

**ANALYSING THE CHALLENGES ASSOCIATED WITH INFRASTRUCTURAL
PROJECT EXECUTION IN THE AWUTU SENYA DISTRICT ASSEMBLY**

KNUST

BY

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DECLARATION

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma Kwame Nkrumah University of Science and Technology, Kumasi or any other educational institution, except where due acknowledgement has been made in the thesis.

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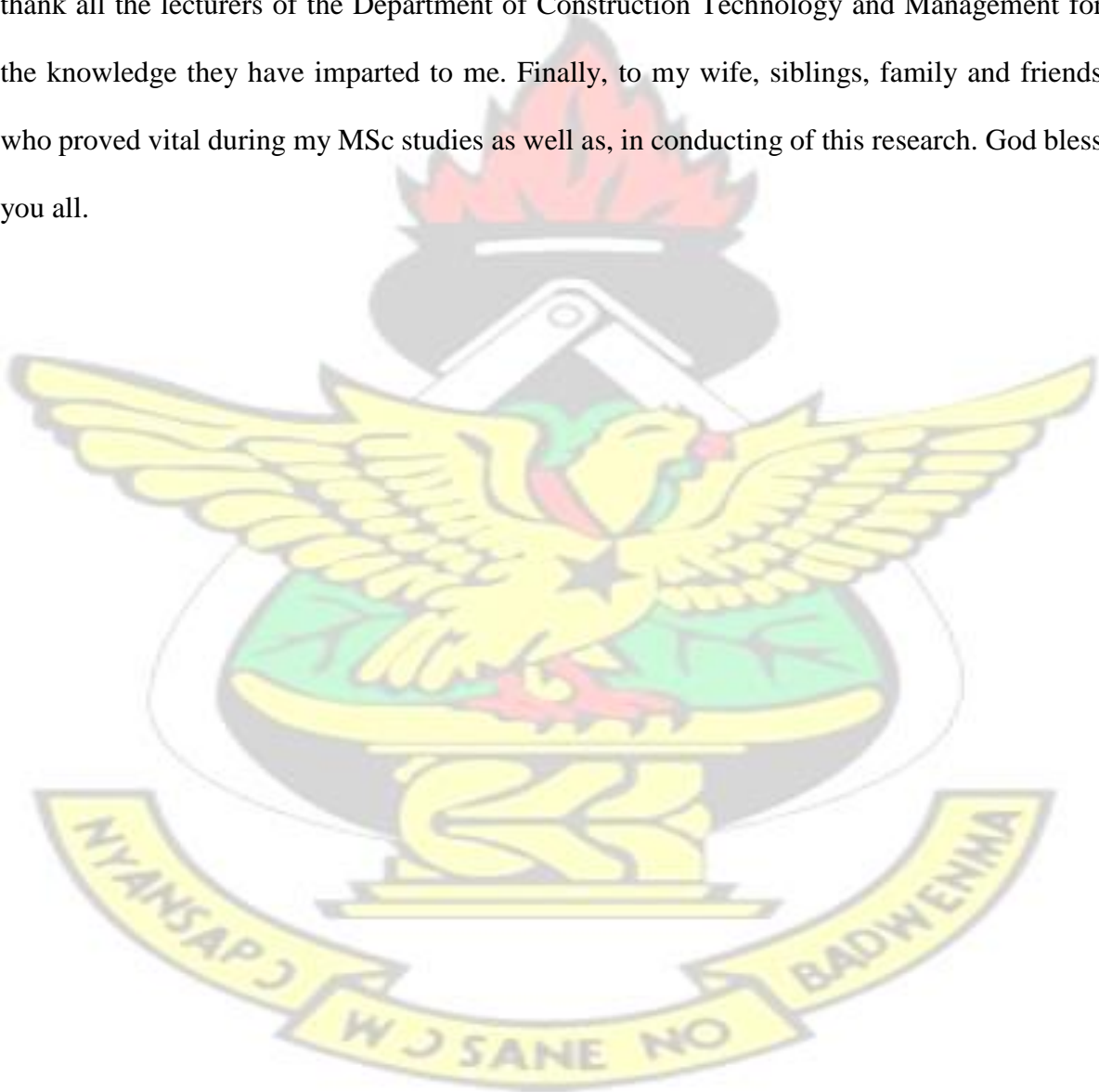
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DEDICATION

To the Almighty God.

ACKNOWLEDGEMENT

All Glory and honour be to the Most High God for bringing me this far in my life. Without him, I wouldn't have been able to make it to this far. Posterity will not forgive me if I fail to acknowledge the immense contribution of my supervisor, Dr. Kofi Agyekum for his guidance in the conduct of this work. To the study respondents, I am very grateful for your time. I also thank all the lecturers of the Department of Construction Technology and Management for the knowledge they have imparted to me. Finally, to my wife, siblings, family and friends who proved vital during my MSc studies as well as, in conducting of this research. God bless you all.



ABSTRACT

Infrastructural assets in a community or country determines the quality of life of the people. In view of the above, it has been on the policy directives of the government of Ghana to increase infrastructure assets delivery in the country through the Metropolitan, Municipal and District Assemblies (MMDAs). The current study sought to assess the challenges faced by MMDAs in the delivery of infrastructure projects using the Awutu Senya District as a case study. Adopting a case study research design and qualitative research strategy, data was collected from key management personnel who play key role in developmental projects. The data collection was done using interviews. Data analysis was done using content and thematic analysis. From the results of the study, it was found that the Awutu Senya District Assembly embark on a number of developmental projects to meet the needs of their people. Despite the effort there still exist a huge infrastructure gaps that needs to be filled. This infrastructure gap was created as a results of inadequate funds. It was also found that the main challenges to infrastructure delivery by the assembly include political interference, Insufficient funds for project delivery, delay in release of funds by the Central government, abandonment of projects, lack of stakeholder involvement in project delivery, poor planning, delays in project delivery, project cost overruns, over awarding of contracts and delay in payment to contractors for work done. In view of the above it was recommended that the works done by the assembly should be devoid of political interference and conflict of interest. Moreover, adequate funds should be available before commencement of a project to avoid delays in project delivery and abandonment of projects. Stakeholders should also be involved in project planning and delivery.

Keywords. *Infrastructural projects; Challenges; Political interference; Project delivery etc.*

LIST OF ABBREVIATIONS

BOOT	Built-Own-Operate- Transfer
CIDA	Canadian International Development Authority
DA	District Assembly

DACF	District Assembly Common Fund
DANIDA	Danish International Development Agency
DBOT	Design-Built-Operate and Transfer
GETFUND	Ghana Education Trust Fund
IGF	Internally Generated Funds
JICA	Japan International Cooperation Agency
MMDA	Metropolitan, Municipal and District Assemblies
NGO	Non-Governmental Organisation
PPP	Public Private Partnership
PWD	Public Works Department

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Development is characterised by both social and physical infrastructure, yet developing societies and countries lack a wide range of infrastructures, ranging from soft infrastructure such as educational systems, health systems and hard infrastructure such as roads, electricity and public hospitals, and therefore, there is the need for extra investment in infrastructure as noted by Owusu-Manu et al. (2010).

A walk through developing countries, shows several uncompleted developmental projects / infrastructure (Olusegun and Michael, 2011), which Ghana, a developing country is not an exception in this menace. Arguably, every executed project, both successful and unsuccessful, faced some challenges as noted by Mossalam (2018). Almost no project can be delivered smoothly without facing some obstacles and issues. Some of these obstacles / challenges could be inadequate resources such as insufficient funds / budget, lack of qualified project staffs, tight deadlines / schedules, and stakeholder, demands that put excessive pressure on the execution of the projects (Mossalam, 2018). In Ghana, examples of projects that has faced challenges with their execution include the abandoned affordable housings projects initiated under His Excellency J. A. Kuffour's regime at Kpone and Kumasi, as well as His Excellency Gen. Kutu Acheampong's administration's police accommodation projects at Saltpond and Cape coast.

Project success has been described in a number of ways. whiles some considers the quality of the final deliverables or the tangibles, others say project success is determined by the

stakeholders and the sponsors Turner and Zolin (2012) as cited by (Serrador and Turner, 2014).

A successful project execution means that, the expectations of the project is achieved by all stakeholders (Zarina et al. 2014).

Infrastructure development helps to facilitate economic activities, expansion of communities, and improve the economy. Unfortunately, a large number of such capital developmental projects have been abandoned, stalled or forgotten, because “organisations fail in implementing their strategies even though they employ project, programme and portfolio management techniques” (Serra and Kunc, 2015) to their projects execution. Developmental projects are capital intensive, and requires critical assessment and considerations, feasibility studies and cost engineering before it is embarked upon. Therefore, the numerous uncompleted projects across the nation creates negative mental pictures, of poor and irresponsible planning by successive governments and technocrats, who manages the national resources.

The Metropolitan, Municipal, and District Assemblies are mandated to execute both hard and soft infrastructure / project interventions to ensure fair distribution of development in communities, towns and cities (The Republic of Ghana Constitution, 1992). However, many of such developmental interventions across the Districts and Municipals in Ghana, are either abandoned for lack of funds and other factors or takes too long to be completed (schedule overruns).

Zarina et al. (2014) indicated some critical inputs and practices that can directly and indirectly, lead to successful project execution or otherwise, the inputs can be summed up as, the project

management activities, project processes and procedures, human factors, external enterprise factors and project related factors.

In order to successfully execute this mandate, as enshrined in the local government Act 1993 (Act 462), the project team needs to clearly define the evaluation process to achieve project success. (Serra and Kunc, 2015). Even though several public institutions undertake capital projects, this study is conducted to investigate the challenges to successful execution of hard infrastructure at the local governance level, with specific reference to the Awutu Senya District Assembly, in the Central Region of Ghana.

1.2 STATEMENT OF THE PROBLEM

The District Assembly is a Public Office Established by an Act of Parliament, The Local Government Act 1993 (Act 462) and Amended as Local Governance Act 2016 (Act 936), it is mandated to facilitate governments infrastructure interventions in the local communities, through decentralisation and local governance as enshrined in chapter twenty of the Constitution. (The Republic of Ghana constitution, 1992).

The mandate is to ensure equitable distribution / provision of developmental projects in the districts. The successful execution of projects in the Assembly, such as school buildings, community clinics and durbar grounds, largely depends on how the project is managed and controlled. But the main difficulties of project execution have been linked to project planning, implementation, budget/cost, scheduling challenges and the quality of work.

(Zarina et al. 2014)

Unfortunately, many of the hard infrastructure / developmental projects started by the Municipal /District Assemblies across the nation has either been abandoned after its commencement or halted half-way, without completion (Olusegun and Michael, 2011).

The increasing number of abandoned public projects in the Awutu Senya District has necessitated this study, to examine the challenges that affects the successful execution of developmental projects, embarked upon by the Awutu Senya District Assembly, as an infrastructure development agent of the people.

1.3 AIM AND OBJECTIVES OF THE STUDY

1.3.1 Aim

The aim of the study is to investigate the challenges faced by the Awutu Senya District Assembly in the execution of infrastructural projects.

1.3.2 Objectives

In order to achieve the aim of the study, the following objectives are set.

1. To identify the types of infrastructural projects undertaken by the Assembly;
2. To outline the challenges faced by the Assembly in the execution of infrastructural projects; and
3. To proposed strategies that can be implemented to remedy the identified challenges.

1.4 RESEARCH QUESTIONS

The study is designed for find answers to the following research questions.

1. What types of infrastructural projects are undertaken by the Assembly?
2. What are the challenges faced by the Assembly in the execution of infrastructural projects?
3. What strategies can be implemented to remedy the identified challenges?

1.5 SCOPE OF THE STUDY

1.5.1 Contextual Scope

Projects are temporal endeavours undertaken to develop unique products, services or results (Project Management Institute, 2017). Therefore, any purpose driven activity undertaken by the Assembly qualifies as a project. There are a lot of projects in this regard, from soft infrastructure such as promoting girl child education, to hard infrastructure such as the construction of school buildings to provide a conducive teaching and learning environment for the girl child. However, this study is limited to identifying the specific challenges, and impediments to the successful execution of physical infrastructure public projects. The challenges may be numerous, but the study is limited to the triple constraints of time, scope and cost, and to ascertain possible remedies to the identified challenges.

1.5.2 Geographical Scope

Geographically, the current study was limited to the Awutu Senya District Assembly.

1.6 SUMMARY OF METHODOLOGY

As Berg (2001) stated, “research problems direct or drive the research enterprise and how the research will be eventually conducted”. The choice of a particular research case is closely linked to the possibility of obtaining access to an appropriate population of the potential study. Therefore, selecting a poor or wrong case study may adversely affect the final findings (Berg, 2001). To ensure that the eventual findings reflect the realities, the research would be carried out in the Awutu Senya District Assembly, in the Central Region of Ghana. A qualitative research method would be adopted in the study, using a non probability sampling technique.

Specifically, a purposive sampling approach, targeting at the personnel involved in project planning and delivery at the Assembly such as the works engineer, planning officer, the district chief executive officer, finance officer among others. A case study research design which employs inductive research approach was used. The inductive approach would allow the research to remain open to the unexpected, through interviews with the key stakeholders of the Assembly.

Both primary and secondary data were used for the study, the secondary data was gathered through literature review of existing studies in the current discipline.

1.7 SIGNIFICANCE OF THE STUDY

Every research work copiously contributes in one way or the other to advancing knowledge in a particular discipline or have some practical, policy and managerial implications (Bryman, 2016).

The current study seeks to examine the hindrances to the successful execution of physical developmental projects within the Awutu Senya District. As noted by Bryman (2016), “the finest piece of research would be useless, if it is not disseminated to others. This research unearths the challenges in executing public infrastructural project in the Assembly to students, researchers, the general public, and serve as reference document for other Assemblies. Again, the output of the study provides literature for decision making by policy makers, especially at the local governance level and add knowledge to literature in academia. Finally, interested students and researchers may use the results for further research works to enhance development in project management.

1.8 LIMITATION OF THE STUDY

As noted by Mossalam (2018), no project can be delivered smoothly without any obstacles. There were challenges in getting the respondents to avail themselves for the interview sessions, even though the purpose of the research had been explained to them. The research is not a complete analysis of all the challenges associated with infrastructure project delivery in the Awutu Senya District Assembly, for instance the study did not analyse the Administrative procedures in infrastructure project execution in the District Assembly. The findings of the research apply mainly to the study area and cannot be generalized as the true reflection of what happens in other District Assemblies in Ghana, since they operate under different traditional, socio-economic and financial conditions. Despite the outlined challenges, the research was conducted in an unbiased manner.

1.9 STRUCTURE OF THE RESEARCH

The research is organized into five chapters. The introduction of the study is contained in chapter one, with discussion on issues such as the background of the study, the problem statement, aim and objectives of the study, scope, summary of methodology, significance of the study among others. The second chapter reviews relevant literature on the study. The methodology used for collecting and analysing primary data for the study is captured in the third chapter. This includes explanation of the study population, sample size, sampling technique among others. The fourth chapter comprise of presentation and discussions of the results of the study while the fifth chapter summarises the findings and conclusions drawn from the results of the study, and finally recommendations are also made in this chapter.

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CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The Ghanaian government in its bid to make governance comprehensive established Metropolitan, District, and Municipal based units. This is to assist in engaging more people at the various levels to partake in governance, and as well make governance available at the grassroots. The assemblies moreover oversee to government's physical developments within their jurisdiction. This chapter conducts conceptual, theoretical and empirical review of literature on infrastructure delivery by MMDAs. Specifically, section 2.2 provides a review of various concept relating to the current study such as meaning of infrastructure, types of infrastructure, the MMDAs and their roles in infrastructure delivery, challenges with physical infrastructure delivery and strategies to address construction infrastructure delivery challenges.

2.2 CONCEPTUAL REVIEW

2.2.1 Understanding Infrastructure

Various definitions of the term infrastructure have been proposed by researchers over the past years. Sheffrin (2003) and Moteff et al. (2003) posit that infrastructure as the services and facilities required for the economy of a country to be in operation. They comprise facilities such as bridges, roads and other public works. Wochong (2009) on the other hand view infrastructure as mainly large structures made of concrete and steel like roads, power plants, water supply systems, information and communications systems. The above authors further argue that these elements of the built environment are central to a country's economic growth

and that no country in the world can succeed without a solid infrastructure base. Cleveland (2008) after agreeing with the above scholars posited that infrastructure provides the link between people and the planet. The quality of infrastructure determines the quality of life of the people who live in a country (Chism, 2009).

The planning professionals and academics come with different understanding with respect to infrastructure. Certainly, researchers have accepted that there exists no definition for infrastructure creating challenges since the elements of infrastructure stand to be hard to be identified and for instance the differences between physical and transport infrastructure as well as social and soft infrastructure frustrate people the more (Hanseth et al. 1996).

According to Johnson (1996), physical infrastructure includes „location fixed assets“ like recreational facilities, bridges, airports, sewage facilities, and water facilities. The researcher further categorized infrastructure in terms of „overcoming distance“ like airports or roads; those that „increase productivity or utility“ like electricity and water; and finally those that „enhances access to service“ like hospitals and schools.

Also, Moreno et al. (1997) came up with a simple peculiarity of basic infrastructure like utilities and highways, roads, as well as social infrastructure like education and health.

According to the World Bank as cited in Wang (2010) public utilities include telecommunication, electricity, gas supply, and water, as well as „public works“ like dams or roads, and also transport system like public transport, railways, airports and sea ports.

All the preceding definitions show a typical understanding concerning infrastructure as mainly transport facilities, they also included utilities that in the developed countries are normally overlooked –utilities like water, gas, and electricity. Only a handful of the scholars added social infrastructure facilities like health and educational facilities. While distinct transport

and physical infrastructure facilities are normally identified like the aforementioned, the actual concept on social infrastructure seemed to be slightly discussed even though some of the researchers included education and health facilities in their scope of infrastructural definition.

The services created by means of enough infrastructure base will go down to upsurge agricultural output through improved roads, rail links, creation of sea ports, electricity generation, distribution and transmission, irrigation projects among others –increasing the quality of life of the people and ensuring urbanization of different regions (Akinyosoye, 2010).

Infrastructure constitute a significant element in alleviating poverty. Infrastructure act as catalyst to growth and improves the interventions for enhancing the poor's access to assets like financial, human, natural and social assets. The impact of infrastructure is felt on the social and economic sectors. For instance, without roads, the vulnerable in society cannot sell their products at the various market centres. In India, studies have shown that road infrastructure alone account for 70% of growth in aggregate products in the rural centres. Also, without electricity, the process of industrialization is unlikely to start. For instance, in Costa Rica, reflective review of electrification to the rural centres shows that major businesses raised from 15% to 86% after the project. Pouliquen (2000) suggest that, without sanitation and portable water health is at stake. The economic and social impacts goes hand in hand most often.

Most of the poor people in the world live the rural communities that are isolated by terrain, distance and poverty from economic and employment opportunities, education, markets and healthcare. Lack of basic facilities like bridges, paths, roads and trail as well as accessing

transport services make life difficult for them to access services and markets. Rural isolation imprisons the people with physical challenges including the elderly. Starkey and Hine (2014) posits that good investment alone is able to solve the challenges posed to the people in the rural areas who mostly constitute the poorest households.

Adequate distribution of infrastructure services has for some time now been regarded as significant for poverty reduction and economic growth, both in academic and policy realms. Recently, the attention on how infrastructure alleviate inequality and poverty has seen an increase as noted by Ogun (2010), Ariyo and Jerome (2004) and Estache and Wodon (2010). Infrastructure plays a significant role in economic growth and this has been shown that improving infrastructure stands the chance of culminating higher productivity (Buurman and Rietveld, 1999; Rietveld, 1989), higher investments and exports (Richaud et al. 1999).

2.2.2 Types of Infrastructure

Over the past years, the definition of infrastructure in policy terms has been fluid among scholars. The term is defined to include both public and private systems, services, and even amenities, and broadly such social amenities (such as hospitals, schools, and prisons), and it sometimes encompasses industrial capacity as well (Moteff et al. 2003). Various types of infrastructure such as transport (e.g. sea ports, roads, airport etc.), public utilities (e.g. water and electricity supply), public services (e.g. fire service and police), national services, energy (transmission and generation), agriculture, communications (satellite, television, cable etc.) and financial services, have been identified by researchers including; Cohen (2002), D'Amour (2002), Atkinson (2003), Moteff et al. (2003), Cardone and Fonseca (2006).

The review of the literature also suggests that two other words are commonly used to describe infrastructure. services and stock. The first term which is infrastructure services, include facilities for the provision of energy, transport, and water. The stock of infrastructure assets on the other hand includes all facilities which produce the flow of services in a community. This study deals both types of infrastructure (Ness, 2008). The people normally see infrastructure just from the transportation sector. Nevertheless, infrastructure includes not just hard or physical infrastructure like railways or roads, but also social facilities like affordable housing, community activities, or education (Keast et al. 2009).

2.2.3 Infrastructure and National Development

A review of the works of scholars such as Dirie (2005), Kumar et al. (2006), Foster (2008), and Ketkar and Ratha (2009), revealed that infrastructural assets play major role in society to the extent that their absence is considered to be a major problem which withholds development and growth in an economy. Consistent with other reports, infrastructural assets are key to the lives of people and economic production. To some scholars and researcher's infrastructure is viewed as engine or wheels of economic growth in any country (Estache, 2004). Estache (2004) further argued that infrastructure aid to increase the benefits of growth, which create more inclusive development process.

A number of studies have come to a consensus that the existence of proper physical infrastructure increases the foreign direct investment by lowering the “cost of total investment” incurred by foreign investors and thus increasing the rate of return (Estache,

2004). Thus, it is been debated that government expenditure on infrastructural development should proceed during the times of financial adjustment because such expenditures pair private investment as well as portend economic development in the long-term. Indeed, research carried out by the World Bank indicate that public spending on basic infrastructure do not just raises productivity but they encourage as well private investment. Foster (2008) also added that infrastructure plays major role in the economic shift of Africa and thus should play even higher role with respect to continental growth targets. Estache (2004) argued that, in addition to infrastructure supporting economic growth infrastructure also reinforces the distribution of the benefits of growth. From the above discussion Foster (2008) maintain that government should focus much on infrastructure development so as to eliminate poverty, enhance economic growth and help in the achievement of the development goals of the country. In the study by Estache (2004), he noted that economic returns on infrastructure projects such as telecommunications are averagely over 30 - 40 % and over 200% for roads.

2.2.4 Delivering Infrastructure

Just like funding, the literature review indicated that two methods exist for delivery of infrastructure projects. the public-sector approach and the private sector approach. The public sector approach is viewed as the traditional means of providing infrastructure projects. However, looking at the huge responsibility on government coupled with the lack of funds, the intervention of the private sector has become one of the efficient means of providing infrastructure (US Federal Highway Administration (2002) and Cohen (2002). Ploeg and Casey (2006), emphasize that in the application of any form of financing mechanism, certain characteristics and objectives of the project involved must be established and studied critically

before any decision should be made on the financing mechanism. The research stresses that even though there are limited methods, however various number of tools can be applied, in each existing method hence developers and the government should explore the innovative financing tools with each method.

2.2.5 MMDAs and Infrastructure Projects Delivery in Ghana

As noted earlier, infrastructure is critical to the survival of the activities of the various sectors of an economy. The quality of infrastructural assets in a community or country determines the quality of life of the people (Chism, 2009). In view of the above, it has been on the policy directives of the government of Ghana to increase infrastructure asset delivery in the country. In line with the above, the decentralization system was adopted which led to the formation of Metropolitan, Municipal and District Assemblies (MMDAs) in Ghana. The role of the MMDAs is to ensure the delivery of social, education (e.g. schools), health (hospitals, clinics etc.), transport (roads) and economic infrastructures at their areas of jurisdiction (Moteff et al. 2003).

The MMDAs were to be the fulcrum of government machinery and to be the main body to make developmental and administrative decisions in the districts. The District Assemblies have been chosen to be the highest legislating, planning, budgeting and political authority at the local level. The Local Government Act (Act 462) of 1993 underpins the constitutional provision for the operation of these MMDAs. MMDAs are to monitor as well as initiate to completion, the delivery of physical infrastructural projects. For example, in the provision of education services, basic education is assigned to MMDAs while the central government has control over education policy and vocational/technical and tertiary education. In health

services MMDAs main task are public health, environmental protection and sanitation. As regards to utilities, MMDAs exercise complete responsibility over water supply service while the central government takes control of electricity production and distribution (section 10 (3) of local government Act (Act 462)).

2.2.6 Financing of Infrastructure Project Delivery at the MMDAs

There is no doubt that for effective and efficient implementation of the functions of the MMDAs in infrastructure delivery, there is the need for strong financial support. According to Kazentet (2011) currently the traditional sources of funds for the local authorities include the following.

- (a) Identified Licenses, Rates and Taxes
- (b) Interest on Investments
- (c) Shared Revenues
- (d) Profits from trading activities and projects
- (e) Loans and overdraft facilities to the tune of Two thousand Ghana cedis (Gh¢2000.00) subject to the endorsement of the Ministry of Local Government and Finance.
- (f) Local and foreign grants

2.2.7 The District Assemblies Common Fund (DACF) - 1992 constitution, section 252

Even though the District Assemblies (DAs) were expected to be self-sufficient through the “Ceded fund” and the traditional sources of finance, most were finding it difficult in getting enough money for salaries, wages and development projects. Thus to address these financial

deficiencies among the MMDAs, the District Assembly Common Fund (DACF) was established by the 1992 Constitution. Section 252 of the constitution provides the following.

- (i) There shall be a fund to be known as the District Assemblies Common Fund.
- (ii) Subject to the provision of this constitution, Parliament shall annually make provision for the allocation of not less than five percent (5%) of the total revenues of Ghana to the District Assemblies for development and the amount shall be paid in quarterly instalments.
- (iii) The monies accruing to the DAs in the Common Fund shall be distributed among all the DAs on the basis of a formula approved by Parliament.
- (iv) There shall be appointed by the President with the approval of Parliament, a District Assemblies Common Fund Administrator.
- (v) Parliament shall by law set the function and tenure of office of the Administrator in such manner as well to ensure the effective and equitable administration of the DACF.

It has been argued that the introduction of the DACF is one of the most innovative and people centered measure ever introduced into the country's local government system. The rationale behind this DACF concept is to ensure the central pooling of resources so that both the financially advantaged and disadvantaged Districts would be fairly financed to enable them carry through the building of the requisite infrastructure and logistics to improve the standard of living of the rural folks (Dirie, 2005)

In the year 1994 the DACF was launched as a step towards the decentralization of fiscal resources of the country. As a form of innovative financing of infrastructure, the district assemblies were restricted on the areas the money is to be expended. About half of the

money is to be expended in respect of the central government's priority spending areas. This included mainly capital projects. The remaining part of the money is often used to match donor funding (World Bank, 2003). Until recently (PPP in waste management), most district assemblies have not been much innovative in financing of infrastructure projects on the local front, to the extent that in implementing the Ghana poverty reduction strategy, district assemblies have been criticized for over reliance on centrally provided DACF funding, Jack and Braimah (2004) as cited by Dirie (2005). As seen from above the use of the DACF to finance infrastructure is innovative in so long as it involves earmarking part of the general revenue for infrastructure development which was traditionally not the case. The use of the DACF to finance infrastructure also involves new financing mechanisms created to leverage resources (matching donor funding), and this makes the approach innovative (Ahwoi, 2010).

2.2.7.1 Internally Generated Funds (IGF)

The MMDAs rely on internally generated funds for their developmental projects. In general, two main types of revenue are common in Ghana including most African countries (i) own revenue and monies from regional and national levels. The latter revenue includes user levies, taxes, and other fees. Transfers from regional and national levels come in the form of revenue sharing and grants. This source of funding has been found not be adequate in addressing the financial needs of the MMDAs.

2.2.7.2 Donor Supports

Grants and funds from donor countries, Banks and NGOs have been one of the major sources of funding rural infrastructure projects in Ghana. Notably among these donor funding agencies are the World Bank, UNICEF, the European Union, CIDA, DANIDA,

JICA and other international NGOs, GETFUND (Casely-Hayford et al., 2007). Despite all the above interventions by the government and other development partners, most rural communities continue to bemoan poor conditions. Rural communities in Ghana have been confronted with acute water shortage problems. Many people especially in the rural areas still rely on rivers, streams, dug-outs and reservoirs for their domestic water needs. In most cases, livestock also drink from these same sources of water. This pose far-reaching and endless health hazards to the users of these water sources. There still exists lack of basic educational facilities necessary for good quality education in most deprived rural communities in Ghana. School children under the 21st Century, still sit under trees for lessons and others sit under very precarious dilapidated school structures or blocks to learn, thereby exposing them to danger (Swann, 2011). The above challenges therefore call for stakeholders to find alternative innovation sources of funding infrastructure projects at the rural communities.

2.3 EMPIRICAL REVIEW

The section discusses the various literature as observed by other researchers through experiments, surveys and scientific research, to review issues that affect infrastructure delivery.

2.3.1 Challenges with Construction Infrastructure Delivery

This section discusses infrastructure delivery challenges identified by researchers. These challenges leads to delays, cost overruns, poor quality work among other issues.

2.3.1.1 Financial Difficulties

Most MMDAs in Ghana face financial challenges as a result of their heavy dependence on the government (Zagorsky, 2007). As a fallout of this, development projects embarked on by the assemblies are affected. As noted by Frimpong et al. (2003) and Arshi and Sameh (2005), owners/clients' delay payment to the project contractors, puts the contractors in financial difficulties and as result affect cash flow for the project delivery. The Auditor General's report in 2017 revealed that a number of developmental project have been abandoned in Ghana because of failure of the client to pay the contractor (Auditor General's Report, 2017).

2.3.1.2 Corruption

Corruption in the procurement process according to Osei-Tutu et al. (2010) has affected development projects. It was found that significant portion of funds for development are channelled into individual's pocket. Moreover, contractors are made to pay bribes before being given contracts. These practices hamper the quality of infrastructure project delivery in Ghana (Auditor General's Report, 2017; Osei-Tutu et al., 2010).

2.3.1.3 Defective and Poor-Quality Works

Failing to work as specified in the project contract causes defective works as Gerskup (2010) posits. Kedikilwe (2009) also aver that poor workmanship causes several defects to structures. Using inferior materials constitute one aspect of poor workmanship. That is, the collapse of structures has been linked to the use of poor quality materials (Binici, 2007).

2.3.1.4 Influence of Processes by Political Heads

Political powers constitute significant challenge to the delivery of projects in the PWDs. Political leaders normally try to affect processes as they bring “party-faithfuls” for contract awards. This constitute one major challenge in projects delivery, as majority of these “partyfaithfuls” are incapable of carrying out such tasks. Also, anytime there is a change of government most projects are repackaged and they are given out to these same “party faithfuls”. Asante (2014) highlights that “in various areas of business, success mostly decreased to who you know instead of what you are capable of”. This is true especially when political affiliation is used in awarding government contracts, and it is common in the developing countries especially. Political powers affect decisions on contracts like awarding several contracts to just one particular contractor at a go; not on the basis of competition.

2.3.1.5 Poor Communication

According to Dunkelberger (2009) communication remains essential in every project delivery as it is capable of causing a failure or success of the project be it the initial or the completion stages. Communication as a result is a very significant factor and communication failure effectually affects a project. Poor communication between the project team have resulted in disputes, claims, time and cost overruns.

2.3.1.6 Stakeholder Involvement

Poor stakeholder involvement in project execution has been found to be one of the key elements affecting project delivery (Boakye-Agyei, 2006). Jones (2000) argued that development concept would be greatly enhanced if processes are made to be sensitive to the

complexities of communities’ history and intricate socio-cultural priorities. Poor stakeholder management has led to the failure of many projects (Boakye-Agyei, 2006).

2.4 STRATEGIES TO ADDRESS CONSTRUCTION INFRASTRUCTURE DELIVERY CHALLENGES

According to literature review, the problems regarding infrastructure delivery can be addressed through the implementation of some of the following strategies.

2.4.1 Effective Inclusion of Stakeholders in Project Delivery

Stakeholders’ involvement in project delivery has been hailed as a good step towards project success (Yang and Ou, 2008). Freeman (1984) describes the stakeholder concept as any individual, or group that get affected or can affect project outcomes of the firm’s objectives. According to Olander and Landin (2008) stakeholders can impede or benefit from a project base on their intention or power to affect project outcomes according to the individual expectations and concerns. This alone support the importance of carrying out inclusive analysis on the influence of stakeholders so as to appreciate how to carry out good management of the project’s stakeholder in project delivery.

2.4.2 Adequate Project Financing

The financing of project has been one of the major problems facing infrastructure delivery at the MMDAs in Ghana. A number of construction project have been abandoned in Ghana due to lack of funds (Auditor General’s Report, 2017). Thus, to enhance project delivery there is the need for adequate project financing.

2.4.3 Implementation of Innovative Project Financing Tools such As Design-Built-

Operate and Transfer (DBOT)

The problem of inadequate funds from the government may continue to plague infrastructure delivery at the MMDAs. However, according to Saeed (2016) the implementation of innovative project financing mechanisms can help MMDAs address infrastructure delivery problems. The BOOT systems is used to increase infrastructure delivery where the client has limited funds to execute a project (Arditi et al. 2002). The design-build approaches constitute a typical single contract between the project client and the design-build body. According to Arditi et al. (2002) in the design-build system, the entity is in charge of both the construction and the design. The developer is also allowed to recoup the cost of investment by operating the facility for an agreed period of time. The design-build system is beneficial as the entity is involved in the design, fast-track planning is possible, and entity has enough control over the products. Acting as one entity and being driven by profit, the system stands the chance of having conflict with the project client. A design-build entity reduces costs on the side of client since there exist no independent agent to scrutinize the quality of the design as well as the construction unlike the construction stage of design-bid-build when the client, project designer, and project contractor work hand in hand. The design-build approach can be used where the client hires a professional to be in charge of administrative duties in the owner's interest (Dibner, 1983). A typical design-build system between the designer and the contractor is frequently compared to the design-bid-build. The lasting partnership between the designer and contractor through the phases of the project reduces constructability challenges as the designer understands what the contractor requires with respect to the design (Arditi et al.

2002). The design-build system is used especially when the project scope falls inside the capacity of the designer and the extra upfront cost stand not to be a problem.

2.5 SUMMARY

Challenges identified from the preceding literature which were ranked per their severity levels included environmental and weather challenges, labour shortage, inadequate logistics, material shortage, equipment and tools shortage, lack of cooperation and coordination of relevant stakeholders, unrealistic project timelines, contractor's financial constraints, poor site management, and inefficient contractor selection methods and procedures. These variables constituted the highest ranked challenges per the data gathered from the field and discussed in the next two chapters. There is the need for the government as well as other managers of the country's economy to consider the needs of PWDs on top of the priority list and as well assist them with logistics and better incentives to heighten their performance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The chapter presents the methodology used in conducting, collecting and analyzing the primary data for this research. This encompasses the research design, strategy, background of the study area, study population, sample size, sampling technique and data analysis.

3.2 RESEARCH STRATEGY AND DESIGN

Research design is the comprehensive strategy adopted to address the research problem. It is a qualitative research with a descriptive approach. Dane (1990) defined descriptive research

as a thorough examination of the research problem, for the specified purpose of phenomenon, measuring and clarifying it. The strategy offers the overall organization and procedures the researcher must follow in the data collection and analysis. Basically research design is “planning” (Leedy and Ormrod, 2001). There are numerous research designs, some are experiments, surveys, Case study, Action Research, Ethnography and Archival Analysis. But this study adopted case study research design. The research design permits one to gather large data from respondents. This method aided in gathering data from the Assembly’s technocrats in analyzing the challenges associated with project execution in the Awutu Senya District Assembly.

A number of research approaches were identified during the literature review which included quantitative, qualitative, and mixed methods. Though, the most frequently used method by previous studies was the quantitative research approach, in which case, data is typically in numeric form and makes it easier to apply statistical tests in the effort to analyze the data. Nonetheless, this study employs qualitative approach where purposive sampling technique is adopted to allow the researcher to derive essential facts from the research data using content and thematic analysis. The study is focused on a particular study group, primarily inductive and describes the problems and challenges from the point of view of the technocrats at the Assembly.

3.3 POPULATION

The study population of the research is the space of units from which the sample is selected (Bryman, 2004). In this current research, the target population (study respondents) consist of the key personnel / technocrats of the Assembly involved in project execution. These are

departmental and unit heads at the Assembly, they are the district chief executive, district coordinating director, the head of finance, the development planning officer, the physical planning officer, the budget officer, the head of works department, the chief technical officer, the quantity surveyor and the procurement officer. The scope of study is limited to the Awutu Senya District Assembly, therefore only officers of the Assembly are involved.

3.4 SAMPLE AND SAMPLING PROCEDURES

The sampling technique and size, vital for a study is swayed by several factors, this include the, purpose of the study, the population size, the anticipated level of precision, the level of confident or risk and the degree of inconsistencies in the attributes being measured (Glenn, 2012). According to Glenn (2012), sample size for a study could be drawn by using figures in published tables, sample size of other similar studies, a consent for small populations and a variety of formulae. It was difficult to engage all the technocrats at the Assembly therefore, a purposive sample technique was used, which targeted ten (10) heads of departments and units. These key management personnel responsible for infrastructure planning and delivery, were engaged whilst the non-management staffs were excluded. The accounts of the management staffs are; the Coordinating director, the head of Works Department, the Finance officer, the development planning officer, the budget officer, the procurement officer, the quantity surveyor, the physical planning officer, the chief technical officer and the District chief executive was solicited and accepted to represent the views of the departments and units since they (collectively) are responsible for the day to day management of the Assembly.

3.5 DATA COLLECTION TECHNIQUES

3.5.1 Sources of Data

The research was carried out using both primary and secondary data. The secondary data was collected from literature review of previous thesis, journal publications, the internet, books etc. However, the primary data was collected from the field interviews.

3.5.2 Data Collection Instrument (Primary Data)

Primary data for the study was gathered using an interview guide. The interview guide had two parts. Part one capture the background data of the interviewee such as position, working experience and highest qualification, while the part two questioned all the relevant inquiries essential to achieve the aim of the study. In detail part two required the interviewees to explain their roles in project execution as well as, the challenges they encounter in delivering their roles towards the successful project execution in the Assembly. A copy of the interview questions and the transcripts are attached at the appendix.

3.5.3 The Fieldwork

The interview was conducted by the research. The researcher visited the Assembly six times on different working days to interview the officers at separate times, as was suitable to them. The data was done in 2 weeks in the month of August, 2019. A total of ten senior officers were targeted but two of them could not avail themselves for it, and hence excluded from the data analysis.

3.6 DATA ANALYSIS TECHNIQUES

The data analysis was done using content and thematic analysis. The key points raised by each of the respondents were noted and organized under 4 thematic areas. These thematic areas were selected based on the objectives of the study.

3.7 ETHICAL CONSIDERATIONS

The consent of the selected interviewees was inquired and the purpose of the study clarified to them. This enabled the respondents to comfortably answer the interview questions with all honesty devoid of any intentional cover ups. The secrecy, privacy, and anonymity of the responses were highly treated. The interview questions were in simple language, devoid of technical terms, and vocabulary to minimize potential of misinterpretation of the questions. All documents used for the research work was appropriately referenced, to void plagiarism.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 INTRODUCTION

This chapter presents the results of the interview conducted among the staffs of the Assembly. Specifically, sections 4.2 addresses the background of the interviewee while the types of infrastructure projects embarked on by the Assembly is captured in section 4.3. Next stakeholders involved in the planning and execution of projects by the assembly are discussed in section 4.4. The last two sections discussed the challenges associated with the delivery of infrastructure projects by the Assembly.

4.2 BACKGROUND OF INTERVIEWEE

The first section of the interview sought to draw information about the background characteristics of the interviewees. From the interviews it was found that these respondents have enormous experience in their respective fields. As shown on Table 4.1, four out of the 8 interviewee had over 20 years of experience in the industry and the local government service. Only one person had less than 5 years of working experience. As argued by Bryman (2016) and Naoum (2006) the level of experience of study respondents influence the credibility of their response. In the current study, it can be deduced that the high experience of the interviewees places them in a good position to address issues pertaining to development projects at the Awutu Senya District Assembly.

These respondents comprised the Planning officer, the head of works, Procurement officer, Chief engineer, Chief technical officer, Budget officer, Assistant technical officer and 1 NABCO trainee. The people play instrumental role in the planning and execution of developmental project in the district.

Table 4.1 Years of Working Experience of Interviewee

Variable	Interviewees							
	P1	P2	P3	P4	P5	P6	P7	P8
Years of working experience (years)	21	8	11	35	30	6	21	2

Source. Research Data (2019)

4.3 TYPES OF DEVELOPMENTAL/ INFRASTRUCTURE PROJECTS

UNDERTAKEN BY THE ASSEMBLY

According to Akinyosoye (2010), infrastructure is a key element of poverty alleviation. It often acts as a catalyst to development and enhances the impact of interventions to improve the poor's access to other assets, e.g., human, social, financial, and natural assets. Its impact is felt both on the economic and social sectors.

One of the objectives of the current study was to identify the types of developmental projects being undertaken by the Assembly. From the interview results it was found that a number of projects are undertaken by the Assembly. This include educational infrastructure, markets, stores, civil and road infrastructure, mechanized boreholes for water supply among others. Quoting one of the interviewees.

“we embark on a number of developmental project such as roads to meet the growing needs of our people. These infrastructures are key to business growth. For instance, without roads, the people are not able to sell their output on the market. Construction of school buildings also helps to promote effective teaching and learning. The same is pipe borne water”

These developmental projects according to some of the study participant are financed by NGOs, the government of Ghana, Donor funding agencies (World Bank, UNICEF, the European Union, CIDA, DANIDA, JICA) or the Assembly using internally generated funds. They further revealed that despite the efforts being made, there are still large infrastructure gaps that needs to be filled as a results of inadequate funds. The above finding confirms the early report by Dirie (2005), who noted that the problem of inadequate funding has created a large infrastructure gaps in many rural communities and Assemblies.

4.4 STAKEHOLDERS INVOLVED IN THE PLANNING AND EXECUTION OF DEVELOPMENTAL PROJECTS

Stakeholder management in infrastructure delivery has been hailed by many researchers such as Olander and Landin (2008), Kolk and Pinkse (2006) and Elias (2012) as a good step towards effective project delivery. As part of the focus of the current study, the interviewees were asked about the stakeholders who are involved in the planning and execution of development projects at the Assembly. Quoting one of the respondents

“Usually the assembly is involved in the planning and execution of development projects. In few cases, the Assemblymen, Unit committee members, and the chiefs are invited depending on the projects to be embarked on”.

Another respondent also stated the following.

“Stakeholder management is a major problem in this assembly. Due to political interference, most of the decisions are taken at the higher level and the decision imposed on us”

From the above results, it is evident that the assembly is not benefiting from the inputs of the stakeholders.

4.5 CHALLENGES FACED BY THE ASSEMBLY IN THE EXECUTION OF DEVELOPMENTAL PROJECTS

One of the objectives of the current study was to examine the challenges faced by the assembly in the execution of developmental projects at the Assembly. Table 4.2. shows a summary of the issues raised by the respondents.

4.5.1 Political Interference

Political influence is a major challenge to project delivery within the assembly according to most of the interviewee. In explaining this some of the people explained that Political heads try to influence the processes by bringing in party-faithful for the award of contracts. This is a major challenge to project delivery as most of them are not competent to carry out these works. On the other hand, when there is a change of government projects are sometimes repackaged and given to the new contractors. In the worst-case scenario, projects are sometimes abandoned all together for new projects. The above finding confirms the early report by Asante (2014).

4.5.2 Insufficient Funds for Project Delivery

“Insufficient funds have been the source of many of the problems the assembly is facing” per the quote from one of the respondents. Abandonment of projects, project delays, delays in the payment of contractors for work done are also as a result of insufficient funds. In line with the above, it was also found that the central government usually delay in the release of funds (e.g. Common Funds) to the Assembly. This put the Assembly in financial constraints. The above finding is not different from that of Boakye-Agyei (2006) and Dunkelberger (2009).

4.5.3 Lack of Stakeholder Involvement in Project Delivery

Poor stakeholder involvement in project execution has been found to be one of the key element affecting project delivery according to Boakye-Agyei (2006). Jones (2000) also argued that development concept would be greatly enhanced if processes are made to be sensitive to the complexities of communities’ history and intricate socio-cultural priorities. Poor stakeholder management may lead to failure of many projects (Boakye-Agyei, 2006). In the current study,

it was found that there is the problem of poor stakeholder engagement in project delivery. The above finding may be partly attributed to the frequent abandonment of projects in the Assembly.

Table 4.2 Challenges Faced by the Assembly in the Execution of Developmental Project

Sn	Challenges	Interviewees							
		P1	P2	P3	P4	P5	P6	P7	P8
1	Political interference	*	*	*	*		*		*
2	Insufficient funds for project delivery	*			*				
3	Delay in release of funds by the Central government	*	*	*	*	*		*	
4	Abandonment of projects	*		*		*			
5	Lack of stakeholder involvement in project delivery	*		*	*		*		
6	Poor planning	*		*		*	*		*
7	Land disputes			*				*	
8	Project Delays	*			*	*			
9	Project cost overruns		*		*				
10	Over awarding of contracts				*	*			
11	Delay in Payment of contractors		*			*		*	*

Source. Research Data (2019)

4.6 STRATEGIES THAT CAN BE IMPLEMENTED TO REMEDY THE

IDENTIFIED CHALLENGES

Table 4.3 also summarized the strategies proposed by the respondents for addressing the challenges to infrastructure delivery at the Assemblies. The strategies are perfectly in line with the identified challenges.

Table 4.3 Strategies to Address Challenges with Developmental Projects

Sn	Strategies	P1	P2	P3	P4	P5	P6	P7	P8
1	Works done by the assembly should be devoid of political interference and conflict of interest	*	*	*	*		*		*
2	Adequate funds should be available before commencement of a project	*			*				
3	Early release of funds by the Central government	*	*	*	*	*		*	
4	Realistic budget allocation for the activities of the assembly			*					*
5	Stakeholders should be involved in project delivery	*		*	*		*		
6	Proper planning and budgeting	*		*		*	*		
7	Procurement plans should be strictly adhered to		*	*					*
8	Teamwork	*			*	*			

Source. Research Data (2019)

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presents the summary of findings from the study, the conclusions drawn as well as recommendation made. Areas that requires further studies have also been highlighted.

5.2 SUMMARY OF FINDINGS

The current study sought to examine the challenges faced by the Awutu Senya District Assembly in the execution of development projects. Based on the interview results the following are the key findings with respect to the various objectives.

5.2.1 Types of Infrastructural Projects Undertaken by the Assembly

It was found that the Assembly embark on a number of infrastructural projects to meet the needs of their community. These project include educational infrastructure, roads reshaping, health infrastructure, markets, store buildings, pipe borne water supply (bore holes) among others. These projects are financed by the central government, donor support organizations (such DANIDA, JICA, World Bank, UNICEF etc.) or the Assembly. It was also found that despite the effort of the assembly and other stakeholders, there still exist a huge infrastructure gap that needs to be fulfilled.

5.2.2 Challenges Faced by the Assembly in the Execution of Infrastructural Projects

A number of complex challenges were found to militate against the execution of infrastructural projects at the Assembly. The notable challenges are.

1. Political interference
2. Insufficient funds for project delivery
3. Delay in release of funds by the Central government

4. Abandonment of projects
5. Lack of stakeholder involvement in project delivery
6. Poor planning
7. Land disputes
8. Project Delays
9. Project cost overruns
10. Over awarding of contracts
11. Delay in Payment of contractors

5.2.3 Strategies that can be Implemented to Remedy the Identified Challenges

The study also found the following as effective strategies to addressing the challenges with infrastructure delivery.

1. Works done by the assembly should be devoid of political interference and conflict of interest.
2. Adequate funds should be available before commencement of a project.
3. Early release of funds by the Central government.
4. Realistic budget allocation for the activities of the assembly.
5. Stakeholders should be involved in project delivery.
6. Proper planning and budgeting.

5.3 CONCLUSION

The execution of infrastructural projects is key to the success and improvement of the livelihood of people in the Awutu Senya District. However, the existence of a number of

challenges such as inadequate funds, political interference, lack of proper planning and lack of stakeholder involvement / engagement has hampered developmental projects at the Assembly. Thus effort and measures needs to be put in place to address the various challenges.

5.4 RECOMMENDATION

Based on the findings of the study the following recommendations are made.

1. ***Lack of Political Interference*** - One of the major issues that arose from the current study was the issue of political interference in the activities of the Assembly. This issue creates so many problems. For instance, it was reported by the respondents that contracts for the execution of developmental projects are usually politically manipulated and awarded to a contractor who may not be competent to do the work. These political interferences and conflict of interest needs to stop to pave way for developments within the District.
2. ***Proper Planning*** - It is also recommended that there should be proper planning by the Assembly. This planning should include realistic budgetary allocations to all developmental projects. Moreover, no project should commence without adequate financial preparations. Existing projects should be completed and the contractor paid before new ones are started.
3. ***Stakeholder Involvement*** - The involvement of all stakeholders in the planning and execution of developmental project is viewed as a good step towards addressing some of the problems encountered in project delivery.

5.5 FUTURE RESEARCH DIRECTIONS

It is recommended that future research should look at the following topics.

1. Effective stakeholder management by the Assembly in the delivery of development project
2. Future studies should also look at extending the scope of the current study to other MMDAs

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KNUST

APPENDIX

INTERVIEW GUIDE

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY (KNUST)

DEPARTMENT OF CONSTRUCTION TECHNOLOGY AND MANAGEMENT

“ANALYZING THE CHALLENGES ASSOCIATED WITH INFRASTRUCTURAL

PROJECT EXECUTION IN THE AWUTU SENYA DISTRICT ASSEMBLY”

Instructions to Interviewees

This is a qualitative study. Your knowledge of the subject-matter of the research, views, experiences and opinions are central to the study. Therefore, kindly answer the main and follow-up questions as exhaustively as you can so that your rich experiences can be captured in this study. Anonymity and confidentiality of all responses is assured / guaranteed.

SECTION A. BACKGROUND OF INTERVIEWEE

1. What is your position of in the Assembly?
2. How many years have you worked here?
3. How long is your overall number of working experience?

SECTION B. ISSUES PARTING TO DELIVERY OF INFRASTRUCTURE

PROJECTS AT THE ASSEMBLY

1. What role do you play in physical infrastructure project delivery at the assembly?
2. What are types of developmental projects are undertaken by the Assembly?
3. Who are the stakeholders involved in the planning and execution of infrastructural projects by the assembly?
4. What challenges are faced by the Assembly in the execution of infrastructural projects?
5. What strategies that can be implemented to remedy the identified challenges?

