corresponding significance level is measured from the transformation matrixes which are as follows:

High (H)	0.8 < RII < 1.0
High-medium (H-M)	0.6 < RII < 0.8
Medium (M)	0.4 < RII < 0.6
Medium-low (M-L)	0.2 < RII < 0.4
Low (L)	0.0 < RII < 0.2

SUCCESS CRITERIA	INTER STAKI	INTERNAL EXTERNAL STAKEHOLDERS STAKEHOLDERS				OVERALL		
Schedule Performance Criterion	hedule Performance Criterion RII Level Rank RII Level		Rank	- AVERAGE	RANKING			
Availability of resources as planned throughout								
the project	0.832	H	1st	0.616	H-M	$1^{ST}$		
A high degree of trust shared by project						$\mathcal{3}^{RD}$		
participants	0.808	H	$2^{ND}$	0.560	M			
Users need thoroughly understood and defined	0.768	H-M	$\mathcal{3}^{RD}$	0.576	M	$2^{ND}$		
Timely and valuable decision from top						$5^{TH}$		
management	0.760	H-M	$4^{TH}$	0.536	M			
No bureaucratic interference	0.744	H-M	$5^{TH}$	0.544	M	$4^{TH}$		
Average	0.782			0.566			0.674	$5^{th}$
Cost Performance Criterion								
Thorough understanding of scope	0.888	H	$l^{ST}$	0.648	H-M	$3^{RD}$		
Comprehensive site investigations	0.856	H	$2^{ND}$	0.680	H-M	$I^{ST}$		
A high degree of trust shared by project								
participants	0.808	H	$\mathcal{3}^{RD}$	0.624	H-M	$4^{TH}$		
No social and political interference	0.800	H	$4^{TH}$	0.656	H-M	$2^{ND}$		
Average	0.842			0.652			0.796	<b>1</b> <sup>st</sup>
Quality Performance Criterion								
Higher quality standards during construction	0.632	H-M	$1^{ST}$	0.824	Н	$2^{ND}$		
Regular quality control and quality assurance								
activities	0.576	M	$2^{ND}$	0.888	H	$1^{ST}$		
Regular monitoring and feedback from top						$\mathcal{3}^{RD}$		
management	0.568	M	$\mathcal{3}^{RD}$	0.816	H			
User needs understood and defined	0.552	M	$4^{TH}$	0.800	H	$5^{TH}$		
Community participate in decision making	0.544	M	$5^{TH}$	0.808	H	$4^{TH}$		
Average	0.574			0.827			0.701	$2^{nd}$
Safety Performance Criterion								
Regular monitoring and feedback from top	0.800			0.616				

management		H	$1^{ST}$		H-M	$2^{ND}$		
Clearly articulate scope of work	0.776	H-M	$2^{ND}$	0.640	H-M	$1^{51}$		
Top management support	0.744	H-M	$3^{RD}$	0.560	M	$3^{RD}$		
Average	0.773			0.605			0.689	<b>4</b> <sup>th</sup>
No Claims and Contractual Disputes Perform	nance Cr	iterion						
Adequate communication among all project								
participants	0.888	H	$1^{ST}$	0.552	M	$\mathcal{3}^{RD}$		
Users need thoroughly understood and defined	0.808	H	$2^{ND}$	0.576	M	$1^{ST}$		
Regular monitoring and feedback from top								
management	0.768	H-M	$\mathcal{3}^{RD}$	0.568	М	$2^{ND}$		
Average	0.821			0.565			0.693	3 <sup>rd</sup>
Environmental Performance Criterion								
High quality after completion	0.552	М	$1^{st}$	0.800	Н	$2^{ND}$		
Incorporating sustainability designs and								
practices	0.488	M	$2^{ND}$	0.808	H	$1^{ST}$		
Average		0.520			0.804		0.662	6 <sup>th</sup>

Source: Field survey, (2016)

#### 4.4.1 Schedule performance criterion

From **Table 4.3** under the Internal Stakeholders category, it can be deduced that the 1<sup>st</sup> ranked and the 2<sup>nd</sup> ranked variable under schedule performance had RII values between 0.8 and 1.0. This shows that the factors had High significance. The rest of the variables had RII values between 0.6 and 0.8 thus having High-Medium significance. Unlike the variables under the assembly staff, the External Stakeholders category had the RII value of the 1<sup>st</sup> ranked variable to be 0.616 indicating a High to medium significance level. The 2<sup>nd</sup> ranked variable to the 5<sup>th</sup> ranked variable had RII values between 0.4 and 0.6. This shows that the factors had medium significance. The average RII value for the Internal Stakeholders under the schedule of performance criterion was 0.782 while External Stakeholders had an average RII value of 0.566.

This indicates that the Internal Stakeholders attach time schedule performance with high priority in defining project success as compared to the External Stakeholders. This finding confirms the assertion by Swan and Khalfan (2007) stating that, time is a key priority to the project team as delays can consequently lead to cost overruns. Apparently, the overall ranking of the success criteria with both categories of respondents in perspective, time or schedule performance criterion is ranked 5<sup>th</sup> as this goes contrary to (Lim and Mohamed, 2000) claim that, stakeholders and the general public look at success in a broader view as time is considered the first criterion for project success.

#### 4.4.2 Cost performance criterion

From **Table 4.3** under the Internal Stakeholders, it can be deduced that the 1<sup>st</sup> ranked to the 4<sup>th</sup> ranked variable had RII values between 0.8 and 1.0. This shows that the

factors had High significance. Under the External Stakeholders category, the 1<sup>st</sup> ranked to the 4<sup>th</sup> ranked variable under cost performance had RII values between 0.6 and 0.8. This shows that the factors had High-Medium significance level. This also shows that Internal Stakeholders attach more significance to the cost performance in defining project success as compared to the External Stakeholders. Swan and Khalfan (2007) postulated that cost is a significant factor to the project team in terms of defining project success because cost overruns which originates from the project team mismanagement can affect the overall profit gained from the project. This further affirm cost as the most important criteria for the determining construction project success as it is ranked 1<sup>st</sup> overall.

#### 4.4.3 Quality performance criterion

From **Table 4.3** under the Internal Stakeholders category, it can be deduced that the  $1^{st}$  ranked variable under quality performance had RII value of 0.632 indicating an **H-M** significant level. The  $2^{nd}$  to the  $5^{th}$  ranked variable under cost performance had RII values between 0.4 and 0.6. This shows that the factors had medium significance. The External Stakeholders had a different perception about quality performance as the  $1^{st}$  ranked variable to the  $5^{th}$  ranked variable had RII values between 0.800 to 1.000 indicating High significant level. The average RII value for the Internal Stakeholders under quality performance was 0.574 while the External Stakeholders had an average RII value of 0.827.

This indicates that, External Stakeholders attach a higher significance to construction project quality in defining project success as compared to Internal Stakeholders. Parfitt and Sanvido (1993) defined quality as the ability of the construction product or service to satisfy its purpose needs and of the users. This definition indicates that, the end-users which are mostly the External Stakeholders defines the success of the project in terms of its ability to do its purpose thus backing the findings. It is also against this background that, quality is ranked  $2^{nd}$  overall by both the assembly staffs and the External Stakeholders.

#### 4.4.4 Safety performance criterion.

From **Table 4.3** under the Internal Stakeholders category, it can be deduced that the 1<sup>st</sup> ranked variable under safety performance had RII value of 0.800 indicating a high significant level. The 2<sup>nd</sup> and 3<sup>rd</sup> ranked variable under safety performance had RII values of 0.776 and 0.744 respectively. This shows that the factors had high-medium significance level. For the External Stakeholders, the 1<sup>st</sup> ranked and 2<sup>nd</sup> ranked variable under safety performance had RII values of 0.640 and 0.616 respectively indicating a high-medium significance level. The 3<sup>rd</sup> ranked variable under safety performance had RII values of 0.640 and 0.616 respectively indicating a high-medium significance level. The 3<sup>rd</sup> ranked variable under safety performance had RII value of 0.56. This shows that the factor had medium significance level.

Internal Stakeholders attach more significance to safety on site as compared to External Stakeholders. Accidents on site can affect the project negatively as it causes delays and increase the cost of production and it can also affect the reputation of the firm (Chan and Chan, 2004). Therefore, in measuring the success of a construction project, the project team attach more priority to safety as identified in the findings. Seemingly, safety is considered a major determinant of success with respect to construction projects as it ranked 4<sup>th</sup> overall but its contribution to success cannot be overlooked.

#### 4.4.5 No claims and contractual disputes performance criterion

From **Table 4.3** under the Internal Stakeholders category, it can be deduced that the 1<sup>st</sup> ranked and the 2<sup>nd</sup> ranked variable had RII value of 0.888 and 0.808 respectively

indicating a high significant level. The 3<sup>rd</sup> ranked variable had RII values of 0.768. This shows that the factors had high-medium significance level. Obviously, this was not the case for the External Stakeholders as it can be deduced that the 1<sup>st</sup> ranked to 3<sup>rd</sup> ranked under no claims and contractual disputes performance had RII values between 0.400-0.600 indicating a medium significance level. The average RII values for the Internal Stakeholders and External Stakeholders were 0.821 and 0.565 respectively. According to Chan and Chan 2004, the absence of claims and contractual disputes is a major indicator of project success for the project team. Also, if there are a lot of disputes on a project, it goes against the project team as it affects cost and time and it defeats the purpose of success criteria.

#### 4.4.6 Environmental performance criterion

From **Table 4.3** under the Internal Stakeholders category, it can be deduced that the 1<sup>st</sup> ranked and the 2<sup>nd</sup> ranked variable under environmental performance had RII value of 0.488 and 0.552 respectively indicating a medium significant level. For the External Stakeholders, under the environmental performance criterion it can be deduced that the 1<sup>st</sup> ranked and the 2<sup>nd</sup> ranked variable under environmental performance had RII values of 0.808 and 0.800 respectively indicating a High significance level.

Environmental issues like waste management is considered as a public nuisance and have bad impact on construction (Shen et al., 2000). If a project has bad effect on the environment, it is community members who suffers the most and therefore External Stakeholders attach more significance to environmental performance in determining project success as was identified in the findings. Nevertheless, environmental performance criterion is ranked 6<sup>th</sup> amongst the six factors but has to be looked as it

can have serious impact on construction (Shen et al., 2000), thereby defining its success or otherwise.

## 4.5 CHALLENGES IN ACHIEVING CONSTRUCTION PROJECT SUCCESS IN THE DISTRICT ASSEMBLIES.

Respondents were also asked to indicate whether the challenges to construction project success identified in the literature really affects the success of construction projects in the district assemblies. Their responses were analysed using RII to rank the variables in order to identify the most severe challenge as shown in **Table 4.4**. Poor planning was ranked first with RII value of 0.796 followed by lack of feedback from users with RII value of 0.784. The variables are discussed below.

#### 4.5.1 Poor planning

Proper planning of construction process is a very important strategy in reducing construction cost and duration (Crittenden and Kolaczkowski, 1995). Poor planning on the part of the project team can lead to failure of construction projects because of cost and time overruns. Poor planning can also lead to reduction in project quality.

#### 4.5.2 Lack of feedback from users

Efficient communication with every benefactor of a construction project including all members of the project team is a very significant enabling factor of project success in terms of cost (Pinto and Slevin, 2001). Poor communication among stakeholders can lead to decrease in the performance of a construction project. Also, stakeholder's inability to give feedback can reduce the probability of achieving higher project success.

Challenges	$\sum W$	RII	Ranking
Poor planning	199	0.796	$1^{st}$
Lack of feedback from users	196	0.784	$2^{nd}$
Poor control mechanism	194	0.776	$\mathcal{3}^{rd}$
Bureaucratic interference	192	0.768	$4^{th}$
Inadequate communication channel	192	0.768	$4^{th}$
Social and political interference	188	0.752	$6^{th}$
Lack of users' involvement at the early stages	188	0.752	$6^{th}$
Undefined and unclear statement of	188	0.752	$6^{th}$
ent			
Unrealistic expectations	185	0.740	9th
Lack of end user involvement	183	0.732	$10^{th}$
Unrealistic estimates for construction projects	179	0.716	$11^{th}$

**Table 4.4:** Ranking for challenges in achieving construction project success

Source: Field survey, (2016)

#### **CHAPTER FIVE**

#### CONCLUSION AND RECOMMENDATIONS

#### **5.1 INTRODUCTION**

This dissertation, which essentially delves into stakeholders' perception of construction projects success at the district assembly is divided into five (5) independent but interrelated chapters. The main introduction to the research covered in Chapter One. The review of literature on the topic, which covered the various objectives listed in chapter one, was captured in chapter two. In Chapter three, the methodology adopted for the study including the philosophical positions, research design, and research strategy was discussed. The research process was in one main phase; survey questionnaires. Chapter four presented the empirical analysis and provided detailed discussions on the survey results. This chapter (Chapter five) summarizes the issues addressed throughout the study. It begins with a summary of how the research objectives were achieved, followed by contributions of this research to knowledge. The chapter concludes with recommendations for further research that can be conducted based on the conclusions.

#### **5.2 ACHIEVING THE RESEARCH OBJECTIVES**

This research was initiated with the primary aim of examining the perception of stakeholders on construction projects success in the district assembly. In order to achieve the stated aim, four (4) research objectives were set in chapter one. Objective one was achieved mainly through literature reviews. Objectives two (2) three (3) and four (4) were achieved through the literature reviews and the survey questionnaires, which were conducted. Below are discussions on how the objectives were achieved.

**5.2.1** *The First Objective:* To identify common stakeholders in a construction at the district level.

Literature on common construction stakeholders was reviewed covering a number of relevant issues as well how they perceive success. The review began with a general overview of the general overview of the Ghanaian construction industry. It was followed by delving into the concept of construction stakeholders and their duties. The structure of district assembly was identified in the literature as well. The review observed that, the client, consultant and contractor forms the main stakeholders of the construction project. The client provides the capital for the project while the consultant makes sure the work follows laid down specifications. The contractor is in-charge of the overall execution of the project mostly on-site. The literature also classified stakeholders as internal and external where internal stakeholders includes the owner, suppliers, employees etc., and the external stakeholders include the government, competitors, the media, traditional authorities, project beneficiaries, opinion leaders, etc.

## **5.2.2 The Second objective:** To identify how the key success criteria are perceived in the Ghanaian construction industry at the District Assembly Level.

Literature was also reviewed on the second objective which covered the concept of construction project success. The review identified a number of construction project success factors with the major ones being time, cost and quality. Also, the review observed that, success of a construction project is very broad and it incorporates the performance of the stakeholders, evaluating their contributions and coming to terms with their expectations. It also identified that, a project can be deemed successful of various stakeholders to that project requirements are met. With the background knowledge in the concept of construction project success gained from the literature, a

questionnaire was designed to address the second objective, of which a number of variables were identified, which were then tested on Internal and External Stakeholders in the Asutifi North District. The questions focused on success factors like compliance with time, quality, cost, environmental friendliness, safety etc. The respondent's response was analysed and the Relative Importance Index formulae was applied to ranked the variables to determine the most significant success factors as perceived by either Internal or External Stakeholders.

# **5.2.3** *The third objective:* To identify the challenges stakeholders face in achieving construction project success in the district assembly.

Literature was reviewed in the third objective and a number of variables were identified. These variables were challenges that the district assembly stakeholders face in achieving high construction project success. With this background, the respondents were asked to verify whether the variables identified were actually challenges that hinders the achievement of project success at the district assembly level. An average percentile of the responses was used to analyse the data collected.

#### **5.3 SUMMARY OF FINDINGS**

The aim of the work was to ascertain the perceptions of various stakeholders on the success of construction projects at the District Assembly to help addressed the needs of all the stakeholders involved. The study revealed six (6) success critical criteria for classifying project as successful. These critical factors included cost performance, quality performance, schedule or time performance, environmental performance, safety performance and no-claim or contractual disputes.

Comparatively, staff of the District who have higher stakes when it comes to construction project success classified construction cost performance as the main indicator for determining the success of every project. This is due to the fact that exceeding cost may lead to unnecessary litigation. Apparently, community members who are the eventual end users of the construction project consider critically the success of a project by the quality performance criterion.

This is a result of the fact that, the project becomes tangible after completion. Again, from the study, it was revealed that cost performance criteria are considered critical by various stakeholders by recording an overall average RII of 0.796. According to the study cost performance criteria determines the success of construction project at the District Assembly since has a ripple down effect on the other critical factors.

Moreover, the research revealed several challenges hindering the achievement of the construction projects success of which 61.81% of the respondents indicated that the revealed challenges really and actually affected the project delivery success.

#### **5.4 CONCLUSION TO THE RESEARCH**

The study demonstrated that the success of a construction project is view differently by various stakeholders. Thus, a project deemed successful by one stakeholder may be considered a failure by a different stakeholder. Therefore, all relevant stakeholders should be considered and treated with fairness to achieve the potential of the intended construction project.

#### **5.5 RECOMMENDATIONS**

In view of the findings of this research, the following recommendations were made:

- Leaders of project teams (project manager) must make it a priority to identify the stakeholders in the project he is handling, determine and understand their necessities and perception of project success and try by all means possible to meet those needs;
- The project team in the district assemblies should not be alienated from the community members as they are vital part in determining the success of a construction project; and
- Moreover, all relevant stakeholders at the District level should be well informed and be involved in the planning and implementation of construction projects to ensure its success.
- Communication among stakeholders within the District should be harmonized so as to ensure effective project performance.
- Internal stakeholders directly involved in the project should adequately invest time and effort in planning, budgeting and implementing construction projects in the district.

#### 5.5 DIRECTIONS FOR FUTURE RESEARCH

There are numerous research avenues in the future as a result of this study. An open avenue for future research can be directed to the study of the strategies in achieving the success criteria factors of construction projects at the district assemblies

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#### **APPENDIX A**

#### QUESTIONNAIRE

#### **INTERNAL STAKEHOLDERS**

Dear Sir/Madam,

### QUESTIONNAIRE SURVEY: STAKEHOLDERS PERCEPTION OF CONSTRUCTION PROJECTS SUCCESS AT THE DISTRICT ASSEMBLY

I am currently undertaking a study aimed at exploring Stakeholders Perception of Construction Projects Success at the District Assembly. In addressing the stated aim, I am conducting a questionnaire survey to solicit information from Stakeholders in the construction industry at the District Assembly level. This study will help profile the perceptions of construction project success that exist in the Ghanaian Construction Industry and offer suggestions on how to deal with them at the District Assembly level.

This study is solely for academic purposes and your responses will be treated as STRICTLY CONFIDENTIAL. Participating organizations will be provided with the findings of the study upon request.

I would like to thank you for accepting to assist and cooperate towards this study.

Yours Sincerely,

Samuel Nketia

#### **MSc Student**

Mobile: 0207671537

Email: nketiasamuel@gmail.com

### (Please choose your option by clicking its corresponding box)

#### SECTION A

1)	What is yo	our professional background?	
	a.	Engineer	
	b.	Planner	
	c.	Quantity Surveyor	
	d.	Auditor	
	e.	Budget Analyst	
2)	Please ind	icate the years of professional Exp	perience at Position.
	a.	Less than 5 years	
	b.	5 – 10 years	
	c.	11 – 15 years	
	d.	Above 16 years	
3)	What is yo	our highest academic Qualification	1?
	a.	No qualification	
	b.	HND	
	c.	BSc	
	d.	MSc/ MPhil	
	e.	PhD	
4)	How long	have you work with the District A	Assembly?
	a.	Less than 5	
	b.	5 - 10	
	c.	11 – 15	

- d. 16 years and Above.
- 5) Please indicate the number of construction projects you have been involved at the District Assembly.

a.	Less than 5	
b.	5 - 10	
c.	11 – 15	
d.	16 years and Above	

#### **SECTION B**

#### SUCCESS FACTORS/CRITERIA

Please indicate the level of importance of the following under the key success criteria for construction project success criteria,

## Key: 1 = Not significant, 2 = Less significant, 3 = Neutral, 4 = Significant, 5 = Very Significant

SN	VARIABLES	1	2	3	4	5
1	SCHEDULE PERFORMANCE CRITERION					
a.	No Bureaucratic interference					
b.	Users need thoroughly understood and defined.					
c.	A high degree of trust shared by project participants					
d.	Timely and valuable decision from top management					
e.	Availability of resources as planned throughout the project					
2	COST PERFORMANCE CRITERION					
a.	No Social and Political interference					
b.	A high degree of trust shared by project participants					
c.	Thorough understanding of scope on the part of the project manager and the contractor					
d.	Comprehensive Site Investigations					
3	QUALITY PERFORMANCE CRITERION					
a.	Availability of resources as planned throughout the project					
b.	Regular Monitoring and feedback from top management					
c.	Regular quality control and quality assurance activities					
d	Availability of avenues for community to participate in decisions of the project					

Е	ligher quality standards during construction				
f.	Users need thoroughly understood and define				
4	SAFETY PERFORMANCE CRITERION				
a.	Top Management Support				
b.	Regular Monitoring and feedback from top management				
e.	Clearly Articulated scope of work				
5	NO-CLAIMS& CONTRACTUALDISPUTEPERFOMANCE CRITERION				
a.	Adequate Communication among all project participants				
b.	Regular Monitoring and feedback from top management				
c.	Users need thoroughly understood and define				
6	ENVIRONMENTAL PERFORMANCE CRITERION				
А	Evidenced of high quality and sustainability after completion				
В	Incorporating sustainable designs and practices				
#### SECTION C: IDENTIFYING CHALLENGES IN ACHIEVING THE

## CRITERIA SUCCESS FACTORS OF CONSTRUCTION PROJECTS AT THE DISTRICT ASSEMBLIES.

The following are some challenges identified to generally impede the achieving of the critical success factors of construction projects in the District Assemblies. With your experience in construction how do these factors hinder the achieving construction project success in the District Assemblies?

Rank your contribution on a 1-5 scale

Item	Challenges	1	2	3	4	5
1	Social and Political Interference					
2	Bureaucratic Interference					
3	Lack of End User Involvement					
4	Lack of Feedback from Users					
5	Unrealistic Expectations (Milestone)					
6	Undefined and unclear statement of					
	Requirement					
7	Lack of Users Involvement at early stage					
8	Poor Planning					
9	Inadequate communication channel					
10	Poor Control Mechanism					
11	Improper Variation Orders					
12	Unrealistic Estimates for construction					
	projects					

#### 1 = strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = strongly agree

#### EXTERNAL STAKEHOLDERS

Dear Sir/Madam,

## QUESTIONNAIRE SURVEY: STAKEHOLDERS PERCEPTION OF CONSTRUCTION PROJECTS SUCCESS AT THE DISTRICT ASSEMBLY

I am currently undertaking a study aimed at exploring Stakeholders Perception of Construction Projects Success at the District Assembly. In addressing the stated aim, I am conducting a questionnaire survey to solicit information from Stakeholders in the construction industry at the District Assembly level. This study will help profile the perceptions of construction project success that exist in the Ghanaian Construction Industry and offer suggestions on how to deal with them at the District Assembly level.

This study is solely for academic purposes and your responses will be treated as STRICTLY CONFIDENTIAL. Participating organizations will be provided with the findings of the study upon request.

I would like to thank you for accepting to assist and cooperate towards this study.

Yours Sincerely,

Samuel Nketia

#### **MSc Student**

Mobile: 0207671537

Email: nketiasamuel@gmail.com

## (Please choose your option by clicking its corresponding box)

#### **SECTION A**

1)	What posi	tion do you hold in the Communit	y?			
	a.	Assembly Member				
	b.	Staff of Sector Institution				
	c.	Unit Committee Member				
	d.	Traditional Leader				
	e.	If other, Please Specify				
2)	Please ind	icate the years of Experience at th	e above Position.			
	a.	Less than 5 years				
	b.	5 – 10 years				
	c.	11 – 15 years				
	d.	Above 16 years				
	e.	If other, Please Specify				
3)	What is yo	our highest academic Qualification	1?			
	a.	No qualification				
	b.	HND				
	c.	BSc				
	d.	MSc/ MPhil				
	e.	PhD				
	f.	If other, Please Specify				
4) How long have you been working in the District?						
	a.	Less than 5				
	b.	5 - 10				

- c. 11–15
- d. 16 years and Above.
- 5) Please indicate the number of construction projects you have been involved at the District Assembly.

a.	Less than 5	
b.	5 - 10	
c.	11 – 15	
d.	16 and Above	

#### **SECTION B**

#### SUCCESS FACTORS/CRITERIA

Please indicate the level of importance of the following under the key success criteria for construction project success criteria,

# Key: 1 = Not significant, 2 = Less significant, 3 = Neutral, 4 = Significant, 5 = Very Significant

SN	VARIABLES	1	2	3	4	5
1	SCHEDULE PERFORMANCE CRITERION					
a.	No Bureaucratic interference					
b.	Users need thoroughly understood and defined.					L
c.	A high degree of trust shared by project participants					I
d.	Timely and valuable decision from top management					
e.	Availability of resources as planned throughout the project					I
2	COST PERFORMANCE CRITERION					
a.	No Social and Political interference					
b.	A high degree of trust shared by project participants					
c.	Thorough understanding of scope on the part of the project manager and the contractor					
d.	Comprehensive Site Investigations					
3	QUALITY PERFORMANCE CRITERION					
a.	Availability of resources as planned throughout the project					
b.	Regular Monitoring and feedback from top management					1

c.	Regular quality control and quality assurance activities			
d	Availability of avenues for community to participate in decisions of the project			
e	Higher quality standards during construction			
f.	Users need thoroughly understood and define			
4	SAFETY PERFORMANCE CRITERION			
a.	Top Management Support			
b.	Regular Monitoring and feedback from top management			
e.	Clearly Articulated scope of work			
5	NO-CLAIMS & CONTRACTUAL DISPUTE PERFOMANCE CRITERION			
a.	Adequate Communication among all project participants			
b.	Regular Monitoring and feedback from top management			
c.	Users need thoroughly understood and define			
6	ENVIRONMENTAL PERFORMANCE CRITERION			
a	Evidenced of high quality and sustainability after completion			
b	Incorporating sustainable designs and practices			

#### SECTION C: IDENTIFYING CHALLENGES IN ACHIEVING THE

## CRITERIA SUCCESS FACTORS OF CONSTRUCTION PROJECTS AT THE DISTRICT ASSEMBLIES.

The following are some challenges identified to generally impede the achieving of the critical success factors of construction projects in the District Assemblies. With your experience in construction how do these factors hinder the achieving construction project success in the District Assemblies?

Rank your contribution on a 1-5 scale

1 = strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = strongly agree

Item	Challenges	1	2	3	4	5
1	Social and Political Interference					
2	Bureaucratic Interference					
3	Lack of End User Involvement					
4	Lack of Feedback from Users					
5	Unrealistic Expectations (Milestone)					
6	Undefined and unclear statement of					
	Requirement					
7	Lack of Users Involvement at early					
	stage					
8	Poor Planning					
9	Inadequate communication channel					
10	Poor Control Mechanism					
11	Improper Variation Orders					
12	Unrealistic Estimates for construction					
	projects					

#### **APPENDIX B**

#### **BRIEF PROFILE OF THE STUDY AREA**

The Asutifi North District used to be part of old Asutifi District under LI 1485 of the erstwhile Provisional National Defence Council (PNDC) quest to deepen the decentralisation process in 1988. In June 2012, the Asutifi South District was created leaving the mother District to stand separately as Asutifi North District under LI 2093 with Kenyasi still the District capital. The District is one of the Twenty-Seven (27) Districts in Brong Ahafo Region and Two Hundred and Sixteen (216) in Ghana respectively. The Asutifi North District is located between latitudes 6°40' and 7°15' North and Longitudes 2°15' and 2°45' West. It shares boundaries with Sunyani Municipal on the North, Tano North and South Districts on the North East, Dormaa East District to North West, Asutifi South District in the West, Asunafo North Municipal in the South West and Ahafo Ano North District (Ashanti Region) in the South East. With a total land surface area of 936 sq.km, the District is one of the smallest in the Brong Ahafo Region. There are a total of over 139 settlements in the District with major towns as Kenyasi I, Kenyasi II, Ntotroso, Wamahinso, Gyedu and Gamabia II. The District capital Kenyasi, is about 50km from Sunyani, the Regional capital of Brong Ahafo. The locations of the specific Communities of study are indicated in figure 6.1. On the other hand, the location of Asutifi North District in the national context is indicated in figure 6.2



### ASUTIFI NORTH DISTRICT IN THE REGIONAL CONTEXT

Figure 6.1: Location of the Area of study.

Source:( Asutifi North District Medium Term Development Plan)



Figure 6.2: Asutifi North District in the National context.

Source:( Asutifi North District Medium Term Development Plan)