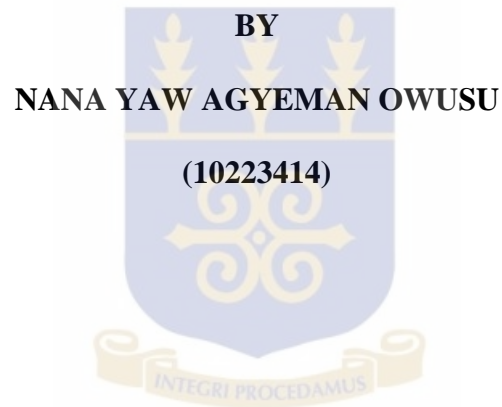


UNIVERSITY OF GHANA

**FUNDING E-GOVERNMENT PROJECTS IN GHANA: A CASE STUDY OF THE
GHANA ELECTRONIC GOVERNMENT (GEGOV) PROJECT**



**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN
PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF
MPHIL PUBLIC ADMINISTRATION DEGREE**

JULY, 2015

DECLARATION

I hereby declare that this work is the result of my own research and has not been presented by anyone for any academic award in this or any other university. All references used in the work have been fully acknowledged.

I bear sole responsibility for any shortcomings.

.....

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.....

DATE



CERTIFICATION

I hereby certify that this thesis was supervised in accordance with procedures laid down by the University.

.....

DR. KWAME ASAMOAH

.....

DATE



DEDICATION

The work is dedicated to my beloved mother and sisters, Mrs. Owusu, Amma and Takyiwaa who have humanly been my strength throughout my academic journey. God richly bless you for the financial and spiritual support given me throughout these long years of education.



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LIST OF ABBREVIATIONS

CBA	Cost Benefit Analysis
e-commerce	Electronic Commerce
e-government	Electronic Government
G2B	Government-to-Business
G2C	Government to Citizens or Government to Customer
G2E	Government-to-Employees
G2G	Government-to-Government
GCNeT	Ghana Community Network Limited
GDP	Gross Domestic Product
GeGov	Ghana Electronic Government
GeReg™	Government Registration System
GIS	Global Information System
GoG	Government of Ghana
GRA	Ghana Revenue Authority
ICB	International Competitive Bidding
ICT's	Information Communication Technologies
ICT4AD	Information Communication Technology for Accelerated Development
IFRs	Interim Unaudited Financial Reports
IT	Information Technology
LG	Local Government
MDA's	Ministries Department and Agencies
MoC	Ministry of Communication

NASCIO	National Association of State Chief Information Officers
NITA	National Information Agency
NPM	New Public Management
OECD	Organization for Economic Cooperation and Development
PPP	Private Public Partnership
RGD	Registrar General Department
SADC	South Africa Development Community
TAM	Technology Adoption Model
TIN	Tax Identification Number
TRIPS	Total Revenue Integrated Processing System
TTI	Telecom Telematique
U.K.	United Kingdom
UN	United Nations
UNDESA	United Nations Department of Economic and Social Affairs
US	United States
WB	World Bank
www	world wide web

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ABSTRACT

Governments and citizens have recognized the potential of using the Internet as a delivery channel for public services. However, the evolution of e-government initiatives poses a myriad of challenges. One of the most overwhelming challenges is identifying and implementing funding strategy for promoting e-government projects. In view of limited availability of public sector funding and the increased focus on judicious spending of government finances, the search for alternative funding is crucial for most developing countries like Ghana. Ghana's ICT Policy identified information communication technology as an indispensable tool for public sector service delivery. Considering the fiscal constraints, the country is deploying e-government infrastructure and systems with stem collaboration with the private sector. However e-government literature provides little information, specifically to the country e-government PPP funding strategy and lessons for case development.

Drawing on the conceptual notions of e-government and public- private partnership tenets, the study employs a qualitative case study method to understand this challenge by selecting the GeGov project. The study used secondary data and semi structured questionnaires to solicit information from the experience of public and private officials. The study explores, describes and explains the factors that influenced the implementation process of the public- private partnership financing strategy between Ministry of Communication and Ghana Community Network Limited.

The study provides critical organisational, legal, political, and economic challenges that can serve as referential experience in PPP funding of e-government projects in Ghana and other developing countries. The study found out that going into partnership with disarray and dummy legal regime that governs the PPP sector the government of Ghana was faced with financial

problem. The PPP funding model was also characterised by organisational challenges in ensuring speedily disbursement of funds from sponsor, the World Bank, likewise economic factors such as the global economic crisis, inflation and exchange rates affected the project cost and repayment. However, critical success conditions also included competitive tendering process, project base budgeting approach and a good measure of political commitment. The practical implication is that, there is a need for full life cycle project budgeting mechanism. To ensure sustainable project funding legal framework should be stressed as a priority for all public institutions going into financing e-government project. Regarding originality and value, the study has introduced best practice conditions in financing e-government project using the PPP model in Ghana which has received little attention in previous studies.

CHAPTER ONE

GENERAL INTRODUCTION

1.0 Introduction

This chapter covers the background, statement of the research problem, statement of objectives and research questions, the significance of the study, the scope and organization of the thesis. The background is on the revolutionary and ever evolving nature of e-government and how developing countries are lagging behind. The research questions raise issues to identify how an e-government project is funded in Ghana and the challenges associated there to. The significances of this study in relation to funding e-government projects in Ghana and enriching studies in the field of e-government are espoused in this chapter. The organization of the work is done in five chapters covering the general introduction, literature review, methodology, study findings and finally, conclusion and recommendations.

1.1 Background to the Study

Over the years, there seems to be an increased interest in how computers and the internet can best be harnessed to improve the efficiency and effectiveness of government at all levels and in both formal and non-formal settings, especially in developing countries. There are several evidences of state, municipal and local government adoption of information technology system and internet to engage citizens and to deliver services and information to support improved public government operations (Reddick & Frank, 2007; Torres *et al* 2005). The use of Information and Communication Technologies (ICT's) in government to improve interaction with citizens as well as for orchestrating intra-government functions has been described as a revolutionary change (Dunleavy *et al* 2006; Heeks, 2006; Basu, 2004; United Nations, 2003).

Revolutionary in the sense that it has resulted in a “change of mind, a total shift in perspective as utilized in the past, a revolution in the way of being of the public administration towards its interlocutors” (Basu, 2004 p.113). These revolutionary changes are rapidly being referred to as electronic government or e-government for short. The term e-government has come of age and according to the Organization for Economic Cooperation and Development (OECD) it refers to the use of ICT’s, and particularly the internet, as a tool to achieve better government services (OECD, 2003).

The scope of e-government capabilities has also grown and the concept has evolved (Layne & Lee, 2001; Gartner, 2001). E-Government initiatives of varying scope and complexity have been implemented in both developed and developing countries (Ndou, 2004; OCED, 2003). There are for example e-government systems that grant access to general government information such as financial information, policy information, government structure, as well as access to online government electronic services such as payment of tax, business registration and renewing of driver’s licenses. The evolution or development of e-government has occurred through phases and has some degree of similarities with the evolution of electronic commerce (e-commerce) with several implications for citizens and government (Basu, 2004, Heek, 2003). The reason is that, as more citizens shopped, banked, or did their professional work online, they are expected to be able to take similar actions with correspondingly fast response times in an e-government environment. This has occasioned very high commercial level expectations on governments worldwide to implementing e-government systems to enhance governance and public service delivery by eliminating inefficient processes and reduction of red-tape (Mutula, 2008; Heeks, 2001). The result are broad-sweeping government initiatives that has put thousands of citizens

and businesses in direct contact with civil servants in a much dispersed authority environment and without the limitations of time and space. Nevertheless, the evolution of e-government represents the level of growth built on the substance and service delivery offered via official websites. It also represents a different relationship between government and citizens and suggests capital financing strategies different from each development phase.

The drive for implementing e-government systems is discerned from the promulgation of policies, legislative and regulatory framework and infrastructure development (Mutula, 2008). In that respect, many developing countries like Kenya, Ghana, Nigeria, Jordan, India, and Ethiopia have created and directed their respective national ICT policies and institutions at bolstering technological deployment. The main goal of these ICT policies is to support knowledge sharing, productivity gains, improve public sector service delivery and narrowing the digital divide in rural communities (Dzidonu, 2003). Taking advantage of the growth of the telecommunication sector, these countries have also executed several ambitious e-government projects including the launch of e-health in Rwanda in 2000, Ghana's eGhana Project in 2006, Kenya eThekwini Transportation Authority in 2003, India Lokvani e-participation Project in 2004 (UNDESA, 2009; Ndou, 2004). Most of these projects seek to help government communication, enhance government's interaction with citizens, and improve government service delivery to citizens and the business community.

Despite significant advancement in the telecommunication sector, Internet and Information Technology (IT), there is little success to report on e-government development in developing countries. Since 2001, the United Nations (UN) and affiliated organizations have measured and

reported e-government initiatives of more than 190 Member States. The report in 2005, for instance noted that, despite the progress made in the previous years with regard to e-government implementation, a serious access-divide exists across the world between the developed and the developing countries (UN, 2005). The 2012 survey report also shows that out of the 192 countries assessed, the majority of places in the top 20 rankings were countries with high national income (UN, 2012). This is not surprising as they have the financial resources to develop and show progressive in e-government initiatives and to create an encouraging environment for citizen enablement and engagement.

Adoption of e-government requires a compatible of IT infrastructure and integrated information systems as well as advance technologies for preserving security and integrity. This comes with huge financial cost for government or agency implementing the project (Irani *et al* 2003; Bonham *et al* 2001). The estimated spending levels on e-government implementation include US \$10 billion for an Advanced South American country, US\$ 172 million for an Asian country and US \$35 million for a Middle East and North African country (World Bank, 2011a). Basu, (2004) and Mimicopoulos (2004) reported that in 2004, the United Kingdom and Singapore respectively spent 1 percent and 0.8 percent of their Gross Domestic Product (GDP) on e-government projects. It can be argue that the cost elements involved in e-government implementation constitute a major factor to adopt a high level of e-government. Kaylor et al. (2001) writes that most governments or public organisations evaluate the cost relative to the benefits before adopting a new technology. Technologies that are perceived to be low in cost are more likely to be adopted.

Therefore, considering the fact that information technology is an investment, countries with larger budgets have the resources to introduce better and more sophisticated e-government infrastructure. The lack of financial resources from central government for e-government investments is seen as a major barrier, hence the call for an innovative strategy for financing e-government projects (Chen & Thurmaier, 2008; Wild & Griggs, 2006; Heeks, 2006).

This study, using a case study design within the qualitative research paradigm, investigates the challenges in using private public partnership (PPP) as an innovative strategy tool for financing e-government projects in Ghana.

1.2 Statement of the Problem

There is overwhelming literature on e-government development in both developed and developing countries (Reddick & Frank, 2007; Torres *et al* 2005; Ndou, 2004; Heeks, 2002). However, a bulk of this literature is skewed toward citizen trust and confidence in e-government systems (Tolbert & Mossberger, 2006; Carter & Belanger, 2005), its impact on government operations and on the relationship between citizens and governments (Heeks & Bailur, 2007; Siau & Long, 2006). Others are on the structural or institutional and technological aspects of implementation challenges (Weerakkody, *et al* 2011; Ndou, 2004). Even though some studies have been done on e-government implementation, a review of these studies suggests that not much attention has been focused on funding. Moreover, most of these studies on e-government funding activities and strategies were conducted in developed countries with some without any empirical bases or case lessons (Chen & Thurmaier, 2008; Wild & Griggs, 2006; Mimicopoulos, 2004; Johnson, 2004).

It is important to understand why innovative funding of e-government projects is necessary for most developing countries in general and Ghana in particular. The case for studying innovation rests upon the argument that, the current approaches are insufficient to secure the huge amount of capital required to meet Ghana's infrastructure demand in general and the improvement of government services delivery through e-government systems in particular (Owusu-Manu *et al* 2008; Awowi & Owusu, 2007). Mimicopoulos (2004) alluded to the fact that, for most developing countries, some funding strategies might not be available due to poorly developed capital markets or limited borrowing capabilities of public organisations. The United Nations (UN) reported in its annual e-government survey that the costs associated with telecommunication infrastructure and human capital continues to impede e-government development (UN, 2010) and Ghana is no exception. The national infrastructure debt in Ghana was estimated in 2011 to be \$1.2 billion per annum and to address this deficit, a sustained spending of this amount for the next decade will be required (Ghana PPP Policy, 2011). Consequently, in an era of financial and economic crisis and its associated budget cuts, it has become essential for the government of Ghana to look for alternative strategies to fund and implement e-government projects.

Ghana's policy vision and strategy on e-government is anchored in the Information Communication Technology for Accelerated Development (ICT4AD) Policy (2003) and the e-Government Strategy Document (2005) respectively. Since the adoption of this policy, a series of reforms and projects have been implemented to improve the capacity of some public agency in service delivery through ICT (Dzidonu, 2010; Awowi & Owusu, 2010; Boateng, 2009). Realising the potential of the private sector's contribution to resolving the financial crunch, the

government is making conscious efforts to attract more private participation in implementing the ICT4AD Policy (Awowi & Owusu, 2010; Boateng, 2009). A typical example is the Ghana Electronic Government (GeGov) project which was implemented through a Private Public Partnership (PPP) for the state revenue collection authority and the register of business agency.

PPP's constitute an innovative financing strategy in Ghana because the private sector is participating in the construction and operation of a public asset that has traditionally been the domain of the public sector (Badu *et al* 2011; Owusu-Manu *et al* 2008).

However, PPP in general is still a new trend, and there are knowledge gaps in the field. While there are some studies dedicated to the subject, their application is largely confined to the physical infrastructure sectors (Owusu-Manu *et al* 2008; Larbi, 2005). Additionally e-government is still in an embryonic stage in Ghana and financing e-government through PPP makes new demands on public servants, as skills and legal framework are needed to specify outputs, to understand complex financial structures and to allocate and manage risks in the most efficient manner (Becker & Patterson, 2005; Langford & Harrison, 2003). Besides, discovering and understanding the different perspectives between the government and private sector regarding incentives and motivation in supporting and financing e-government projects is very much necessary.

It is against this background that this thesis explores, describes and explains the challenges in using PPP as a financing tool for the implementation of e-government projects in Ghana by selecting the Ghana Electronic Government (GeGov) project as a case study.

1.3 Research Objectives

The central aim of the research is to investigate the challenges of using PPP as a financing tool for the implementation of the GeGov project. To achieve this aim, the following specific objectives were pursued:

1. To examine the legal regime that facilitates e-government PPP funding arrangement in Ghana.
2. To investigate the adequacy of institutional arrangement in implementing the PPP funding strategy for the GeGov project.
3. To examine the political support that was provided relating to funding the GeGov project.
4. To explain the influence of economic factors in funding the GeGov project.

1.4 Research Questions

In an attempt to address the above objectives, the study was guided by the following research questions.

1. What is the legal challenge involved the use of PPP in funding e-government projects in Ghana?
2. Were there adequate structures for implementing the PPP funding strategy for the GeGov project?
3. What was the nature of political support relating to funding the GeGov project?
4. How did economic factors influenced funding for the GeGov project?

1.5 Significance of Study

This study presents a number of significant contributions to the field of e-government and public administration. The study is useful in adding to existing knowledge in PPP in e-government financing which has not been adequately studied. The study investigated the use of PPP as a strategy for e-government development in Ghana. Even though this study is a part of an academic activity for a master's program, it will be useful for the successful implementation of e-government projects in Ghana. This is because a case study was conducted to highlight the key features of the PPP-GeGov project financing strategy. The findings of the study would be beneficial to public officialdom in reviewing the e-government programmes in Ghana. The findings of the study can also inform multilateral and bilateral funding agencies and government institutions involved in formulating e-Government policies, strategies and programmes.

Finally, the study's findings will guide the efforts of other governments engaged in the developing appropriate PPP institutional and regulatory reforms along with financial assistance and risk-sharing framework that facilitate private sector involvement in e-government projects.

1.6 Scope of the Study

The scope of the study is to explore the implementation challenges of e-government projects, primarily the issue of funding and the strategies adopted by the government of Ghana to overcome these challenges. For that matter, the study geographical context is Ghana and the focus was on implementation rather than outcomes of the PPP financing strategy for the GeGov project. It focused on the GeGov project which was implemented using a PPP financing contract between Ministry of Communication (MoC) and Ghana Community Network Limited (GCNet) in the development of e-government infrastructure system for two state agencies. The

institutional scope of the study was MoC and GCNet since they were the main partners in the PPP contract. The institutional scope also covered the National Information Technology (NITA) as the project regulators. The Ghana Revenue Authority (GRA) and Registrar General Department (RGD) were also covered in the study since they constitute the project sites.

1.7 Organization of the Study

The thesis work is divided into five chapters. Chapter one presents the research background on e-government, its revolution and evolutionary nature. It also presents the research problem, objectives of the study, research questions, research significance, scope and the chapter organization of research.

Chapter two presents a discussion on the concept of e-government (definitions, adoption, evolutions, benefits and implementation challenges) and empirical literature on funding issues. The other part covers conceptual perspectives on PPP as an implementation strategy with focus on success and failure conditions. The study indicators or variables are also presented under this chapter.

Chapter three presents the research methodology and arguments that support the selection of an interpretive qualitative case study design of the work and how data was collected and validated.

The findings and discussion are dealt with in chapter four. This chapter entails data presentation, analysis, and discussion of findings.

Chapter five is the concluding chapter and provides a summary of the study findings and some thoughts on the implications for research, policy and practice.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews relevant empirical and conceptual literature on both e-government and PPP and its implication to funding. The first section presents a critical review of the empirical literature on e-government implementation with a focus on funding challenges and opportunities. The second part presents notions on the concept of PPP financing and goes further to present empirical literature on the use of PPP in Ghana. Finally, the study's variables base on e-government and PPP is presented.

2.1 e-Government Concept

2.1.1 Thematic Perspectives of e-Government Definition

The study of e-government requires retrospection into the definition of the concept. Various researchers have offered different definitions of the concept of e-government. In fact, the term e-government itself is not universally used (Basu, 2004). Definitions of e-government ranges from narrow perspectives like, the use of informatics to primarily make the delivery of government services more efficient (Bannister & Remenyi, 2005) to a broader view such as e-government is the use of ICTs in public administrations, combined with organizational change and new skills in order to improve public services and democratic processes and strengthen support to public policies (Akeson *et al* 2008). The common theme behind most of the definitions is that, e-government involves the automation or computerization of existing paper-based procedures of government business. However, some of these definitions tend to differ in terms of e-government foci and are usually centered on transaction, citizen, government, process, or a

functional perspective (Weerakkody & Dhillon, 2008). For example, definition that focuses on process transaction includes, “e-government means exploiting the power of information to help transform the accessibility, quality and cost-effectiveness of public services and to help revitalise the relationship between customers and citizens and public bodies who work on their behalf” (Aldrich *et al.*, 2002, p. 103).

Focusing of the same transaction aspect of e-government, Okot-Uma (2004) defines e-government as the processes and structures pertinent to the electronic delivery of government services to the public. Ke & Wei (2004) emphasizing on the benefits e-government explained that e-government involves access to government information and services 24 hours a day, 7 days a week, in a way that is focused on the needs of citizens and businesses. E-government relies heavily on agency use of the internet and other emerging technologies to receive and deliver information and services easily, quickly, efficiently and inexpensively. However, benefit base e-government definition turns to focus too much on the desired results rather than describing the tool utilized.

Viewing e-government from a citizen-centric point authors such as Gronlund, (2001) defines e-government as strategic application of ICT to provide citizens and organizations with more convenient access to government information and services, and to provide delivery of public services to citizens, business partners and suppliers, and those working in the public sector.

Owing to the different perspectives, no one definition has broad acceptance of e-government. However, the definition considered most suitable for the purpose of this study is one that defines e-government as, the use of IT by government agencies (such as wide area networks, the internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better

delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and or cost reductions (World Bank, 2004). The World Bank definition focuses broadly on the utilization of IT to deliver government services, improve interactions and effective management. Fenwick, *et al* (2009) described the definition stated by the World Bank as a comprehensive definition of e-government. E-government needs to be broadly defined because governments themselves serve multiple roles. The World Bank's definitions captures largely the transformational and interactive nature of the current status of e-government systems as well as the political, economic and social benefits associated with the incorporation ICT in governance.

In the final thought, the scope nature and capabilities of e-government continue to evolve and as such the definition of e-government has evolved with it. Although these definitions vary in terms of depth as well as the focus, they are not mere semantic. They reflect particular objectives that the individual countries' adoptions as well as the benefits, forms and maturity of e-government.

2.1.2 Classification of e-Government

There seems to be very little debate about the classifications or dimensions of e-government. Siau & Long, (2006) explain that, general e-government manifestation can be examined in terms of the interaction between different sectors of government, businesses, citizens and government employees. Largely e-government has been classified in terms of activities and delivering models. The main categories are, Government to Citizens or Government to Customer (G2C); Government-to-Business (G2B); Government-to-Employees (G2E); Government-to-Government

(G2G) (Carter & Belanger, 2005; Okot-Uma, 2004). Explaining the various classifications, Okot-Uma (2004) states that G2G provides the government's departments or agencies cooperation and communication online based on mega database of government to have an impact on efficiency and effectiveness. It also includes internal exchange of information and commodities. He further explains that, G2B actively drive electronic transactions initiatives such as electronic procurement and the development of an electronic marketplace for government purchases and carry out government procurement tenders through electronic means for exchange of information and commodities. G2E embarks on initiatives that will facilitate the management of the civil service and internal communication with governmental employees in order to make electronic career applications and processing system paperless in the office.

However, in the literature G2C is considered to be the cornerstone of e-government services with a vehement call for citizen-centric approach to e-government implementation (Carter and Belanger, 2005; Torres *et al* 2005, Heeks, 2003). Carter and Belanger, (2005) writes that, G2C initiatives are designed to facilitate citizen interaction with government, which is what some observers perceive to be the primary goal of e-government. Heeks (2003) views G2C as providing the momentum to put public services online, in particular through the electronic service delivery for citizens. Notwithstanding these views, government must first improve upon its internal systems and procedures before electronic transactions with citizens and businesses can be successful.

2.1.3 Stage Evolution of e-Government

Some researchers have tried to understand the e-government phenomenon from an evolutionary point of view by dividing e-government development process into many stages. A couple of

models proposed for the different stages in the evolution of e-government services and are summarized in Table 2.1. The purpose of table 2.1 is to identify the difference within the each proposed e-government evolution model. The stages represent the level of e-government growth built on the substance and service delivery offered via official websites.

Table 2.1: Stage Modeling of e-Government Evolution

Reference	Stage Model
Gartner (2000)	Publish → Interact → Transact → Integrate
UN (2008)	Emerging → Enhanced → Interactive → Transactional → Networked
OECD (2003); Baum and Di Maio, (2000).	Information → Interaction → Transaction → Transformation
Layne and Lee, (2001)	Cataloguing → Transaction → Vertical Integration → Horizontal Integration

Source: Author's Construct, 2014

The arrow movements from left to right in Table 2.1 indicate the stage development as proposed by each author. Some researchers believe that only four stages are necessary, others believe that five stages are required. To broadly discuss these models, the first stage is usually the broadcasting mode or informational or publish (Table 2.1). Government's presence would be made with static web pages and one-way communication under this stage. This stage can develop from emergence to enhance wide presence (UN, 2008). Layne and Lee, (2001) describe the format of the early e-government websites as similar to that of a brochure or leaflet. The value to the public is that government information is publicly accessible.

The next stage is the interactive stage (Table 2.1) where, websites would be able to exchange information or services with citizens, where citizens can enquire, and obtain resources from

database backed websites located behind a portal. At the transaction stage, however the public would be able to carry out all the above including financial transactions with the government. Baum and Di Maio, (2000) asserted that e-governments would reach integration or transformational stage where departments collaborate in significant ways to avoid duplication of efforts, and a one-stop contact point is created, which is capable of handling procedures of all involved departments. In this phase all information systems are integrated and the public can get G2C and G2B services at one virtual counter.

Some studies argue that e-government maturity for most countries would pass through all of the preceding stages by moving from one to the next (Layne & Lee, 2001; Gartner, 2001). However, one might side with Irani *et al.*, (2003), who argue on the contrary that public organisations might decide to skip certain stages or to offer different services at varying stages of maturity depending on the objectives or needs of the public office. This is because the trend of not religiously following a sequential evolution stages has been accelerated by the mass proliferation of digital devices and internet, which gives government the option to skip or accelerate some of the intermediate stages. Thus, generalizing the evolutionary path for e-government systems in today's context might be making a faulty assumption. Given a country's political and economic circumstances, e-government programmes can develop and change quickly, sometimes skipping a developmental phase.

Nevertheless, programmes may remain in a particular stage for a longer period due to funding constraints or political pressure to maintain the status quo. Robbins and Miller, (2008) make the point that for the different stages of e-government development government spending patterns are shaped by the access businesses and citizens have to the web and other technologies. They

argue that “at the integrative, or transformational phase, not only is there consumption but investment as well as.., an investment in efficiency in government operations. This efficiency can come through the integration of government operations, improvements in constituency relationships and high capital investment” (Robbins & Miller, 2008, p144). In light of these views, comprehending e-government evolutionary stages provides the public officials with a clear understanding of the issues that should be taken into funding consideration. These stage models represent a number of benefits that influence decision-makers in the public sector to finance e-government projects.

2.1.4 Benefits of e-Government

As illustrated earlier in some of the definitions, e-government promises to deliver a number of benefits to governments, citizens and businesses (Ke & Wei, 2004; World Bank, 2004). Several frameworks have been developed to identify the distinctive benefit of e-government. There seems to be a general agreement that e-government benefits can be tangible and intangible (Homburg, 2008). E-government projects are focused on facilitating inter and intra-organizational interaction, strengthening organizational competence, promoting knowledge management, and streamlining government business processes through the use of IT. This as expounded by Ndou (2004) will substantially decrease in the processing costs of many activities compared with the manual way of handling operations as well as reducing the time spent on repetitive tasks for government. In their study Whitson and Davis (2001) observed a tremendous cost budget reducing from \$15 million in 1995 to \$8.6 million in 2000 by the Department of Energy’s Office of Scientific and Technological Information, United States. This was attributed to the e-government system implemented to provide citizen services. E-government strategies are

customer focus, with the specific objective of providing citizens and businesses with a coherent interface with government which reflects their needs rather than the structure of government (Heeks, 2006). This agreeably leads to customer (citizen) satisfaction and reduction cost in performing business with government.

Likewise, e-government is also viewed and promoted as a positive channel for reducing corruption, enhancing accountability and transparency in the public sector as demonstrated in studies by Schuppan (2008); Ndou (2004); and Kumar, (2003). This is derived from the limited physical contact between citizens and government officials, better control mechanisms and easy monitoring of agencies activities. Schuppan (2008) for instance reported that ITAX e-government system implemented in Tanzanian has reduced corruption because citizens no longer have to directly contact the responsible back-office employee, but instead can go to one-stop tax offices created as part of the project. He further writes that, the fight against corruption was also solidified by the new system as tax audits and returns are carried out by two or three employees, instead of being performed by only one.

Finally, e-government benefits, as argue by Basu (2004) have an accumulative goal of ensuing better management of a country's social and economic resources for development. With the reduction of corruption, cost and errors in the public sector, scarce resources can be channeled to other developmental projects. In a related study it was observed that government online services played a strong role in improving business productivity and assisting in the start-up of new enterprises (OECD, 2003).

Whereas the full extent of the benefits of e-government remains an open ended question, the benefits have some implication on the funding strategy to adopt. Wild and Griggs (2006) suggest

that the implication of the benefits to funding choice is that projects with high cost reduction benefits are likely to be funded through cost savings approach without partnerships since the benefit may not be translatable into a business opportunity for the partner. They further recommended that a choice of advertising based funding may work best in narrowly focused applications with low adoption rates and low governmental benefits.

Reviewing the stage characteristics of e-government as consumption and investment, the benefits incidence of this infrastructure at present value, and the burden demanded by the tax structure, Robbins and Miller (2008) pose that the more investment oriented the project, the more equitable it is to have both current and future taxpayers pay for the stream of benefits they will receive from e-government services. This suggests that the benefit of e-government project will direct the kind of funding strategies to adopt.

2.1.5 e-Government Adoption

Chen and Thurmaier (2008) indicated that, perhaps many agency heads hesitate to develop e-government services because they dislike being faced with the question from the state budget director “What if we spend a lot of money on an e-transaction service, and nobody comes?” (p538). In a similar view, Wild and Griggs (2006) explains further that a reliable adoption rate is essential for a valid cost and benefit analysis in e-government. If usage rates are low for an extended period, the project is in danger of becoming a new recurring cost rather than a benefit. Finding the factors that influence adoption of a particular e-government system becomes a critical input in developing funding strategies. E-government adoption studies have been conducted by researchers (Bwalya, 2009; Tolbert & Mossberger, 2006; Carter & Belanger, 2005). These studies found out that, the factors that influence adoption of e-government were

perceived ease of use, compatibility, and trustworthiness. Carter & Belanger, (2005) suggested that perceived usefulness, trust of the internet, previous use of an e-government service, and perceived ease of use all have an impact on intention to use an e-government service. Further, perceived usefulness emerged as the most important factor explaining 75% of the variance in intention to use. With high adoption rates of over 70%, governments can rely on user charges or fees to offset some the operational and maintenance cost. However, Wild & Griggs (2006) observed that cost reduction requirements of 70% adoption rate are uncommon in e-government projects. This places a lot on government to find alternative strategies in financing and sustaining their e-government projects.

2.1.6 e-Government Project Implementation Challenges

Some studies focus on the implementation challenges of e-government projects (Weerakkody, *et al* 2011; Matavire *et al.*, 2010, Ndou, 2004). The e-government literature in this area tends to follow a trend of quantitative analyses of these challenges (Asogwa, 2013; Ndou, 2004) with some few researchers employing qualitative studies (Weerakkody, *et al* 2011; Matavire *et al* 2010). Usually using a case or a survey of multiple cases, some researchers focus on exploring the factors that constrain or serve as barrier to the implementation of e-government in either developing or developed countries. This literature has been useful in helping build the overall body of knowledge in the implementation of e-government. Heeks (2003), a scholar in e-government research, for example reported that most implementation of e-government in developing countries fail, with 35% being classified as total failures (e-government was not implemented or was implemented but immediately abandoned), and 50% as partial failures (major goals were not attained and or there were undesirables outcomes). These failures are in

part attributed to technology planners failing to account for user expectation or overlooking managerial and social context (Heeks, 2003).

Using a much rigorous approach, Ndou (2004) also conducted an empirical web-based research of 15 case studies in developing countries that had explored and implemented e-government initiatives. The study found out that, e-government offers opportunities for governments. However, it concluded that the ability of developing countries to reap the full benefits of e-government is limited and is largely hampered by the existence of a myriad of political, social and economic hindrances.

The challenges identified in the literature can be distinctively categorised into four themes, namely, organisational, political, technological and social factors to e-government implementation and adoption. To have a better understanding of these themes, it becomes imperative to examine the existing e-government literature to recognize what challenges can be considered under each of the themes.

Critical organizational challenges involved in e-government implementation include strategic change management challenges and employee's training needs. Weerakkody *et al.* (2011) in their studies observed that paradigm shift and change of culture may result in resistance during e-government implementation. Another organisational challenge is the need for employee training on IT skills. Chen and Gant (2001) and Heeks (2002a) identify the shortage of IT skills as another potential challenge that confronts some government's ability to provide e-government services. For developing countries, Heeks (2002a) suggests that, they should be aware of and consider the possible difficulties in attracting the right skilled employees. Therefore, to enhance

the effectiveness of e-government practices, public sector organisations would require more and highly trained technical staff.

Other studies have identified some social factors that undercut e-government implementation efforts. These factors include lack of awareness, digital divide, culture, and citizen electronic literacy (e-literacy) levels. Lack of awareness of the opportunities and potential impact of introducing e-government systems in the public sector constitute a challenge to e-government implementation (Weerakkody, et al., 2011; Bwalya, 2009). Bwalya, (2009) studied e-government adoption in the South Africa Development Community (SADC) Region and found out that although Botswana was considered as one of the ICT usage power houses, there was ignorance of the importance of e-government to citizens due to limited promotions and awareness campaigns. Similar studies in Jordan also revealed that a striking low level of awareness of the e-government programme within the citizens (Al-Jaghoub et al 2010). Without an awareness of potential benefits, the resistance to change remains strong and the trust for e-government dwindles. Therefore there is the need to emphasize e-government benefits to government and citizens.

The second social challenge to e-government is the digital divide. Digital divide refers to the gap between those with full access to electronic information and those without it (UN, 2003). This gap is caused by socio-economic factors such as gender, age, income, physical situations, ethnicity and language (UN, 2003; Hargittai, 2002). Therefore, it is required that e-government project implementation should go hand in hand with strategies to narrow the digital divide. This will ensure access and high adaptation of the e-government services.

Despite this, Hargittai, (2002) emphasis that, digital divide is not so much a question of access but of education. Even in areas where access to technological infrastructure is nearly ubiquitous, there are still groups who are unable to make use of ICT's because they are not electronic literate (e-literate). Therefore, the level of citizen literacy especially in the use of ICT's can affect the implementation and adoption of e-government.

Technological themes that affect attempts to implement e-government are IT Standards, Security and Privacy issues, System Integration and E-Government Portal Accessibility. IT standards have been emphasized as a major factor influencing e-government implementation (Weerakkody, *et al.*, 2011; Heeks, 2006: 2002b). Government organizations are required to implement standards based on internet and World Wide Web (www) technology that can facilitate seamless processes. However, differences in the technical standards adopted by different government agencies as well as the existence of legacy systems can cause integration complexities (Heeks, 2006). The reason is that the data formats used by one application may be incompatible or non-readable by other applications. Therefore, IT standards are necessary to avoid any hardware and system obstacles that would impede the execution of e-government systems.

Similarly, security and privacy issues have been identified by some researchers to be also a significant barrier faced by several governments (Weerakkody *et al.*, 2011; Wing, 2005). Security notions in e-government systems are broadly recognized as the aptitude to protect against possible risks. Wing, (2005) suggests that for e-government applications security concerns entail computer security, privacy and confidentiality of the personal data. Since e-

government deals with very sensitive personal and official information, it must be insulated from hackers and Internet crooks.

However, the high cost of security applications and solutions make ensuring high security and privacy a daunting task for e-government implementers. This raises a lot of trust and confidence issues for e-government users. Ensuring trust and confidence between users and government thus is a critical success factor in e-government security assurance. Although there are some studies that show that trust and confidence in e-government application are dependent on the user's culture and electronic literacy background (Chen, *et al.*, 2006), other studies revealed that online users conceivably abstain from using online services for the reason that they simply concern about privacy (Layne & Lee, 2001).

Regarding e-government systems integration, Wing (2005) again observed that, differences in architecture interoperability are a major reason for failure in application integration. IT system integration can be divided into two types, namely vertical and horizontal. Ebrahim & Irani, (2005) asserted that, whereas vertical integration involves the linking of local systems to higher level systems but within smaller functionalities, horizontal integration on the other hand integrates system across different functions. However, there are a number of technologies and systems infrastructure that many organisations need to adopt in common to provide facilities for the integration of their systems in a way that enables them to build a platform for sharing their knowledge resources (Ebrahim & Irani, 2005). The absence of this integration can cause major setbacks to e-government adoption.

Finally, e-government portal accessibility can be narrowly defined as the ease of reaching information and services provided via a formal e-government web site. Linking e-government with e-commerce, Weerakkody *et al.*, (2011) explained that the success of online service delivery by government depends on ease of access by diverse type of consumers and use from different kind of machines and location. However, studies indicate that accessibility is a challenge to e-government implementation in different countries (Weerakkody, *et al.*, 2011; Wittmann *et al.*, 2007). To illustrate this challenge, Wittmann *et al.*, (2007) cited in Weerakkody, *et al* (2011) revealed that the use of “Geldkarte” payment is only possible inside Germany and it is not possible internationally as the payment process involves inserting a card into a card reader which is located only in Germany.

The political elements that influence e-government implementation includes the legislative framework, leadership or political support, and funding. Governments must ensure that a proper legal framework exists before e-government initiatives and processes can take off (Basu, 2004). Legislative instrument for the recognition of electronic processes and services as equivalent with the paper based processes and services as well as legal recognition of digital signatures should be in place. The absence of such regulatory framework can jeopardize the implementation of e-government. In most African countries, for example, digital signatures cannot be accepted. E-government implementation also requires strong leadership and top management support. Chen and Gant (2001) argue that continual leadership support is necessary for dealing with possible initial resistance and ensuring interdepartmental communication and cooperation. The issue of leadership support is also important here because it reflects the government’s willingness to embrace e-government services, and commit resources especially financial, to establish and

maintain e-government services. Udo and Edoho (2000) found out that the limited number of committed senior officials to champion ICTs in government acts as a most serious constraint to e-government diffusion in Africa. Likewise, Asogwa (2013) observed that poor leadership is a leading factor to earlier failure of the e-government initiative in Nigeria. Bhuiyan (2009) echoes these similar sentiments and even went as far as adding corruption as an added challenge, especially where the developing countries political landscape is characterised by a political elite who influence the direction of ICT initiatives. These empirical findings illustrate the crucial role leadership plays in e-government project implementation.

Another political dimension to the implementation of e-government is limited funding. E-government involves huge financial implication for central government and public organisations. However central government funding might be limited and this constitute significant constraint to e-government development (Basu, 2004; OECD, 2003, Heeks, 2002). Heeks (2002a) suggested that a major explanation for the slow pace at adopting e-government in Africa was finance. African countries have far less money in both absolute and per capita terms to spend on ICTs than Western countries. On the contrary Weerakkody *et al.*, (2011) studied the e-government diffusion in Qatar from a public sector employee's perspective and found out that, the majority of respondents perceived funding not a challenge to e-government implementation. Funding forms the very scope of this study. The following paragraphs examine the literature on the various aspects of funding in the context of e-government projects implementation.

2.2 Funding e-Government Projects - Empirical Literature

Funding in this context refers to the provision of sufficient financial resources needed to ensure successful e-government implementation as well as ensuring maximization of the benefits and long-term sustainability of the project. According to Eyob (2005), the importance of funding in providing excellent service cannot be over emphasized. It is the glue that holds the building, collections and staff together and allows attaining goals. However financial resource is limited for most government or public organisation. Central government funds to public sector organisation have been described as coming in ‘feast and famine’ (Heeks, 2006, p107).

Funding has been discussed in the literature of e-government in relation to limited funds for e-government implementation in developing countries (Basu, 2004; Heeks, 2002), the cost and what governments spend on e-government projects (Ebrahim & Irani, 2005; Mimicopoulos, 2004; Bonham *et al.*, 2001); specific budgetary barriers to e-government (Mimicopoulos, 2004; OECD, 2003) and prepositions to overcome e-government funding challenges (Wade & Grant, 2010; Chen & Thurmaier 2008; Robbins & Miller, 2008; Wild & Griggs, 2006). The literature largely suggests that the success of e-government is directly depended on the governments overall ability and readiness to mobilize and spend on the necessary IT and related costs.

2.2.1 Issues Related To Funding e-Government Projects

The challenges to e-government funding are the issues that affect funding for e-government activities. These factors serve as barriers or constraints that prevent the availability of needed financial resources to execute e-government projects. Upon reviewing the critical funding challenges which have been identified by researchers over many e-government programmes, the key issue that arose was how to classify them. After careful study, it became clear that the issues

fell into discreet but not mutually exclusive categories mainly Structural (Budgetary issues), Cost and Benefits Considerations, Socio-Economic, Political committee issues.

2.2.1.1 Structure or Budgetary Barriers to e-Government Funding

Structure and institutional arrangement of an organisation such as budgeting is very crucial in the performance of its function. The nature of public organisation budgeting system constitutes a challenge to e-government funding. In a study conducted by the Harvard Policy Group in 2001, cited in Basu (2004), concluded that there is a virtually inverse relationship between transitional government budgeting and ICT investment.

Table 3.2 Difference between traditional budgeting and budgeting for ICT Investments

Traditional Government Budgeting	High-Value ICT Investments
• Single-year (or biennial) expenditures	• Multi-year investments
• Programme-by-programme performance	• Enterprise or cross-boundary performance
• Financial costs/benefits	• Financial and non-financial costs/benefits
• Level of effort within existing work flows	• Changes in the flow of work
• Ongoing operations	• Start-up operations
• Control	• Innovation

Source: Harvard Policy Group in 2001, cited in Basu (2004)

Table 3.2 above summarises the difference between traditional government budgeting and high-value ICT investments like e-government. From the table, 3.2 traditional public funding management involves vertical funding structure, where agency resources are budgeted on an annual or bi-annual basis; the agency receives the resources to accomplish its mission and it is held accountable for achieving its mission. However, this principle does not act in favour of e-government projects that involve multi-year funding and collaboration across agencies (Wild & Griggs, 2006; OECD, 2003). Expressing similar views, Mimicopoulos (2004) defines traditional

expenditures of e-government projects as normal operating expenditures that may result in poorly financed projects over their lifecycle.

Secondly, e-government project implementation can bring together multiple agencies and groups that intend to work in concert to achieve a set of objectives. The vertical nature of public budgeting arrangements means that it can be difficult to request joint funding to pay into a project being done by another agency or to pool funds. Johnson, (2004) observed that, the use of performance-based budgeting can create disincentives for collaboration, by rewarding independent behaviour at the expense of shared projects. Also, there could be some disagreement on the framework for profit-sharing since it can be difficult to assess the extent to which agencies are benefiting from and hence should contribute to a shared project. In such case the agencies have no incentives to eliminate redundant systems by sharing systems with other agencies unless they can share in some of the savings generated. In addition, fragmentation in the decision-making process hampers efforts to achieve the objectives of e-government policy strategy, especially in area of funding. Matavire *et al.*, (2010) using qualitative method found out that e-government projects which span over a single department were often hampered by differences in the financial processes and priorities of the affected departments.

Another public budgeting drawback is the financial resources allocation process (Weerakkody *et al* 2011; Matavire *et al.*, 2010). In their study Matavire *et al* (2010) found out that, e-government funding in South Africa was very fragmented due to the fact that sponsorship for e-government projects was channeled at different rates in differing locations and from different sponsors. Reaffirming the same point, Weerakkody *et al* (2011) reported that it takes time to access the

financial resource due to the process of getting financial approval and this hampered the implementation process. Their findings collaborate the point that public sector administration structures and processes are key consideration in financing e-government projects. To ensure that a programme is implemented in a consistent fashion throughout the various agencies and departments, Ke and Wei (2004) suggest that funding should be centralized.

2.2.1.2 Cost Verses Benefit Considerations

Mimicopoulos (2004) raised some relevant questions when considering the current push to adopt a high level of e-government system by governments. “Will the costs of introducing e-government outweigh the financial savings or benefits? And what is the time framework for recovery of such costs?”(Mimicopoulos, 2004:p10). When looking to fund e-government projects, governments need to evaluate potential projects by undertaking a traditional cost-benefit analysis (CBA) and discounting to present value. In most cases the approval of funding for information systems was based on business justification and strategic value of the applications as viewed by top management. However, Mimicopoulos (2004:p10) explains further that, “it is in fact possible that savings may never overtake the costs so that e-government, while sharply improving services for those able to take advantage of it, may remain an additional cost”.

Moreover, evaluating cost against benefit is a difficult task because many of the benefits of e-government are intangible and cannot be measured using traditional quantifiable methods and financial terms (Wild &Griggs, 2006; Nguyen, 2004). Nguyen (2004) writes that traditional CBA analysis commonly measures only tangible direct costs such as hardware and software costs and tangible direct benefits such as cost reduction. This may be suitable for private

organizations driven by profit but is almost always inadequate for public agencies. Reeder (2005) sharing similar view also argues that CBA is typically calculable for bricks and mortar projects like dams and roads, but is less obviously of value for government initiatives where the expected benefit may be public convenience or even improved public perceptions of public services. These observations make it hard to develop funding cases for projects and compare alternatives in a budget-setting.

Therefore, cost-benefit consideration has become a relevant issue in the effort to align information technology with the activities of government. New techniques of measuring both financial as well as non-financial cost-benefits need to be developed in order for governments not to underinvest in IT-related projects.

2.2.1.3 Political Issues in Funding e-Government Projects

Some studies have also raised issues about the overall government commitment to spend on e-government projects (Themistocleous & Irani, 2002; Larraín, 2000). Themistocleous and Irani (2002) observed that many e-government projects are multi-year in nature and require commitments to spend resources over a long period. Such projects represent a commitment to spend future revenues and governments are understandably reluctant to tie up future spending. Also, support for e-government can reduce especially when there is a change in government or leadership. The case of Ghana's TradeNet Gateway project is very relevant in this respect. Wulf (2004) reported that the post-election period leading to the implementation of TradeNet Gateway in 2001, was characterised with delays as a result of power vacuum and lack of political support. This power vacuum before the new cabinet members reviewed policy decisions made by the previous government for due diligence purposes, seriously affected the implementation of the

Gateway project for Ghana. It prevented making operational decisions, including the procurement of the computer hardware. In addition, the appointment of many new ministers meant that the project did not get the political backing that had been expected by the previous government. As a result of this uncertain political support, it took fourteen (14) months to provide capital contribution of GoG (Wulf, 2004).

Likewise, Larraín (2000) found out that a growing and very successful e-procurement project was abandoned soon after the new administration has set foot in office. Unlike the private sector mind sets may not consider the very real possibility of a withdrawal in funding (Dada, 2006). The case might be different when it comes to political commitment, especially with a change in leadership. Therefore, it can be said that the cycle of leadership change poses a significant obstacle to government strategy formulation and implementation, especially in terms of consistent goals and funding. A huge risk often lies in the change of government or leadership in implementing e-government projects. In that sense for e-government funding to be guarantee political commitment should be high and should be accompanied by readiness to spend on the necessary e-government cost and not mere lip services.

2.2.1.4 Economic Dimension to e-Government Funding

The level of economic development as a whole is also relevant because it dictates priority. Decision makers in developing countries face a set of informational, demographical and economic challenges that increase their prominence in the policy process at the same time that limit their ability to make well-informed decisions about the development priorities of their countries. E-government projects are unlikely to win out in competition with other public policy objectives like health, education and security (OECD, 2003). The question is what is more

important, ICT or clean water? E-government projects are also not immune from the power and influence of societal interests that make demands on the political system. While most e-government proposals will be argued for in terms of programme outcomes rather than in terms of advancing e-government per se, the level of resources devoted to e-government is ultimately a matter for governments to determine in light of their overall socio-economic priorities (Robbins & Miller, 2008).

This challenge can also be deepened by the treatment of certain e-government ICT spending as capital rather than recurrent expenditure (OCED, 2003). Not all ICT expenditure is of a capital or investment nature nor does it all involve maintenance, associated recurrent staffing costs, or small-scale projects (Robbins & Miller, 2008; Mimicopoulos, 2004). However, if major projects are not considered as investment, they will need to compete with other more pressing recurrent funding proposals, and in this context will seem to involve large levels of expenditure.

Overgaard (2011) in the study on the impact of the financial crisis on the Danish e-government development found out that, even though the recent financial recession and the measures taken because of the recession have not had a real impact on e-government development, the Danish government has adopted a reluctant approach towards financing new e-government initiatives. The impact of economic situation such as depreciation of local currency, inflationary periods and the economic crisis on e-government funding activity cannot be over looked.

2.3 E-Government Funding Strategies: Pros and Cons

Wild & Griggs (2006) proposed that, the choice of funding options for e-government projects can be modeled as a set of forces and parameters (inputs) that move or influence the decision in a particular direction. The model's inputs are identified are target users, adoption factors, benefits

to government, third party players, risk factors, and service factors. These inputs produce an output of e-government funding strategies. A number of these strategies have been advanced and discussed in the literature (Mimicopoulos, 2004; Johnson, 2004; Heeks, 2002). Although many of these approaches appear attractive or optimal in funding e-government services it appears that each has its own drawbacks.

2.3.1 Donor Funded e-Government Projects

Mimicopoulos (2004) advocated that e-government projects in developing countries are closely associated with principles of good governance in the public sector and as such should receive priority consideration in development assistance by the donor community. The literature identifies that donor assistance to e-government initiatives and other ICT infrastructure projects have characterized project investment largely in developing countries (World Bank, 2011b; Dada, 2006; Heeks, 2002). Also, through donor funded e-government agendas, consultants have been provided to compensate for the weak or the absence of IT skills within Africa.

However, the dangers associated with over dependency on donor support for e-government projects implementation has been reported by empirical studies. For example, Schwabe and Deane (2003) indicated that e-government projects in developing countries are usually driven by individual government departments that frequently depend upon aid from donors. They found out that, most of these state departments' lose the control to either plan and prioritize these e-government projects. Hamiduzzaman (2011) in his study reported that the government of Bangladesh lacked the influence on how to prioritize its e-government projects because of the fact that the financing of equipment, internet subscriptions and the procurement of software depend heavily on donors. Secondly, the technical constraints provided by these donors also bring

their context with them and then impose a design derived from that context that mismatches specific developing country's realities. Once this financing ceases there is often insufficient funding to continue the project. To illustrate this point, Higgs (2003) found out that, a computerized system which was intended to institutionalise and standardise financial decision-making in Sudan failed after two years of work on the project when funding stopped and the IT consultants left. Nabafu and Maiga (2012), using a sample population of 160 public employees in six districts in Uganda, similarly concluded that donor funding dependency is affecting the sustainability of the e-government projects in Uganda. These cases point to some of the lapses when developing countries over depend on donor countries to finance their e-government projects.

2.3.2 Public Financing Model of e-Government Projects

Some traditional public financing model for IT infrastructure has been reported in some studies to be effective for funding e-government projects (NASCIO, 2008; Johnson, 2004; Mimicopoulos, 2004). These include issuing of bonds and accessing credit facility to provide a pool of funds to upfront the implementation of e-government system (Mimicopoulos, 2004; Johnson, 2004). Through these funding sources, a borrowing government can implement its e-government project by pledging its full taxing authority to pay back the debt from the savings made. Also longer maturity debt helps to minimize the budget risk and contributes to the financial stability of borrowing sovereign government. Although bonds and credits are typically most secure in providing the needed funds, in some countries delays such as legislative or voter approval can affect the timely availability of funds (NASCIO, 2008). Moreover funding from these sources may not be available due to over borrowing for other developmental projects and

most often might not be sufficient to sustain the project after the initial set-up or take off unless other strategies are adopted.

2.3.3 Market Oriented Funding Strategy for e-Government

Garson (2006) and Wild and Griggs (2006) have similarly identify several e-commerce models for funding e-government projects. These include auctions, user fees, online malls, sponsored advertising, online brokerage, information sales and direct sales. However, they conceded that most of these market oriented strategies do not directly apply to the public sector. For example, the use of advertising or sponsorship on e-government sites may be perceived as posing a conflict of interests. Wild & Griggs (2006) indicated that, these strategies may have social, political and economic implications when adopted and raises a number of rhetorical questions: will additional user fees be construed by citizen as tax on a tax? Will citizen accept high participation of private firms in essential government operations?

Notwithstanding all the rhetoric that might suggest otherwise, some of these funding approaches, especially user fees, remain the primary means of financing e-government projects in some countries. Johnson (2002) studied the financing of State web portals in the USA and contends that States should use fees and other revenue source like advertisement to fund e-government. He argues that this approach allows the State to reinvest fees and savings in portal maintenance, development and costs recovery. Robbins and Miller (2008) in their study also concluded that, fee-based financing schemes for investment in e-government projects provide for the most equitable and efficient financing techniques. Nevertheless, these market oriented approaches become feasible if the development of online services is customer or client driven.

2.3.4 Public-Private Partnership (PPP) Financing

Public-Private Partnership (PPP) has also emerged as a viable solution to the problems of funding e-government projects. The partnerships can be between governments and a private firm or among other public sector entities. The aim of PPP is to enable adequate funds and skills of the private sector to be utilized for e-government projects thus improving upon the economic viability and sustainability of the e-government project (World Bank, 2009; Sharma, 2007; Lalor & Brooke, 2002). PPP can be used to bypass budgetary constraints and thus respond to a number of barriers, including obtaining capital, budget time horizons and disincentives for innovation and collaboration (World Bank, 2009; Mimicopoulos, 2004; OCED, 2003). This can be achieved by using a private partner to build the required infrastructure, and then lease it, or otherwise pay the contractor on a user-pays basis. This will reduce the need for up-front capital but with the risk of greater long-term costs.

PPP effectiveness and efficiency in funding successful e-government projects has been demonstrated by a number of case studies (Langford & Harrison, 2003; Sharma, 2007). Sharma (2007) using a multiply case study observed that an attractive revenue sharing model was offered to the private players, which enormously improved the economic viability of the e-government projects in Asia. However, he concluded that, blind implementation of PPP model does not necessarily yield results, as demonstrated in some of the cases. Garson (2006) cautioned that the success of partnering, outsourcing, and contract management depends upon performance monitoring. He also reminds about the risk of crossing a thin line between partnering on the one hand and 'sweetheart' contracts and insider dealings on the other.

2.4 The Concept of Public-Private Partnership (PPP)

Public Private Partnerships (PPPs) have become widely accepted and popular in public sector management. Akintoye, *et al* (2003) write that, since the 1980s, privatization, market mechanism, contestability in the delivery of public goods and services, deregulation, and reinvention of the role of government were the keywords of New Public Management (NPM). The idea of PPP has received much attention in public sector reforms and performance management. Wettenthal (2007) explains that, at the centre of NPM was a cut-back of public sector expenditure, a delegation of responsibilities to the private sector and fostering of voluntary engagement of private sector aiming at providing public goods. NPM has shifted the focus of management from public service to service delivery. The principles of NPM therefore encouraged the establishment of Public Private Partnership (PPP) as a new management tool.

It is widely acknowledged in literature that there is no clear definition for PPP which would cover all aspects of the different relationships that these partnerships encompass. One definition of PPP offered by Akintoye *et al.*, (2003) defines the concept as a long-term contractual arrangement between a public-sector agency and a private-sector concern whereby resources and risks are shared for the purpose of developing a public facility. Some definitions of PPP stress the financial relationships. Wettenthal, (2007) for instances suggests a definition of PPP focusing on financial arrangements that is a PPP project generally involves the design, construction, financing and maintenance and in some cases operation of public infrastructure or a public facility by the private sector under a long term contract.

Admittedly, PPPs are not about funding alone, they are also about delivery. PPPs are about changing the political economy of providing infrastructure by combining the strengths of the

public sector with strengths of the private sector. Becker and Patterson (2005) provide a most succinct definition that refers to public-private partnership as a collaborative effort between the public sector and for-profit or non-profit organisations in the private sector to provide enhanced services to the public, to accelerate economic growth, or to supplement government revenues.

From the above definition and based on the view point of the various authors, one can conclude that, the concept of PPP carries the notion of a tool of governance or management, tool of financial arrangements and a tool of development process.

The reason for using PPP by government thus varies. Akintoye *et al.*, (2003) suggested three main reasons for using the PPP approach. Firstly, the private sector possesses better mobility than the public sector. For example, the private sector is not only able to save the costs of project in planning, design, construction and operation, but also avoids the bureaucracy and to relieve the administrative burden. Secondly, the private sector can provide better service to the public sector and establish a good public private partnership so that balance risk-return structure can be maintained. Thirdly, the government lacks the ability of raising massive funds for the large-scale infrastructure projects, but private participation can mitigate the government's financial burden.

Although, Akintoye *et al.*, (2003) observations may not be universally true, they reflect the general perceptions regarding the choice for PPP. This is because even though PPP is seen as an efficiency strategy in providing public service, some limitations can be observed in the model.

Li *et al.* (2005) noted that, the most significant disincentives associated with PPP procurement are of the amount of management time spent in contract negotiations, lengthy delays in negotiations and high participation costs. Likewise, Jamali (2004) reported that PPP

procurement creates challenges in terms of high cost of tendering, complex negotiations, cost constraints on innovation, and differing or conflicting objectives among the project stakeholders.

Unlike the traditional procurement, a PPP scheme has unique characteristics. Li *et al.*, (2005) summarize common PPP project's features. First, a framework contract underpins the partnership and provides the partners with some degree of certainty. Second, the risks of bringing infrastructure and services to the public are shared between the public and private sector. Third, the financial rewards of the endeavour are shared. For the public sector, this comes in the form of reduced costs for the private sector, it comes in the form of a return on investment. Finally, the amount of reward expected is related to the amount of risk and responsibility taken on by the public and private sectors.

Despite its identifiable characteristics, PPP manifestations are of several structural arrangements. This mostly includes BOT (Build-Operate-Transfer), BOOT (Build-Own-Operate-Transfer), BOO (Build-Own-Operate) Lease, Concessions and Divestiture (Jefferies *et al.*, 2002). Jefferies *et al.* (2002) explain that, generally the financing arrangements of BOT, the most common of these arrangements, are that the project is designed and financed by the private sector, and run and maintained by the private sector for the concession period. The private sector partner receives income from running the infrastructure. After the expiry of the concession period, the legal ownership of the project is transferred to the government (Jefferies *et al.*, 2002).

PPP's financing therefore is a creation of legal arrangement to provide public services. This place must importance on the country's legal regime for when financing using PPP arrangements. Nevertheless, Jamali (2004) suggests that, in some cases completing a PPP deal will require adoption of a flexible contract, if the project has to see daylight. Apart from the legal

regime, PPP as a financing tool also required some other consideration including the organisational structure of the implementation agencies, economic circumstances, technical and leadership support (Akintoye, *et al.*, 2003).

2.5 PPP application and experience in Ghana

The literature contains a list of empirical studies that have been conducted to ascertain the critical issues in PPP financing of government projects in Ghana. The study of PPP financing contracts in Ghana reveals some political, legal, organisational and financial challenges that need to be addressed when implementing PPP as a financing strategy. The following paragraphs discuss some PPP application and experience in Ghana.

Political conditions refer to challenges encountered by operators or contractors as a result of undue governmental disruption, including breach of contract, political instability and expropriation. In the Ghanaian context, they include change in government, termination by government, political interference, government corruption manage (Haarmeyer and Mody, 1998). Allegations of corruption practices have been reported in several PPP cases in the form of kickbacks, not observing regulations, removing competition and favourable contracts (Stone & Webster, 2002). Stone & Webster, (2002) reported that in 2000, the World Bank cancelled a US\$100 million loan on the basis of allegations of corruption against Azurix, a subsidiary of Enron. It was alleged that Azurix paid US\$5 million in bribes to government officials to win a contract to run the public utility's services in Accra.

Some studies also raise concerns relating to delayed and non-payment to private partners (Osumanu, 2008; Larbi, 2005). Factors explaining this financial challenge include poor economic status of most domestic consumers and increased tariffs which reduces their ability to

pay (Osumanu, 2008); poor service levels received by consumers thereby killing the willingness to pay and poor payment attitudes of public institutions (Nyarko *et al.*, 2011). Labi, (2005) in his very comprehensive study of PPP cases in Ghana observed that public sector is unable to raise short and long-term funds which resulted in poor performance of the PPP projects. He observed that during the development of urban water contract from 1999 to 2002, only 20 percent (US \$363.6 million) of the required investment of US \$1.818 billion was secure. The multiply case studies also revealed that failure of government to honour its financial obligations in urban and small-town water contracts for investment had huge implications on the project execution.

Finally, Awortwi (2004), researching on private sector involvement in local governments (LG) service provision in Ghana exposes the gap between PPP policy expectation and outcomes, which he attributes to getting the fundamentals wrong. He found out that, contrary to the PPP benefits portrayed in literature, almost no gains arose from the PPP arrangement in Ghana. There was no evidence of PPP improving service quality and no cost savings. Instead, he observed that, the LG and users were paying more than they used to when services were delivered by the public agency; no efficiency gains were recorded and that the private companies did not bring in any substantial financial and managerial expertise. These he alluded to poor contract arrangement and lack of enforcement laws.

2.6 Study Variables

Based on the discussion of the conceptual and empirical literature on PPP financing and the concerns related to e-government, the study explores the challenges in using PPP as a financing tool for the implementation of the GeGov project. The study indicators are grouped in four broad categories namely, organizational, economics, political, and legal. These categories represent the four fundamental forces that drive the success or failure of PPPs. The following explanatory variables have been adopted to guide the study.

2.6.1 Organisational

Organisational characteristics or complexities can affect PPP projects like e-government projects. Institutional structures such as administrative arrangements, budgetary planning norms and the structure for intergovernmental agencies relations can serve as constraints. Identifying the influence of institutional structure on PPP project financing becomes important. This variable therefore describes the properties of the organisation put in place, its behaviour and how it hinders or promotes PPP financing of the GeGov project.

2.6.2 Legal

The PPP legal and regulatory framework can be thought of as all the laws and regulations that relate to the implementation of PPPs. These laws and regulations can include PPP-specific legislation, public financial management laws and regulations, and sector-specific laws. They emphasise the promotion of PPP initiatives without first creating the appropriate policy, legal and regulatory framework could result in poor quality, unsustainable projects as well as damaging investor confidence. A sound regulatory environment is often a condition for the

success of a PPP. This variable therefore describes the challenges associated legal arrangement for PPP e-government projects in Ghana.

2.6.3 Political Commitment

Political commitment is the attitude, behaviour of individuals or leadership needed to achieve desired results. This is critical in any PPP implementation. The nature of e-government means that it is at the centre of and surrounded by politics from implementation perspective. Political commitment describes government's readiness and motivations to spend on e-government. This variable therefore seeks to examine the political commitment provided under the case study.

2.6.4 Economic

Governments sometimes see PPPs as a way to rescue financially challenging projects. The variable seeks to explain how basic economic assumptions such as revenues, costs, and level of investment have been integrated into a reasonable and sustainable business such as the case for the GeGov Project. The economic environment has been identified as possible a challenge to PPP financing strategy. The economic environment can provide both opportunities and constraints for effective implementation of PPPs. The economic environment can be a main force that determines the roles and degree of involvement of government in a particular project. The more important e-government is to economic development or economic recovery, the more support it will receive from government. This variable examines the influence of economic conditions in developing a financial case for implementing the GeGov project.

2.7 Chapter Conclusion

In summary, the benefits of ICT in government cannot be disputed. However, there are several concerns about its success as well as the strategies to be adopted in implementing e-government systems in various countries. While many agenda on government programmes can be achieved only by reforming legal framework, without financial implication, e-government requires a huge amount of financial input for each stage. Yet, e-government would not be able to secure the necessary budget for implementation due to some budgetary hindrances, lack of political support, cost and benefit uncertainties and economic challenges. Therefore, it becomes crucial to devise some other strategies to secure the budget for e-government projects, different from general government projects. PPP has been espoused as a formidable strategy to overcome these challenges. However, the current knowledge in deploying PPP as a financing tool for e-government projects is limited to studies conducted in developed countries. Since in developing countries like Ghana organisational, political motivation, legal and economic contexts may be considerably different from those of the developed countries, studies on these variables are important for developing countries that are plan to implement e-government systems.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter discusses the philosophical assumptions and the design strategies underpinning this research study. Common philosophical assumptions are reviewed and documented. In addition, a discussion of the justification for the selection of a qualitative single case research method for the thesis is provided. Finally, the overall research protocol used for data collection and analysis is discussed. The primary focus of the methodology was to explore, describe and explain the challenges involved in the use of PPP as a financing tool for the implementation of the Ghana Electronic Government (GeGov) project.

3.1 Research Paradigm

The design of a research begins with the selection a paradigm. A paradigm is “a set of beliefs, values and techniques which is shared by members of a scientific community, and which acts as a guide or map, dictating the kinds of problems scientists should address and the types of explanations that are acceptable to them” (Kuhn, 1970 p.175). Choosing an appropriate research paradigm to follow in this thesis was a critical task. There are many research paradigms in the field of social research including positivism, interpretive and critical realism (Creswell, 2009; Myers & Avison, 2002). Myers and Avison, (2002) writes that, the positivist paradigm researchers attempt to accomplish objectivity and to determine realities that can be simulated by other academics. The ontology assumption here is that, an objective reality is single and concrete. The researcher in this case is independent from what is being researched; that is, the researcher is distanced or objectively separated from the object of study. Positivism studies

generally attempt to test theory to increase the predictive understanding of phenomena. Knowledge is discovered and verified through direct observations or measurements of reality (Creswell, 2009). Therefore positivists believe in empiricism, the idea that observation and measurement are at the core of the scientific endeavour. The purpose of most positivism research primarily is to instrumentally learn about reality so that the general laws that govern reality can be discovered and explained in order to describe, predict and control reality.

On the other hand, interpretive scholars try to understand phenomena through the meanings that people assign to them. Guba and Lincoln (1988) explain that, the interpretivist researchers' explanation to the ontological question is that there is an existence of multiple realities and value-laden which are socially constructed. However, their answer to the epistemological question is that research methodologies must not depend only on the gathering of data and facts, but they must consider the complication of human action and deal with explaining the meanings and manners of the observed human performers (Myers & Avison, 2002). Contrary to positivism thinking, the researcher is not independent from what is being researched. In that sense, interpretivists believe that researchers are unique individuals and that all research is essentially biased by each researcher's individual perceptions (Guba and Lincoln, 1988).

Contrary to the positivism and interpretivism thinking, the critical realist or postmodernity school argues that reality is founded and that it is described through a discourse (Orlikowski & Baroudi, 1991). Realism recognizes that perceptions have certain plasticity and that there are differences between reality and people's perceptions of reality. Critical realists are therefore

concerned with the discovery of observable and non-observable structures and mechanisms, independent of the events.

3.1.1 Selecting an Appropriate Research Paradigm

Following the above discussions, the philosophical assumptions underlying this study come mainly from a qualitative interpretivism. The reasons for choosing this approach are explained hereunder.

According to Creswell (2009) a qualitative study is defined as an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting. Interpretive approach was adopted for this study because it gives the research greater scope to address issues of influence and impact, and to ask questions such as ‘why’ and ‘how’ particular funding trajectories as deployed in the case study. The purpose of the interpretive approach in this study is to produce an understanding of the context and the process whereby funding influences and is influenced by the context. This study tends to go beyond the observable actions of people in the context of social phenomena to understand the subjective meanings they assign to their actions and thereby interpret and understand the reasons behind those actions. One advantage of qualitative study is that it makes use of multiple sources of data to enrich the study.

Also, the adoption of this paradigm was necessary because it ensured the detailed description of the issues by the implementers. The researcher’s intention was is to make sense of or interpret the meanings others hold about e-government funding. In so doing, the research attempted to obtain deep understanding of the funding strategy adopted for the GeGov project. In particular,

the researcher interest was on the major challenges that are hindering funding activities and strategy for the GeGov project. This assertion justifies the researcher's choice of interpretivism as the philosophical rationale for this study.

3.2 Research Design

This study adopts a qualitative exploratory single case study approach, to highlight instances when “how” or “why” questions are being posed when the researcher has little control over events; and when the focus is on a contemporary phenomenon with some real-life context (Yin, 2003). E-government is a novelty in Ghana and is constantly evolving. Researchers have little control over its dynamic and complex nature. Also, Creswell (2009) argues that the case study will approach be appropriate when the study's intent is to understand a specific issue, problem or concern.

Admittedly the evidence from multiple cases is often considered more compelling, and the overall study is therefore regarded as being more robust (Yin, 2003). However, for this study the selection of a single case was based on pragmatic considerations and the fact that there are few e-government projects in Ghana. In addition, the case study method was used in this research for two other reasons. Firstly, the study was looking to gain a better idea and understanding of e-government and its implementation process, with a particular focus on the identification of the challenges that might hinder funding activities. Secondly, because of the nature of the selected case study and the limitations of resources and time, the researcher would not be able to conduct several or multiple case studies within the framework of this study. The researcher therefore decided to undertake a single case study in the hope that it would provide richness and help to inspire a more substantive work in the near future by other researchers.

The study also identifies a common concern about case studies providing little basis for scientific generalization. “How can you generalize from a single case?” is a frequently heard question (Yin, 2003). The answer is that, case studies, like experiments, may be generalized to conceptual perspectives and not to a population (Yin, 2003). In this sense, the case study selected, like the experiment, does not represent a “sample,” and in creating a case study, the goal was to expand and espouse analytic generalization and not to enumerate statistical generalization. This study uses the GeGov Project, which is being implemented for two state agencies, namely Ghana Revenue Authority (GRA) and Registrar General Department (RGD), as the subject of the case study.

3.3 Unit of Analysis

Yin (2003) explains that the features of a case constitute the identification of the case which could be a more concrete entity like an individual, a small group, an organisation or partnership or less concrete level like a community, a relationship, a decision, a decision process or a specific project. The unit of analysis of this study is the GeGov project. The GeGov Project has been deployed as an e-government solution in Ghana. The project seeks to deploy ICT to redesign the work of two public agencies, GRA and RGD. Whereas the RGD is a department of the Ministry of Justice authorized with the responsibility for the initial registration and maintenance of the information of business organizations, administration of estates and marriages, GRA on the other hand, is authorized to mobilize revenue in Ghana.

3.3.1 GeGov Project System Solution Description

The new system automates and integrates business processes within GRA and RGD. The entire project system has three major components: the Total Revenue Integrated Processing System (TRIPS™); Government Registration System (GeReg™); and Shared Services (Appendix B). TRIPS™ allows for tax administration and management, including filing tax returns and making payments whereas GeReg™ provides business registration, marriage registration and estate administration. Additional TRIPS™ and GeReg™ functionalities include Business Intelligence (BI), Global Information System (GIS) and communication which allows users to receive e-mail and mobile notification and make appointments. The Tax Identification Number (TIN) is the primary means of identification in the shared dataset service. The GeGov system when fully deployed can allow businesses and citizens to conduct business with these state agencies via the web portal (Appendix B).

3.4 Data Sources

The quality of a research may be influenced by the types and sources of evidence used. Various sources and types of evidence abound and could be used for the work. The study used both primary and secondary data focusing on three out of six sources mentioned by Yin (2003). The three sources used in the study include interviews, official documents and archival records. The study took into consideration factors relating to interest of the research, the research questions, accessibility and ethical considerations in order to decide on these sources which satisfy the condition of multiple sources as espoused by Yin (2003) in his explanation of the three principles which could be used to facilitate a case study with a view to improving its quality substantially.

Primary data for the study was obtained through one-on-one in-depth interviews using a semi structured question guide (Appendix A). The in-depth interviews were administered to gather the views of respondents in relation to the research objectives. Respondents were allowed to share and express their thoughts without many restrictions. Relevant insights were revealed in some of these interviews and were supplemented by the secondary source of data.

A variety of secondary data source such as internal reports, archival records and other publications that form part of the case study project and institutional histories offered further information and context for the study. Data was also collected from open channels of the internet, especially the website of the National Information Agency (NITA) and the World Bank. The website of the NITA and World Bank contain many downloadable official documents about e-government development in Ghana, including guidelines, speeches, policy statements, regulations, discussion papers and progress reports. These documents contain data and information about the development of the GeGov Project. As the websites of the World Bank and NITA are the most important channels to communicate with citizens and provide citizens with the most updated information, its data is particularly reliable and up-to-date. The search parameters included the date range from January 2006 through January 2014. The search also included official speeches by Commissioner of GRA, press releases, editorial works and granted interviews by the GeGov project members and World Bank officials published in the electronic media. The official documents were also obtained from the Ministry of Communication (MoC) and the National Information Agency (NITA) premises which included PPP guidelines, GeGov project procurement notices, feasibility study document and budget documents that provided information on the GeGov Project. The data sources used in the study complemented one another to produce quality data for the work.

3.5 Sampling

3.5.1 Sampling Technique and Sample Size

Qualitative research demands that excellent respondents to be sought out (Creswell, 2009). The sampling approach adopted for selecting institutions and respondents for the study was aligned with purposeful sampling. Institutions and respondents hence were chosen based on their direct or indirect involvement in the GeGov Project. However the respondents were identified using the snowballing technique. Snow ball method yields a study sample through referrals made among people who share or know of others who possess some characteristics that are of research interest. As there were no list or identifiable clusters of the GeGov implementation team this sampling technique provided access to members of GeGov project. The technique was also used for study because the respondents were scattered over a large area but keep in touch with one another in some way. At the end of each interview respondent was ask to recommend helpful persons who met the equally provide answers to the interview questions. Eventually, some few key were mentioned repeatedly providing a list for the interviews. This therefore qualifies them as important informants, capable of answering the research questions. In adopting snowball sampling technique for the study, a group of senior level officials such as directors, general managers and consultants were targeted to be interviewed. Yin (2003) noted that interviews of this nature tend to reach a point of data saturation after interviews with about eighth individuals. To ensure that the research went beyond the point of data saturation, it was decided that there should be between fifteen (15) and twenty (20) respondents involved in the study.

Therefore, in all, a sample size of eighteen (18) respondents was used. Members from four (4) government agencies and one (1) private organisation were interviewed. The researcher separately interviewed eighteen officials from five (5) distinct organisations in involved in

GeGov project implementation. The distribution is as follow, twelve (12) of the respondents were from public institutions and six (6) from a private organization. Four (4) each were from MoC and NITA; two (2) each from GRA and RGD (project sites); and six (6) from GCNet. The aim of this distribution was to ensure that greater perspective from each of these institutions was obtained. The respondents had an average of five and half years' experience on government ICT related projects and an average of eleven years work experience with public sector projects before the term e-government became fashionable. The positions held within the different offices were diverse. The respondents described their position as Managers (3), Directors (2), Assistant Directors (4) Coordinator (2), Consultant (1), project officer (2) and public official (4).

3.5.2 Study Sites

The study took place in the Greater Accra Region of Ghana. The researcher used five (5) organisations for this study. The study primarily was undertaken at the office of the Ministry of Communication (MoC), National Information Technology (NITA), Ghana Community Network Limited (GCNet), Ghana Revenue Authority (GRA) and the Registrar General Department (RGD). The choice of these institutions was informed by their roles in the GeGov implementation process and their contributions to understanding the research problem and questions respectively. The MoC, GRA, RGD and GCNet were at the centre of the implementation of the PPP contract as MoC represented the government and GCNet was the private partner. The study would have been incomplete without examining the views of management of these four institutions. The MoC was chosen purposely because its critical role in budget planning for the eGhana project in general and the personnel provided for the implementation of the GeGov project specifically. The NITA was included in the study because

it is in charge of regulating the provision of information communications technology and a critical technical advisory service to the government for implementing this project. Their perspectives enriched and broadened the scope of the study.

3.6 Instrumentation and Data Collection Procedure

Empirical data using in-depth interviews were collected and analysed. This approach enabled the researcher to obtain in-depth views and experiences of knowledgeable individuals who are intricately involved in the GeGov e-government project. A semi-structured interview guide (Appendix A) was developed and used during the data collection process, which was largely influenced by normative literature and in consonance with the research objectives. This instrument was very appropriate for getting detailed information from the respondents. The interviews were all conducted separately during face-to-face meetings. Access to the interviewees was gained through personal contacts. The researcher had the interviewees' permission to use a tape recorder except four interviewees who requested not to record their conversations. In those cases notes were taken throughout the interview. Where necessary, follow up interviews were conducted to clarify any unclear information by revisiting the respondent or through telephone calls. To better utilize interview time and enable interviewees to assemble their thoughts, the interview question guide and an introduction letter from the that explained the objectives of the study were submitted beforehand either by hand delivery or attached to an email message. With each interview the researcher obtained consent from the respondent before each interview was conducted. In all, eighteen (18) interviews were conducted which lasted for an average of seventy five (75) minutes. Although the number of interviewees was initially thought to be small, the interviews were sufficiently in-depth to generate a

significant amount of data. In fact, the researcher reached a point of data saturation (Yin, 2003) after the twelfth interview, whereby subsequent interviews tended to reiterate points already mentioned by earlier respondents rather than raise any significant new points or insights. The content of these interviews was transcribed directly following each one. The entire data collection process lasted between December 2013 and February 2014. To achieve the objectives the study, the researcher spent as much time as necessary, until he was satisfied that he had found answers to the research questions in terms of funding the GeGov Project.

3.6.1 Ethical Consideration

Creswell (2009) stated that, the researcher has an obligation to respect the rights, needs, values and desires of the informants. Ethical matters or considerations were very important for this research. In that respect, interviewees' consent was appropriately sought regarding all information that they provided. They were assured of confidentiality and anonymity of their information provided. To assure them further, consent was sought before recording devices were used in order to give interviewees the confidence to speak to the issues without any fears and suspicions. The wishes of the four other respondents who did not want to be voice taped were granted. The researcher also made it clear that, the respondents' names would not be used for any other purposes, nor will information be shared that reveals their identity in any way. Interviewees were informed that the work is purely for academic purposes and not for any other reasons. Also, all documents used have also been properly acknowledged and documented to avoid issues of plagiarism.

3.7 Data Management

The overall data analysis approach followed largely a thematic and descriptive analysis process. This first of all involved encoding the qualitative information in order to identify a particular theme with the information; that is whether some sort of pattern is identified within the information that may have some relevance to the area of the research. Secondly, content search and analysis of official documents was also carried out to verify the information provided by the respondents.

3.7.1 Data Coding

Data coding was done by using the categorizations or themes of issues identified in the literature. In specific terms, data was coded according to the challenges that influence the use of PPP as a funding strategy for e-government projects. To make analysis simpler, every question of the interview guide was mapped to each category in the various themes identified in the literature namely, political, economic, legal and organisational. Therefore, coding of the transcribed interviews was much easier as responses were directed towards the larger themes. The researcher drew a table for each objective of the study. Each respondent was assigned an identification number starting from one that is the first interviewee to eighteen (eighteenth interviewee). The table was then divided into three columns. The first column has the assigned identification of the respondent, whilst the second column is the response given by the respondent; the third column was used to identify the emerging themes in the responses. The next row is given to another informant using the same headings for the columns. Similar tables were developed for each objective.

However, for official documentation and archival records, content analysis and making margin notes were used. According to Neuman (2003), content analysis is a technique for gathering and analyzing the content of the text which enables a researcher to compare content across many texts and analyze it with qualitative techniques. It helps to yield repeatable, precise results about the text (Neuman, 2003). The researcher searched for related phrases and sentences within the texts while reading, and this made it possible to take into account the context and connotations of words and phrases. In conducting the content analysis, attention was paid to key phrases, sentences, or statements such as “funding structure”, “challenges”, “risk allocation”, “cost-benefit”, “financing,” “cost-effective,” or “value for money” about the GeGov Project. By reviewing official documents, it was possible to code the parameters that move the challenges into a set of the taxonomies. This was then analyzed in an iterative manner, likened to the much referenced open coding technique as argued by Strauss and Corbin (1990).

3.7.2 Mode of Data Interpretation and Presentation

For qualitative data analysis, it is required of the researcher to place data into meaningful categories in order to analyze them in a valid manner and to find a way to communicate this interpretation to the research audiences. An important aspect of data analysis in qualitative case study is the search for meaning through direct interpretation of what is observed by themselves as well as what is experienced and reported by the informants. As the interview was the main method of data collection to study, the government’s efforts at funding the GeGov project from an e-government implementation perspective, the analysis of data involves testing the meaning of interviewee’s words and actions. Data analysis also involved triangulation between collected primary data through interviews and results gleaned from official documents in order to

compare separate information and draw final conclusions. In additions, from each transcript significant phrases or sentences that pertain directly to the lived experience of interviewees or explanation to the case theme were identified. Meanings are then formulated from the significant statements and phrases. For the ‘how questions’, a descriptive approach was used to present the data on how the GeGov project was been funded. The techniques of reporting interviewees’ response in the form of quotes or excerpts were used to present findings as advanced by Creswell (2009) and Yin (2003). This helped to improve its soundness as qualitative research. In addition, summary tables and figures were constructed to present the findings.

3.7.3 Data Reliability and Validation

The collection of reliable and valid data for the case study was an important issue. The goal of reliability is to minimize the errors and biases in the study (Yin, 2003), while the goal of validity is to collect true and authentic data that can be measured objectively and observed empirically. In order to ensure the validity and reliability of data, this study adopted the approach of data triangulation that uses multiple sources of evidence as indicated above. As Yin (2003) argues, no single source has a complete advantage over all the others. Instead, various sources are highly complementary. This study adopted data triangulation in order to collect information from multiple sources which aim at corroborating the same fact or phenomenon. In other words, triangulation of data implies that, the events or facts of the case study have been supported by more than a single source of evidence (Yin, 2003). Multiple sources of evidence essentially provide multiple measures of the same phenomenon. Information provided by informants was triangulated with project reports and other official documents. The use of multiple sources of

evidence allowed this case study to present more rounded and complete accounts of issues and processes of the GeGov project.

3.8 Field Experience and Challenges

As is true of all research work, a number of problems were encountered. Some of these challenges were obviously predicted, but others were experienced during the primary data collection. Among them were the misplacement of the informational document and question guide by some respondents and the subsequent refusal of some respondents to honour appointments. Busy schedules of respondents resulted in late interview sessions. Access to some records was a major challenge since most officials were not willing to give away some sensitive documents relating to the research. Time constraint was also a great problem too but the major issue had to do with getting appointment to conduct interviews at the Ministry of Communication and GCNet.

Seeking information from Ghanaian public institutions has always been a challenging task. Moreover, a proposed focus-group discussion which was initially planned did not materialise due to the fact that it was difficult getting participants together in a single meeting. Ghanaian public officials are exceedingly skeptical with divulging information, especially when audio recording devices are being used. This is because some Ghanaian journalists and political opponents have the habit of recording public officials sometimes without their knowledge only to replay their voices in the electronic media to create problems for them. During the period of the study, the then Deputy Minister of Communication lost her job as she was secretly recorded by an unknown person while having private conversation. This scandal and many others prior to this somewhat changed the way some Ghanaian officials view recording devices. This major

challenge was deflated by obtaining an introductory letter from the Department of Public Administration and Health Services Management, which was duly signed by the supervisor. This letter facilitated the data gathering processes as it provided the researcher some credibility and prominence.

3.9 Chapter Conclusion

In summary, a qualitative single case design approach was the most suitable method for the reason that the researcher was trying to understand how PPP financing of an e-government project in Ghana and the challenges faced from the perspective of government officials. Interview method was the primary source of data collection. A comprehensive review of existing document was the secondary source for gathering information. The data was analysed with the help of qualitative methods. The procedure of analysing data and the methods of reducing the threats of validity and reliability were mentioned. The next chapter provides the findings and discussion of the study.

CHAPTER FOUR

DATA PRESENTATION AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter deals with the analysis of the data that was collected during the field studies. The chapter particularly covers the findings about the challenges of using PPP as a financing tool for the implementation of the GeGov project. The chapter is structured along the objectives of the study and is therefore, analyzed thematically as follows; legal, organisational, political and economic challenges.

4.1 GeGov Project Funding Structure

The descriptive qualitative questions that were asked had to do with description of the funding strategy to which the implementers understood the funding structure. Questions were geared towards describing the funding source, partnership structure, payment mechanism and risk allocation.

The study found out that the budget for the GeGov project was acquired through a Private Public Partnership (PPP) financing arrangement. A summary of the GeGov project PPP funding structure is provided in table 4.1. The total contract value was US \$59,866,648.08 (\$60 million approximately) and this amount includes investment and recurrent cost which cover a period of five years. The public partner is the government of Ghana (GoG) represented by the Ministry of Communication (MoC) with a financial contribution of US \$20m and the remaining contribution was from GCNET the Private Partner (table 4.1).

Table 4.1 Distinguishing Characteristics of GeGov PPP Funding Model

PPP Type	Design-Building-Finance-Operate-Transfer (DBFOT)
Duration	Five years (end July, 2014)
Project Cost	US \$60 million (approximately)
Partners	MoC- NITA GRA and RGD (Public) GCNet (16 subcontractors (Private)) World Bank (Sponsor)
Risk Allocation	Risk is largely borne by the private partner
Nature of private partner financing role	Invest in the designing, management, operation, maintenance of the e-government system to a specified standards and outputs. Financial investment of US\$40 million
Nature of public partner financing role	Tax exemption for imports, counterparty contribution of US \$20 million

Source: Author's Construct, 2014

The government of Ghana's contribution was from a specific investment loan facility from the World Bank under the eGhana project funding facility of US \$86.41 million. However, the private partner provided an upfront financing beyond what the government of Ghana is providing, as advance payment. In addition, the private partner was expected to design, build, operate and transfer (DBFOT) the electronic systems for the involved public agencies. This PPP-DBFOT arrangement is for a period from 5 years, after which all rights or title to the assets are relinquished to the government.

The funding structure was project based which is contrary to the findings of Gottipati (2002), who observed that, e-government projects in Arabian Gulf are being reviewed and funded on a budget-based rather than being project-based budgets. Project based unlike the fixed budget-based process, provided flexibility in financial management for pursuing long-term projects from investment perspective and contributed towards launching of never before used or experienced emerging technologies, even with their associated risk of failure. Also, with the World Bank as a

key sponsor the GeGov project the funding strategy enjoys the benefit of much concrete financial sources as compared to the findings of Matavire *et al.* (2012), who observed that in South Africa e-government financing was greatly affect by funding fragmentation.

4.2 Partnering without a Sector Legal Regime

This section includes information regarding initial challenges that confronted developing a funding strategy for the GeGov project. The section examines the drive for government engagement in private partnership arrangement and examines the legal regime that facilitates PPP funding arrangements in Ghana. The proposition is that investors in PPP projects need predictability to determine that the legal basis for their participation in projects and that there are no unduly restrictive or unreasonable legal requirements.

The study found out that, in Ghana there was no umbrella legislation for PPP in general and in extension for e-government infrastructures development. However, the study's respondents identified some legal framework that was relevant in implementing this PPP contract between MoC and GCNet which included PPP Policy Guidelines, Procurement Act, 2003, Financial Administration Act, 2003, Contract Law in Ghana, Ghana's Constitution, and Disposal of Assets (PPDA) Acts, 2003.

Answering the question of enough legal and regulation framework for implementing PPP financing of e-government projects, respondents expressed mixed response. Eleven of the participants indicated that current regulations and policies are sufficient for implementing PPP in e-government.

“As you may be aware there is no PPP law, Ghana does not have a single law which applies to all PPP. However, there is sufficient flexibility within the common legal framework that recognizes and permits private partnership.”

“The absence of a law has not been a hindrance in partnering a private company to implement this project as there are other legal frameworks which permit PPP.

The remaining seven were of the view that, the current regulations and policies were insufficient in addressing new types of internal and external interactions that result from e-government implementation. The following quote expresses their views;

“Even though the PPP policy the ministry is using provides general guidelines for procurement it is still an administrative document with no legislative support or backing. Partnering in an e-government project requires specific rules for everyone involved in the entire procurement and delivery process”.

“There is a general call for private public partnership law and I believe efforts have been made already, as to whether the current laws available are enough for projects like e-government I doubt”.

From the data collected, it can be said that although Ghana has made some progress in legal and regulatory reform for private partnering in infrastructure projects, the legal framework is still so inadequate as to have a piecemeal approach. Some respondents pointed out that in Ghana,

investors are most concerned about legal risks, approval risks, and regulatory risks associated with PPP projects. The legal weaknesses are shown in the following quotes:

“Some investors are not happy with the legal regime. The legal direction of PPP had to rely on administrative decisions by government and some few public officials.”

“I think because we do not have a special law that can deal with PPP in e-government. This is the difference with some other countries where all PPP projects are governed by a specific PPP law. The current policies and laws are many and scattered, usually deal with different aspects such as contract, tendering, and bidding processes of a single project. The problem is that it usually results in a complex legal situation which investors are afraid of.”

Even in the initial stages, the procurement process for the GeGov project was guided by the World Bank’s Procurement Guidelines. Initial assessment rated procuring under Ghana system as high risk. The Bank believe that its procurement procedures are regulated and standardized, ensuring that the key principles of fairness, transparency and competition are preserved. As stated in the World Bank project report:

“Though the Procurement Unit [in Ghana] has significant experience in procurement using Shopping, National Competitive Bidding and other procurement procedures under the Public Procurement Act, it does not have any history of implementing Bank-financed projects in the recent past and therefore the experiences of the staff in comprehensive use of the World Bank

guidelines for procurement of goods, works and services are very limited” (World Bank- eGhana project, p.2009).

PPP is a risk sharing relationship based on legal agreement between public and private sectors. The partnership can be cultivated in PPP projects by a well-crafted contract agreement base on the country’s laws and regulations. In the GeGov project too such was the case as one of the interviewees from NITA explains;

“If you are going to have a high way effective collaboration you do need some sort of formal relationship mainly just to protect each other, therefore upon approval of the bid evaluation committee’s recommendation, the winning bidder was invited to enter into negotiations with government based on their technical and financial resources offered.”

However, the evidence from the interviews conducted indicate that the GeGov project PPP arrangement contracts was far more complex and required considerably more time for negotiations than conventional purchases of goods and services because of the partnership nature of the relationship. Largely, the negotiation challenge had to do with the indemnification requirements, as well as legal inflexibility in repayment. They, also indicated that private-public partnerships are often challenging to negotiate to ensure that the interests of all parties are balanced.

Legal clarity of contract terms and congruence of goal involved in the GeGov PPP arrangement, as important funding factors was recognized by the interviewees. The respondents indicated that

the matters of dispute regarding contract signing included the timetable for deliverables, associated adjustments in repayment, termination and transition, how to handle unforeseen events that may affect the performance of the contract and how to resolve disputes that may arise between the partners. These challenges are captured in the following quotes;

“Most of these problems occurred due to the difficulty in the negotiation process with the government agencies and also due to government long process to provide the necessary guarantee and appropriate assurance towards us regarding the long-term security of the project’s revenue stream” (a Manager, GCNet).

“In organizing the financing for this massive project, extensive negotiations were held with the service provider, focusing on the following: what should be the agreed equity, financial internal rate of return and what service standards, both quantity and quality was required of the operator”.

“The issue of meeting deadlines, changing the scope of the contract under certain circumstances and repayment dominated the negotiation discussion for a long time.” (Public Officer, MoC)

In most PPP negotiations, the particular details of the winning offer would be translated into contractual terms that were to govern the performance of the contract and the compensation arrangements (Jefferies *et al.*, 2002). However, from the data collected it could be argued that this agreement approach was not suitable for the projects which require innovation and high development of high quality ICT service with long-term benefit like the GeGov project. A much

flexible contract approach was adopted for the GeGov project to remove many constraints among the partners. It is evident from the interviews, as one of the interviewees said, “*We were not quick to jump too quickly onto a formal agreement, and we have a very flexible agreement.*”

Jamali (2004) suggested that for an appropriately designed legal framework needed for a PPP arrangement, provisions for contract re-negotiation and contractual adjustments of terms and conditions particularly in countries having the weak administrative capacity are required.

The complexity of the project and the high uncertainty level precipitated the need for a much flexible contract for the GeGov project. From the data gathered, some interviewees shared the same perceptions that legislation is an influential factor prior to and during the implementation of a large-scale IT project like the GeGov project. This finding corroborates studies by Heeks (2001), and Bonham *et al.* (2003) that show legislation challenge as a pivotal factor for e-government implementation. This finding is also in line with the observation made by Jefferies *et al.* (2002), in his study of Stadium Australia a BOOT type PPP project that ascertained that the legal framework as one of the critical success factors of the project.

4.3 The Quest for a Private Partner

Evidence from the data collected indicates that the quest for a private partner was a daunting task for government. This theme was introduced as a result of frequency of occurrence in the data collected from the field and was not identified during the literature review. This theme runs through most of the interviews as various respondents alluded to this issue.

The challenge with financing e-government projects from the very beginning in developing countries is that, there is always a case for insufficient public funds (Heeks, 2003). Initial

assessment as to the actual e-government implementation shows that there are always good reasons as to why the funds are not enough. The case study findings also collaborates the assertion in the literature that, developing this project encountered financial constraints. In the interviews, scarcity of government funds was identified as the main reason for government opting for PPP for implementing the GeGov project. This particular challenge was highlighted by these respondents:

“I will say finance because serious financial difficulties besieged Ghana almost from day one in developing this project (eGhana project Coordinator).”

“The Government of Ghana faced financial constraints and capacity issues. Therefore, PPP was considered an ideal method for funding and implementing the GeGov project” (An Assistant Director, NITA).

This challenge precipitated the need for government to a partner private an IT firm. However, based on the empirical data gathered another pre-contractual challenge for the GeGov project was the search for local private IT firm to partner. The fielding findings show that the search for an IT firm to invest financially and execute the GeGov project was a daunting task for government, least speak of a local partner. This opinion is epitomized in the following quote by a Director at MoC-eGhana secretariat:

“Attracting private partners who are willing to work through the rigour of working with public institutions was difficult. The reason is that there are very few specialized IT companies in

Ghana that the government can partner to develop e-government systems for our public agencies”.

The challenge of limited local partner alliance is an interesting challenge, as it was an important point to find the right local industry partners in Ghana as this respondent contributed:

“The search for a partner was an important agenda for government on the basis of ensuring that best practices were followed, government was obliged to identify a strategic technical partner that had some local experience to drive the process and also prepared to invest in the GeGov project”.

This finding is not surprising as many emerging market countries like Ghana lacks local private ICT industries that are sufficiently developed to partner with the government on e-government PPP projects. The finding shows that e-government officials and implementers claim that IT private partners and alliances in Ghana are not strong, and that they were looking to enhance the local industry partners in Ghana. Nevertheless, this is not to say that the government was not prepared to partner international ICT vendor firms. As one of the respondent stated unequivocally:

“Government would like to encourage international companies as well towards PPP financing of e-government system on the condition that there is long term commitment from these organisations, this is important to ensure sustainability of e-government in Ghana”.

Other informants from MoC also attributed this challenge to the issue of incentives to attract private firms and prevailing economic conditions. For the private sector to step into the funding activity,

their commercial interests needs to be ensured by creating incentives for e-government partnership. Incentives are needed to reward risk takers in order to promote adoption of new technologies (World Bank, 2009; Wild & Giggs, 2006; Jahnsen, 2004). In addition, the general deterioration of the international investment climate, especially in the infrastructure sector as a result of the economic crisis, had generally reduced the possibilities of finding bidders or buyers even for viable IT companies as depicted in this quote:

“Government needed to put in more effort to attract a partner. The challenge of providing attractive incentive was further reinforced by the fact that between 2007 and 2009 when the project was being promoted, interest rates were very high. Investment in government treasury bills and bonds offered a more secured return for any investor than an investment in a perceived risky e-government project (NITA, GeGov, Project report, 2012)”.

Incentives to attract private participation and competition during the bidding process became a crucial ingredient for this project success. GoG was required to rebid due to non-compliance of bidders and the participation of smaller firms. Initial bid prices put forward by the private firms was about 40% higher than GoG projection. To increase private partner interest a request was made by GoG to the World Bank to increase the public contribution which initially was US \$10 million to US \$20 million. Secondly, an attractive revenue sharing model was offered to the private player, which enormously stimulated private sector interest. As captured in this comment by one public officer;

“The primary reason for this request was to top up government contribution which was initially 10 million, as a show on government commitment and also to provide incentive for a successful project”.

The increase in government financial contribution thus reduced the level of investment that the private service providers would have had to make, thereby enabling them to achieve agreed rates of return on their investments from revenue sharing arrangements relating to the service provision.

It was not surprising that because of the challenges stated above, the GeGov project procurement was through an International Competitive Bidding (ICB) process. The firms were rated using criteria such as prior experience with the development and operation of application systems for revenue and business registration agencies, prior business process re-engineering experience within government agencies. For the financial capacity criteria, bidders were required by the procurement notice to demonstrate this competence thus:

“...by a presentation of the projected cash flow needs based on the bid price for performing this PPP contract over the contract duration of five years and the available financial sources to meet the needs, supported by audited financial statements for the three prior fiscal years and any commitment letters from internationally recognized banks or financial institutions where necessary” (Ghana, 2009).

From the 28 original bidders, 12 bidders were chosen as semifinalists with only 3 finally submitting. These companies were then asked to submit a best and final proposal. Again, the proposals were reviewed for technical and financial capability and the solutions submitted by each bidder. One proposal was chosen to move forward with final negotiations. GCNet as a strategic technical and financial partner, a fulcrum around which the project will evolve, became a choice for the GeGov project. In addition to scoring high in the evaluation, the choice of

GcNET was largely because of the experience and the touted success in developing and implementing the TradeNet system at the ports.

These findings also collaborate with studies by Heeks (2003), Eyob (2004) and Gottipati (2002) that highlight the challenges of obtaining required funding for e-government projects. From the data collected, it was observed that the critical success condition amidst financial constraints were competitive tendering process and provision of incentive to attract private participation. These conditions as in previous PPP studies by Sharma (2007) and Jefferies *et al.* (2002), also show that a functional competitive procurement system and incentives that ensure competition during the bidding process is crucial to the success of partnering the private sector in project development.

4.4 Project Organisations: Procedural or Due Diligence

Under this theme, the study sought to investigate the organisational structure(s) put in place, its behaviour and how it can hinder or promote PPP financing for e-government projects. There were several structures put in place per the project design and contract document. The project was implemented through a contract between GCNet and the Ministry of Communications (MoC), serving as the project executing agency. Contrary to most PPP contracts for roads or other infrastructure based projects, the GeGov contract does not provide for any new legal entity defining the partnership or a Special Purpose Vehicle (SPV). For the day to day implementation of the project, GCNet established a GeGov project team whiles the MoC had a Project Implementation Unit (PIU) which consisted of a project coordinator, a monitoring and evaluation specialist, procurement specialist and technical experts from the National Information Technology Agency (NITA). On the sideline was the World Bank as the project sponsor. The

contract also specified the establishment of a Project Steering Committee (PSC). The PSC was the principal forum for ensuring that the project objectives were met. The Project Steering Committee comprised representatives from the project agency sites, the private partner and a private consultant. They were responsible for reviewing functional and implementation issues and recommending actions to the GeGov Project Manager and PIU for resolving those issues.

The interest of this study is however not limited to just identifying these structures but the effectiveness of these structures in ensuring continued value for money. The responses for this objective were quite mixed, although a general pattern was observed. In all cases, responding to a question of availability of structures to ensure sound and continue value for money, respondents expressed some challenges which resulted in delays in disbursement of funds. The challenges evident from the interviews include fragmentation of institutions, capacity and coordinating issues. The following views dominated the discussion on the organisational procedures as part of the development phases of the GeGov project.

Lengthy bidding process as characterised from initial phase of project assessment to signing of contract took up to almost two years (mid - 2008 to December 2009). The process of inviting, preparing and assessing and refining bids and negotiating contracts was complex and very procedural. This particular point was echoed by most of the informants:

“The issue that there were so many public offices to deal with at any point in time, involving decisions...lengthy administrative processes have accounted for the delays in the implementation of this project”.

The result of this organizational fragmentation was delays in the bidding process, slow rates in funds disbursement and approvals from the GoG and the World Bank. These affected the private partner in preparing and executing budget in an orderly manner. The private firm also incurred high costs partly due to the over consideration of the GoG and World Bank, as this respondent at GCNet remarked:

“The cost of professional consultant services increased the bidding cost for us. We thought we had something wrong with all this reviews and lengthy negotiations and in all instance we needed consultants to assist”.

In explaining the cause of these challenges some of the informants attributed it to some collaborative and capacity issues in complying with World Bank Covenant, the high uncertainty level concerns and paralysis decision making process that characterised the process of implementing the PPP contract between the GoG and GCNet. To ensure due diligence, there was a protracted review process both by the World Bank and GoG in view of the complicated process. One participant at the MoC noted:

“I think the uncertainty level in this project was very high, government did not want to lose so did the private partner. The particular instance of difficulty had to do with accurate projection of revenue to be received by the private partner and the level of potential benefit to be received by the services to be provided and whether government could afford”.

However, the World Bank and the GoG seem to exude blame for the delays in conducting these reviews. As this quote depicts:

“The World Bank has its own procurement system which is long and cumbersome. That could be the cause of delays in implementing projects from which the bank is funding. The ministry had its own processes and systems which it follows to ensure that the project is not delayed because of the procurement processes. However, it is left with the World Bank to approve for the release of funds after its ‘No Objection’ which can take many months to approve” (Public Official, NITA).

Blaming delays on lengthy administrative processes at the various agencies involved in the GeGov project a Communications Specialist of the World Bank’s Country Office in Accra stated in an interview with Business and Financial Time media;

“Government takes loans for projects, puts people in charge of these projects, who are being paid very well to implement them but somehow things happen so slowly” (Business and Financial Time, January 28, 2013).

“The implementation of most projects follows country’s systems, laws and regulations, which sometimes take too many steps to be resolved. The important fact is to learn from our projects how to do better with Ghanaian public investments. Perhaps more systematic processing of bidding documents, contract signing, and management is needed. Ghana has changed into a more complex and sophisticated country, and some country systems must evolve as well to reflect this progress” (Senior Country Officer, Business and Financial Time, January 28, 2013).

From the data gathered the issue of capacity and collaborative efforts had to do with the fact that NITA as a critical agency responsible for monitoring and reporting on the project had some capacity issues. Secondly, it seems NITA was too focused on the technology aspect of the GeGov project and disconnected from the financial management of the project due to lack of collaboration with the ministry of communication as shown in the quotations below:

“NITA does not have direct access and easy control over funds required to meet the needs of the project. In fact the financial planning and disbursement are done at the Ministry of Finance and the Ministry of Communication (Public Officer, NITA)”

“Since we do not have people here to do the budgeting we left all the financial decision to the Ministry and once the contract has been signed we are to see to it that they provide the right technology and services” (An Assistant Director, NITA).

It is a potential downside that the leading agency lacks the financial expertise and budgeting capacity required to ensure both technical and financial coordination. In order to redress NITA budgeting capacity challenge, project budgeting was conducted by the PIU. However, some collaborative efforts were required to perform this task. The Project Accountant at the MoC- PIU was required to collaborate with NITA to prepare and submit separate quarterly Interim Unaudited Financial Reports (IFRs) to account for activities funded under the project to the World Bank. IFRs for the project are expected to be submitted in addition to technical report not later than 45 days after the end of each calendar quarter to enhance subsequent disbursement.

However, it was overwhelming since government functionaries have been working with the bank on various projects should therefore have become familiar with the Bank's procedures. Clearly, it appeared the Ghanaian implementer faced stem challenges meeting the banks financial reporting, requirement including delays in preparing the reports.

“The challenge we faced was around having a forum where we can get collaboration and discussions with a wide range of IT expertise and financial expertise to share knowledge, ideas, and concepts because e-government has never been an individual effort” (A Director, NITA).

Similarly acknowledging this challenge, another respondent remarked that:

“PPP especially in e-government should be a collaborative effort. So, we have found that in this project there was the issue of coordination which was needed to effectively gather the efforts of the ministry, NITA and, the experts to implement this project”.

The seeming capacity issue and absence of coordination between the technical expertise (NITA) and the financial planning expertise (MoC) resulted in the delays in the repayment of the private partner. This was revealed during the interviews and collaborated by the World Bank report relating to the GeGov project:

“The slower than anticipated disbursements have been primarily due to: (a) the mainstreaming of project implementation which has had the advantage of internal capacity building but also presented challenges in contract processing...the cumulative disbursements for the first year was about 21.5% of project commitment” (World Bank-eGhana Project, 2010, p4).

The Bank conceded that, this is a peculiar challenge in financing e-government projects. As a result, the e-government officials started to attract consultants and IT experts from outside Ghana to support the Ghanaian e-government implementers in meeting such challenges. The external consultants' roles were seen as imperative for both technical and financial sustainability of the GeGov project.

Therefore, from the empirical data collected it could be contended that issue of meeting international funding institutions lending covenants cannot be over glossed in e-government projects as well. This finding is also confirmed Weerakkody *et al.* (2011) who observed that in e-government projects in Qatar while funding was not a challenge, it is was observed that elaborate systems that ensures value for money were overly bureaucratic and regulatory resulting in a dead flow funds of PPP projects.

4.5 Political Commitment: Will or Exigencies?

An important and unique feature of this landmark e-government PPP project is the recognition of a good measure of leadership support, at the national and organisational levels. Some of the respondents interviewed indicated that the greatest drive for e-government activities was coming from government efforts and rated the GeGov as an important priority of government. One participant pointed out thus:

“The GeGov project is a priority for government, we are talking about improving revenue collection process, most definitely government must be committed (Project officer, MoC)”.

Another participant upheld similar views by commenting that:

“The GeGov project I can say has received constant support from the top political leadership of Ghana from and through successive government to date. Financially, I can also say it has been remarkable as government has been very instrumental in implementing this project (Director at RGD)”’.

Moreover, a Coordinator at the eGhana Secretariat added the following;

“I think there is there is government commitment. We are having all those key ministers headed by the president himself showing keen interest in the project. Also, we have a periodic update to the office of the president where we receive a great support in terms of some actions that we have taken”.

When contacted, one respondent referred to the 2010 budget statement as an indication of the government commitment to e-government projects in general. The relevant parts are quoted below:

“Madam Speaker, to modernize the Ghana tax system and enhance revenue administration, the management of the three revenue agencies of VAT, CEPS and IRS would be brought under the umbrella of a single Ghana Revenue Authority in 2010 as part of the e-Ghana Project...The integration of the revenue functions will address the problems of duplication, streamline operational policies and procedures, minimize on administrative costs, reduce compliance cost for taxpayers, and generally improve efficiency” (MoFEP, 2010, p14).

In a slight contrast, a project manager at GCNet mentioned that the support of the government officials towards the project varies from time to time, but in general it has a good support, and citing the delays in approving financial demands, he added:

“As I understand that the project team always gets the right support from Government but occasionally government is too slow in approving certain financial demands”.

In additions, two events occasion some misgivings about government’s financial commitment to the GeGov project. The first incident had to do with the delays by government in approving tax and duty exemptions, leading to customs clearance delays and high storage charges against the private partner. The second issue had to do with the failure of government to establish the Escrow Account as a conduit for the repayment. These were perceived by the private partner as a show of non-commitment. As a project team member at GCNet commented, *“I cannot say government commitment is poor or good”* and he justified that by saying *“because of the lack of some top leadership support. When we placed our financial requested and other needs to promote this project, there were deaf people”.*

Notwithstanding this, some of the respondents attributed this encouraging government commitment to benefits to be received from the project. They explained that the government was aware and realized the relative advantage of having an e-government system for the revenue agencies. Speaking in the local parlance, this respondent simply had this to say to depict this view:

“You need to spend money to make more, government is aware of the financial gains that will accrue from this project”.

This view was also collaborated by government own communications. For example, speaking on the floor of Parliament to defend the 2014 budget allocation to the Ministry of Communication the Minister pronounced that;

“... the revenue agency’s capabilities will be enhanced by the new systems and processes allowing for targeting of under paying and non-paying taxpayers...The automation of the Ghana Revenue Authority and Registrar-General’s Department would be vigorously pursued”. (Ghana, Parliamentary Handsard, 10th September, 2013)

Therefore, PPP in this project is not only seen as an efficient approach to relieve government of some financial burden through private financial input but also the GeGov project promises to provide tremendous financial benefits to government. This however raises the question whether government support for GeGov project was a matter of genuine will or an issue of exigency? And whether other related e-government projects with less or non-financial benefit receive similar support.

These findings confirm the findings of Weerakkody and Dhillon (2008) and Heeks (2003) which suggest that governments should support and understand the benefits of e-government projects to achieve success of implementation and adoption.

4.6 Economic: Increasing Cost and Ravaging Repayment

This section sought to find out the extent to which economic variables influenced funding the GeGov projects especially in the area of cost overruns and government revenue to be generated from the project for repayment of the private partner. Respondents were therefore asked the

various ways by which the repayment was consistent with normal PPP practice, its economic viability and the challenges faced in payment.

In the first place, e-government project operations should start with a good understanding of costs involved and assured benefits or revenues that follow careful analysis of opportunity costs. However, a major challenge is to identify these costs. The Ghana e-Government Strategy Document identifies cost-benefit analysis (CBA) as a challenge by stating that:

“Finding out how much funding will be required for e-government activities, and how this requirement will be met will be a major challenge” (Ghana, e-Government Strategy Document, 2005, p. 76)

Although not dominating the discussion, evidence from some of the interviews indicates that initial assessment of the projects financial viability was a challenging task. This particular issue was highlighted by some respondents who saw government ability to demonstrate the long term cost-benefit as an initial project burden as evident from one of the interviews:

“I think initial assessment was not straight forward in terms of the cost involved and the revenue to be generated. The government spent money on consultancy work to arrive at something....it takes careful assessment to identify cost and savings that result from e-government projects since they are difficult to calculate”.

Determining the benefit and cost ratio for e-government is not straightforward since the outcomes and benefits are not just financial. This particular finding is in line with what was reported in OECD report, (2003) about some European governments’ attempt to finance

promising e-government projects. To overcome this challenge, GoG in 2006 commissioned a feasibility study which was conducted by Telecom Telematique (TTI) in collaboration NITA and the revenue generating agencies. The broad feasibility study included a needs assessment among prospective agencies, technical feasibility and the financial feasibility of the various PPP model options.

The following views also dominated the discussion on the economic conditions as a challenge relating to cost overrun and repayment under the GeGov project. The study's findings indicate that the economic situation of a Ghana played a critical role in developing and implementing funding structure for the GeGov project. When asked if economic status of Ghana influenced financing of the GeGov project, one respondent had this to say *“Yes, the economy is a major issue in implementing a project like this”*.

Interviewees also shared similar view regarding government funding for this project, the costs were rapidly increasing with little evidence improvement to show.

“The variation in the cost submitted by the GCNet was increasing over the period; our initial audits revealed some cost variation which was largely because of unforeseen conditions both economic and changes in project scope” (A Project Officer, MoC).

The financial arrangement for the GeGov project was also adversely affected by the global financial crisis that started in 2008 requiring GoG to increase its counterpart contribution. Likewise the project was not insulated from the macroeconomic risks of inflation and exchange

rate. A 11% inflation rate was determined for this project based on historical data inflation rate up to 2006, where the annual average inflation rate was approximately 10.50%, and it was used since the feasibility study was carried out from 2007-2008 (Appendix C). Unfortunately, the inflation rate increased rapidly in 2009 and 2013 into 8.2% and 13.3% respectively (GSS, 2013). Besides, as a result of the relatively small financial markets, long term funding in local currency is not prevalent in Ghana. This significantly increased project liability due to financing in dollars. The GeGov project was exposed to exchange rate increase which was pegged at 0.966 in 2008 but further rose to 1.60 in 2011 and 2.04 in 2013 (Bank of Ghana, 2011- 2013).

The combination of these economic factors as observed by the project implementers severely hampered the implementation of the GeGov project. The prices of main construction materials increased, thus affecting the contractors which in turn caused an increase in the overall construction cost by approximately 20% from the initial budget.

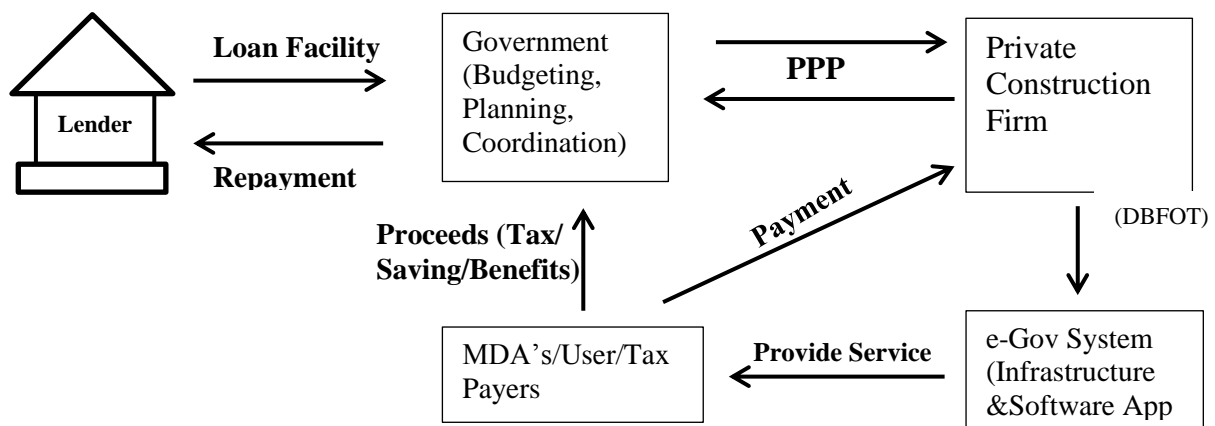
Admittedly, this cost overrun was also triggered by the fact that there was the need to upgrade some of the offices of the agencies especially the ones that were remotely located to acceptable cabling and power standards which was not fully considered in the contract. This cost proved to be considerable, thus changing the entire cost of the project. As respondent commented thus:

“The number of offices to be connected changed as a result of the merging of the tax agencies, more operational offices needed to be furnished which increased the cost of implementing this project”.

This finding affirms Mimicopoulos (2004) assertion that cost overruns are the norm in e-government projects as cost estimates hardly live up to expectations.

Another major issue had to do with the expected revenue to be generated to repay the private partner. Under the original contract, the private partner was expected to receive payments for delivered system goods and services from two sources. The first source was the US \$20 million from the eGhana project loan facility secured from the World Bank (lender) and the second is 85% of incremental revenues that will be deposited in a Special Repayment Escrow Account (SREA) to be established by the government of Ghana. Figure, 4.1 provides an illustration of the financial repayment arrangement as envisage by the project projections.

Figure 4.1 GeGov PPP Funding Model



Source: Author's Construct, 2014

The incremental revenue was going to be any increase in revenues over and above the previous five year project contract term. In addition, the private partner was to receive any interests accrued from the SERA, calculated at London Interbank Offered Rate (LIBOR) plus 2%. However, the total payment was limited to total cost plus the undiscounted total recurrent cost.

This projection was determined through a feasibility study which projected revenue to be a cumulative annual revenue growth rate of 17.37%, an indication that this is very feasible (Appendix D). The projection also indicated that a 2% increase over the revenue mobilization levels would be enough to repay the total investment before the contract ends. To cite the feasibility study report;

“Since the agencies that were part of this project are tax revenue agencies, with the exception of the RGD Business Registration function, a hybrid model is being considered. It was envisioned that the private partner will recoup their investment out of a special fund created from Business Registration fees, IRS and VAT Tax Certificate fees and a portion of the Tax agencies tax revenue based on increases above the currently trended annual increases”.

However, the study found out that repayment using this approach had not been a smooth ride due to some economic challenges. In the first place, the period 2009 and 2012 recorded low tax mobilization in Ghana as is stated in the 2010 and 2012 budget statements;

“Total revenue and grants received during the first three quarters of the year amounted to GH¢4.5 billion, reflecting 11.9% shortfall in the estimated figure of GH¢5.1 billion. For the whole 2009 fiscal year, total revenue and grants are projected at GH¢7.2 billion, also indicating a drop of 3.5% below the original budget estimate. The shortfall is attributed to a 2.8% drop in domestic revenue.... The drop in domestic revenue is due mainly to the underperformance of domestic VAT and petroleum taxes” (Ghana MoFEP, 2010 p10).

Tax revenue, excluding tax exemptions granted for the period, amounted to GH¢11,738.3 million, about 3.8 per cent lower than the budget target of GH¢12,201.4 million. The low performance of tax revenue was mainly due to lower company taxes resulting from the non-payment of taxes by some corporate institutions, including oil companies (Ghana MoFEP, 2013 p27).

The low mobilization of tax revenue led to government revision of the ambitious payment structure envisaged earlier in the five years DFOT contract. GoG is currently looking at a contingent liability fund to pay the private partner. The private partner is occasionally on a bent knee for payment to be made. This repayment challenge confirms the PPP financing literature as observed by Nyarko *et al* (2011). They found out that a high amount of accounts receivable from government and high running expenditure was a major challenge in partnering government to deliver water service in Ghana.

In explaining government challenge in paying the private contractor, some participants put emphasis on the gap between strategy and reality in executing the e-government project. One public official commented thus:

"Personally, I think that we have a good payment scheme, however, how this plan could be seen applied but the reality is our economy dictates to us when it comes to something like this.

These findings on economic factors as a challenge to e-government project financing is in sync with Darrell M. West (2004, p13), a leading expert on digital government, who argued that “when economic times are good and governments have abundant resources, tax revenues are a

popular way to pay for e-government. However, when resources are limited, spending on e-government must compete with expenditures for education, health care, and welfare’.

4.7 Chapter Conclusion

This chapter offered practical insights on developing a funding strategy for an e-government project in Ghana. The results of the study contributed to the understanding of PPP as a model for financing e-government in terms of value for money in public sector financial management. The implications of PPP are inherent in the dominant views or results obtained from the analyses. The case study findings showed that these issues are considerable and very challenging to PPP financing of e-government projects in Ghana. They must be subjected to in depth analysis before and during the implementation of such arrangements. Ghana’s public officials also demonstrated that they have put substantial efforts into developing the GeGov project, but more work is required in the area of capacity building in order to achieve the maximum success from this project and minimise the expected gap between the government’s expectations and private sector interests. In addition, there were some other issues that were not considered and, thus not carefully treated during the e-government system implementation. These are natural teething problems and growing pains encountered when project implementation becomes more complex, especially where innovatory ideas are implemented. The case study findings showed that each challenge mentioned needs to be treated as a critical and important challenge.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter provides a conclusion to the thesis by summarising the areas covered in this study. The chapter presents the research overview and provides a discussion of the contributions the thesis has made in the area PPP financing of e-government projects. This is followed by a brief discussion of the implications of the research findings, the study limitations and gaps for possible future research and recommendations for improving PPP financing for e-government projects.

5.1 Summary of Findings

The study investigated the implementation of e-government public-private partnership funding strategy in Ghana using the example of the GeGov project. The main research objective was to investigate the challenges of using PPP as a financing tool for the implementation of the GeGov project. This was done by the collection information through comprehensive and face to face interview. Form the interviews with the respondents of the public and private sector involved in the GeGov project the most common critical challenges were identified and discussed under the broader themes of; partnering, economic, legal, organisational and political commitment challenges to e-government PPP financing.

5.1.1 Partnering

The study found out that the primary drive for initiating PPP for implementing the GeGov project was the financing. An innovative financing structure has been developed to finance an e-government system for Ghana Revenue Authority and the Registrar General Department. Initial

development stage was characterised by limited government financial resource contribution. With the absence of necessary government funds, PPP was considered to be the only option for realizing significant system development at the time. However, the project attracted very little participation from international investors and local private funds. The search for private partner was identified as a major challenge for implementing this project. This situation led the government of Ghana to seek assistance from the World Bank to increase the public financial contribution for a re-bid process to start. The willingness of the GoG to provide additional funds was seen as a good signal that helped to build confidence in the private sector investors. Secondly, the study found out that competitive bidding ensured a better deal in terms of pricing which was achieved with the increase of government contribution. This competition did not only bring in the best private sector capabilities, but also allowed the government to get the best possible financial terms. The choice of private partner was guided by well thought-through criteria in accordance with the specific need (financial stability and a proven track record of experience and expertise in the field).

5.1.2 Legal

The study observed that there are a plethora of laws having PPP relevance in Ghana but most are uncoordinated. The study found out that the legal and regulatory frameworks used by the government to initiate and implement PPP in e-government development and service delivery were identified to include: Ghana's Constitution, , Public procurement and Disposal of Assets (PPDA) Acts 2003, Land Act and Financial Administration Act, 2003. However, it is worthwhile to note that respondents find these dummy of legislations for PPP relevant though not adequate. According to them, a framework is need harmonize and to match emerging times and demands

regarding partnering, to rhyme with current activities like e-government projects. Respondents also observed that the uncertainty of the legal regime for PPPs in Ghana results not only in inconsistent approaches to the participation of the private sector in the delivery of PPPs but it also constitutes a potential risk that may adversely affect the appetite of private sector partners to participate in PPP projects in Ghana.

With regard to the legal conduit for the GeGov project, the study found out that the process of signing the contract was characterised by complicated negotiations that slowed down the entire process. Issues relating to risk allocation, repayment and contract flexibility in relation to deadlines dominated the negotiation. Due to the complex nature of the GeGov project, a much more flexible contract was signed between the government and the private partner to provide room for project changes.

5.1.3 Organisational

The study further revealed that there were a number of organizational bottlenecks, which led to delays in the financial approval process. While frantic efforts were made by government to make funds available the lack of organisational knowledge and basic skills to deliver administrative requirements hampered access to these funds from the World Bank and approvals to pay the private partner. According to the respondents, they had to go through several procedures before funds could be released from the World Bank to the GoG before paying invoices submitted by the private partner. Whereas there were inadequate capacity and coordination challenge within and between MoC and NITA, the World Bank was also limited by their own institutional arrangements and procedures resulting in delays in disbursement of funds for the GeGov project. Moreover, both government and World Bank tend to exonerate

themselves from delays caused by their procedures. However, respondents believed that the bottlenecks were blessings in disguise as they served as checks on the way funds were disbursed. To address these challenges, the study also observed that the roles of external consultants became essential to complement government efforts to implement the GeGov project.

5.1.4 Political Commitment

E-government readiness starts with political will. Some of the public officials contacted argued that the government has recognised the important role that the GeGov project can play in the socio-economic development of the country. Hence, the project is receiving strong political backing. Respondents believe that government commitment has been remarkable even though with some misgivings. The government was seen as supporting the GeGov project from its inception in 2006. To ensure sustainability of the project, the government provided an amount of US \$20 million to the US \$40 million provided by the private sector. In addition, the government agreed on a revenue sharing incentive as mode of repayment to the private partner. The respondents attributed government awareness of the benefits of the project and the fear of failure as explanation to the high government support and commitment. Nevertheless, the private partner felt that the delays from governments in approving of tax exemption on imports shows the lack of support from top government leadership. The issue of political commitment as a result of government desired to increase revenue mobilization raise some rhetorical question as to whether similar support will be provided for other e-government projects having only intangible benefits.

5.1.5 Economic

The results of the study indicate that there has been significant improvement in the alignment of external funds with the GeGov PPP project strategies. Initial challenge and uncertainty level of estimating cost was derailed by a feasibility study that created a business model for PPP in e-government. Nevertheless, microeconomic variables such as inflation and exchange rates continue to affect the budget cost of the GeGov project. Likewise, off-budget and off-plan activities such as expansion in project connection offices were also observed as resulting into cost overruns.

The study's findings also go to echo the point that PPPs can deliver successful and financially attractive projects but they cannot perform economic miracles anticipated revenue generation was not materialized due to some economic setbacks. The government of Ghana is looking beyond the intended revenue to be generated from the GeGov project to pay the private partner.

In light of the above, critical success factors in the development of the GeGov project could be concluded and summarized in Table 5.1. The preliminary qualification phase critical success factors included appropriate project identification through feasibility study, high capability of project sponsor which was the World Bank. However, the phase was constrained by lack of funds for the infrastructure component and definite legislation and regulations. Competitive tendering system anchored on by incentive packages was identified to be critical during the tendering phase. Likewise, the criteria for selection included technical and financial competency and local experience. The award phase was characterised by a stem negotiation process resulting in special guarantee by government, risk allocated to the private partner and high political support. However, in both phases some implementation challenges included economic

difficulties, fragmented organisational structures, weak organizational capacity and coordination and extensive procedures in disbursement of funds.

Table 5.1 GeGov Project: PPP Financing Tool Success and Challenging Conditions

Development phases of the GeGov Project	Success Conditions	Challenging Conditions
Preliminary Qualification Evaluation Phase	Appropriate project identification through feasibility study	Lack of funds for infrastructure component of the project
Tendering Phase	High capability of project sponsor (The World Bank)	Indefinite legislation and regulating framework Economic challenges, Procedural bottle necks, Fragmented organisational structures, Weak organizational capacity and coordination
	Competitive tendering process	
	Attractive financial package	
	Engaging consultants to beef public technical and financial competency Flexible contractual arrangement	
Contract Award Phase	Special guarantee by the government	Weak organizational capacity and coordination
	Reasonable risk allocation	
	Political commitment	

Source: Author's Construct, 2014

5.2 Conclusion

The research presents an original contribution to the literature by presenting critical success conditions for using PPP in funding e-government projects in Ghana (as shown in Table 5.1 above). However, the main implications of this research to policy, practice and future research are as summarized in the next subsection.

5.2.1 Implication to e-Government Policy Strategy

The status of e-Government based on the national vision and strategic agendas in public policy are embedded with the unique and specific institutional requirements. As indicated earlier, the current framework document covers the general requirements expected by the GoG for all PPP project proponents to comply with. However, more helpful information and technical aids are needed to effectively address PPP in e-government project formulations. Traditional infrastructure projects (roads, bridges, electricity and water systems, etc.) are well known, with extensive experience in their procurement and management. For developing countries like Ghana, IT services and e-government in particular are relatively new and their traditional procurement and management can be daunting, given the complexities and fluidity of technologies, vendors, knowledge, costs, and other factors. The areas for the expansion of Ghana's PPP policy framework to address e-government needs include more specifics on financial justification requirements with examples and templates pertaining to ICT type projects will help to standardize evaluation of initiatives. For this objective to be fulfilled for e-government initiatives, the framework has to be extended to provide additional specific guidelines and tools suitable for ICT and e-government projects.

In addition, investments to be made in government departments to provide electronic services to the clientele would entail not only a capital cost but also recurring costs. According to the results of the field data the governments of Ghana is hard pressed financially and cannot perhaps provide for these costs through continuous budgetary support. This brings us to the inevitable conclusion that the brunt of the operational costs will have to fall on the citizens or the other end-users in the form of user charges. Policy direction in that respect will be required as we have for road tolls and other infrastructure levies.

5.2.2 Implication to e-Government PPP Funding Practice

The GeGov case study provides a lot lessons for practitioners in future PPP financing modeling.

The main implications of this research on PPP funding practice include the need to cultivate improved procurement planning at the design stage to secure timely project implementation and improvements in disbursements. The significant results from the empirical case study indicate that the public sector organizations must be prepared to address several challenges in relation to the adoption of e-government services, which is deemed more complex. Whenever advisable and feasible, funding should be treated as a business investment and carry expectation of returns.

Secondly, while large direct funding of private companies by government is being debated fiercely in political circles, what is clear is that government funding of innovation in technology needs to be accelerated. As long as government focuses on funding innovation, it will in the long term drive public value and create private growth oriented industries. Even if there are failures along the way, they may in fact be early stepping stones to success and potential future dominance in these upcoming industries in Ghana. In most situations, you learn more from your failures than from quick successes.

Finally, the results of the study have management implications and suggest that in countries without IT-matured companies like Ghana, it is most of the time problematic to contract out an e-Government project to a company. It is always a possibility that a company with enough experience in the public service can win the contract most of the time. This can lead to monopolistic tendencies on the path of the private partner. In that case, the contracting authority has to do a great amount of work for the contractor such as analyzing the business problem.

5.2.3 Study Limitation and Gaps for Future Research

While much effort was made to ensure the quality of the study and the validity of the findings, the results could have been affected by a couple of limitations. First, this research also had the constraints of time availability of respondents. Interviews could not be conducted with the representatives of the external consultants who were instrumentally involved during the implementation phase. Hence, the perspectives and inputs from the side of the external consult could not be captured in the study. Secondly, the thesis is limited to only one case study in Ghana. Thus, the sample may not be representative enough for the whole PPP e-government projects in Ghana.

There are many more other issues in PPP models, but as mentioned before the thesis just looks at the aspect of financing using PPP model. Future studies can be further enriched in terms of its rigour and findings by considering a few additional parameters. Evaluative studies can be conducted to identify the critical performance measures useful in the evaluation of the success of e-government partnerships. Another field of research which may be looked at is the evaluation of the financial impact of PPP e-government projects. This field is particularly relevant for G2C projects. Thus, bringing in further insights from relevant fields is expected to yield a much richer and more rigorous framework for evaluating the financial sustainability of e-government projects. Finally, facing excessive financial constraints governments are not in a position to extend an open-ended financial support to e-government projects. It therefore becomes imperative to find newer innovative methods of financing ICT and e-government projects. Studies that explore project demand and willingness to pay levels, with possible usage of the celebrated Technology Adoption Model (TAM) will be useful.

5.3 Recommendations

Considering the impact of public projects on beneficiary agencies and citizens in general and the challenges associated in the course of implementation, it is imperative that measures are put in place to mitigate the negative impact.

Government should consider developing options to promote and adequately sustainable delivery of e-government service. This can be done in concert with other stakeholders such as international partners and private sector. Based on the findings of the case study and the views of respondents, a number of specific recommendations are proved hereafter. It is the hope of the researcher that policy makers and implementers may consider these suggestions in future.

Capacity needs to be enhanced to avoid the cost associated and over-dependence upon external advisers in project preparation and procurement. The Ghanaian e-government PPP programme would benefit from developing a core group of financial, legal and technical experts who could assist line ministries and the NITA in delivering PPP e-government projects.

There is the need for the relevant regulatory framework and efficient and effective jurisprudence to govern this new area of ICT development financing. Governments will need to ensure that regulatory conditions are conducive to the successful implementation of PPP e-government projects. The new PPP Law should be enacted as soon as possible in order to provide clarity regarding the legal basis for procuring and financing under PPP projects.

Finally the long-term approach of the GeGov system should focus on revenue maximization. It is important for PPP projects to be financially independent to the extent possible and minimize

reliance on World Bank schemes. This is possible through innovative financing structures that not only bring down the cost of funds but also tap new sources of funding such as user fees.

REFERENCE

- Akesson, M., Skalen, P., & Edvardsson, B. (2008). E-government and service orientation: Gaps between theory and practice. *International Journal of Public Sector Management*, 21, 74–92
- Akintoye, A., Beck, M. and Hardcastle, C. (2003). Public–Private Partnerships: Managing Risks and Oppaortunities. Available at: <http://www.eib.org/projects/publications/evaluation-of-ppp-projects-financed-by-the-eib.htm>. (Accessed 5 February 2014).
- Aldrich, D., Bertot, J. C. & McClure, C. R. (2002) E-government: Initiatives, developments, and issues. *Government Information Quarterly*, 19, 349-355.
- Al-Jaghoub, S., Al-Yaseen, H. & Al-Hourani, M. (2010). Evaluation of awareness and acceptability of using e-government services in developing countries: The case of Jordan. *The Electronic Journal Information Systems Evaluation*, 13(1) p.1 – 8
- Asogwa, B. E. (2013). Electronic government as a paradigm shift for efficient public services opportunities and challenges for Nigerian government. *Library Hi Tech* 31(1), p. 141-159. DOI 10.1108/07378831311303985
- Awortwi, N. (2004), Getting the fundamentals wrong: woes of public-private partnerships in solid waste collection in three Ghanaian cities. *Public Administration and Development*, 24, pp. 213–224.
- Awowi, J. E. and Owusu, G. (2007) E-Governance in an Environment with Limited Resources: A Case Study of Ghana. ICEGOV, ACM 978-1-59593-822
- Awowi, J. E. and Owusu, G. (2010). Ghana Community Information Centers (CIC's) e-Governance success or mirage. *Journal of E-Governance*, 33, p.57–167
- Badu, E., Owusu-Manu D., and Edwards D.J. (2011) Innovative financing (IF) of infrastructure projects in Ghana: conceptual and empirical observations, *Engineering Project Organization Journal*, 1,4, 255-268, DOI: 10.1080/21573727.2011.597744
- Badu, E., Owusu-Manu, D-G, Edwards, D. J. and Holt, G. D. (2011). Innovative financing (IF) of infrastructure projects in Ghana: conceptual and empirical observations, *Engineering Project Organization Journal*, 1,4, 255-268, DOI: 10.1080/21573727.2011.597744
- Bank of Ghana, statistical bulletin various issues
- Bannister, F. & Remenyi, D., (2005). The societal value of ICT: First steps towards an evaluation framework. <http://www.ejise.com/volume6-issue2/issue2-art21.htm> edn. Reading, England: Academic Conferences Limited.
- Basu, S. (2004). E-government and developing countries: An overview. *International Review*

- Of Law Computers & Technology*, 18(1), p.10 –132.
- Becker, F. and Patterson, V. (2005). Private Partnerships: Balancing Financial Returns, Risks, and Roles of the Partners. *Public Performance and Management Review*, Vol. 29, No.2, PP.125-144.M.E. Sharpe Inc. Accessed on June 08, 2014 from <http://www.jstor.org/stable/20447583>.
- Bhuiyan, S. (2009). E-Government in Kazakhstan: Challenges and its role to development. *Public Organization Review* 10(3) p.1–47
- Boateng, V. (2009). E-Government and E-Health Strategies. Accra: ECOSOC Africa Regional Ministerial Meeting on e-Health.
- Bonham, G., Seifert, J. & Thorson, S. (2001), The transformational potential of e-government: the role of political leadership, paper presented at 4th Pan European International Relations Conference, 2013 University of Kent.
- Bwalya, K. J. (2009). Factors affecting adoption of e-government in Zambia. *Electronic Journal of Information Systems in Developing Countries*, 38(4), p.1-13.
- Carter, L., & Belanger, F. (2005). The utilization of e-government services: Citizen trust, innovation and acceptance factors. *Information Systems Journal*, 15(1), p. 5–25.
- Chen, Y. & Gant, J. (2001). Transforming local e-government services: the use of application service providers. *Government Information Quarterly*, 18(4), p. 343-55.
- Chen, Y. N., Chen, H. M., Huang, W. & Ching, R. K. H. (2006). E-government strategies in developed and developing countries: An implementation framework and case study. *Journal of Global Information Management*, 14, 23-46.
- Chen, Y.-C., & Thurmaier, K. (2008). Advancing e-government: Financing challenges and opportunities. *Public Administration Review*, 68(3), p. 537-548. DOI: 10.1111/j.1540-6210.2008.00889.x
- Creswell, J. W. (2009). *Qualitative Enquiry and Research Design: Choosing Among Five Approaches*. SAGE Publications. London
- Dada, D. (2006). The Failure of e-government in developing countries: A literature review. *The Journal of Information Systems in Developing Countries*, 26(1), p.1-10
- Dunleavy, P., Margetts H., Bastow S. & J. Tinkler (2006). *Digital Era Governance: IT Corporations, The State and E-Government*, Oxford University Press, United Kingdom
- Dzidonu C.K., (2010). An Analysis of the Role of ICT to Achieving the MDGs, A Background Paper, United Nations Economic Commission for Africa. available at: www.comnet-it.org/news/CESPAM-Botswana.pdf (Retrieved 02/12/ 2013)

- Dzidonu, C. K., (2003). An Intergraded ICT-Led Socio -Economic Development Policy Plan Development Framework. Accra: United Nations Economic Commission for Africa.
- Ebrahim, Z. & Irani, Z. (2005) E-government adoption: Architecture and barriers. *Business Process Management Journal*, 11, p. 589-611.
- Eyob, E. (2004), E-government; breaking the frontiers of inefficiencies in the public sector. *Electronic Government: An International Journal*, 1, p. 107-14.
- Fenwick, W., John, E., & Stimac, J. (2009). The Necessity of E-government. Santa Clara Computer and High. *Technology Law Journal*, 25(3), 427.
- Gant, D. B., Gant, J., & Johnson, C. L. (2002). State Web portals: Delivering and financing e-service. Washington, DC: PricewaterhouseCooper Endowment for the Business of Government, E –Government Series
- Garson, G. D. (2006). *Public Information Technology and E-Governance: Managing the Virtual State* (1 ed.). Sudbury, MA: Jones and Bartlett.
- Gartner. (2001). Gartner’s Four Phases of E-Government Model. Gartner Group, USA
- Ghana Statistical Service (GSS), (2013). Consumer Price Index (CPI) Bulletin. Statistical data on the economy of Ghana. Accra. http://www.statsghana.gov.gh/docfiles/CPI%20Release_pdf/CPI_New_Series_Newsletter_July_2013.pdf
- Ghana, (2003). ICT For Accelerated Development Policy Document.
- Ghana, (2005). e-Government Strategy Document
- Ghana, (2009). Rebidding - for DFBOT-PPP for e-eGov applications for revenue generating agencies and the registrar general's department, Procurement notice
- Ghana, (2010). Budget Statement, Ministry Of Finance And Economic Planning, Accra
- Ghana, (2013a). Budget Statement, Ministry Of Finance And Economic Planning, Accra
- Ghana, (2013b). The Hansard Official Report for 10th December 2013 accessed on 12/14/2014 at <http://www.parliament.gh/publications/30/716>
- Gronlund, A. (2001): Introduction. *Electronic Government: Design, Applications and Management*, Idea Group Publishing, PA, Hershey, US,
- Guba, E. G. & Lincoln, Y. S. (1988) Do inquiry paradigms imply inquiry methodologies. *Qualitative approaches to evaluation in education: The silent scientific revolution*, 89-115.

- Haarmeyer, D. and Mody, A. (1998), *Tapping the Private Sector: Approaches to Managing Risk in Water and Sanitation*, The World Bank, Washington, DC.
- Hamiduzzaman, M. (2011). Application of e-governance to civil service management of Bangladesh: Does it bring efficiency and effectiveness? *Journal of E-Governance*, p.152-164.
- Hargittai, E. (2002): Beyond logs and surveys: In-depth measures of people's web use skills. *Journal of the American Society for Information Science and Technology* 53(14), p. 12–39
- Heeks, R. & Bailur, S. (2007). Analysing e-government research: Perspectives, philosophies, theories, methods, and practice. *Government Information Quarterly*, 24, p. 243-265.
- Heeks, R. (2002a). E-government in Africa: promise and practice, paper no.13, iGovernment Working Paper Series
- Heeks, R. (2002b). Information systems and developing countries: failure, success, and local improvisations. *The Information Society*, 18(2), p. 101-12.
- Heeks, R. (2003). Most eGovernment for development project fail: how can risks be reduced? iGovernment working paper series, paper no. 14
- Heeks, R. (2006). *Implementing and managing e-government: An International Text*, Sage Publications, London.
- Higgo, H., (2003) Implementing an information system in a large LDC bureaucracy: The Case of the Sudanese Ministry of Finance, *The Electronic Journal on Information Systems in Developing Countries*, 14(3), p.1-13.
- Homburg, V. (2008). *Understanding e-government: Information systems in public administration*. New York, NY: Routledge
- Irani, Z., Themistocleous, M. & Love, P.E.D. (2003). The impact of enterprise application integration on information system lifecycles. *Information & Management*, 41(2), p. 177-87.
- Jamali, D. (2004), Success and failure mechanisms of public private partnerships (PPPs) in developing countries, *International Journal of Public Sector Management*, Vol. 17, No. 5, pp. 414-430.
- Jefferies, M.C., Gameson, R. and Rowlinson, S. (2002). Critical success factors of the BOOT procurement system: Reflections from the stadium Australia case study. *Engineering, Construction and Architectural Management*, 9, 4, 352–361.
- Johnson, C. L. (2004). E-government financial management models. In A. Khan & W. B.

- Hildreth (Eds.), *Financial management theory in the public sector* (pp. xi, 270 p.). Westport, Conn.: Praeger.
- Kaylor, C., Deshazo, R. & Eck, V.D. (2001). Gauging e-government: A report on implementing services among American cities. *Government Information Quarterly*, 18, p. 293-307
- Ke, W., & Wei, K. K. (2004). Successful E-Government in Singapore. *Communications of the ACM*, 47(6), 95–99.
- Kuhn, T. (1970). *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press
- Kumar, M. A. (2003). E-government and efficiency, accountability and transparency. *The Electronic Journal of Information Systems in Developing Countries*, 12, p. 1-5.
- Lalor, J. Brooke, G. (2002). Public Private Partnership Opportunities in E-Government. PMG. Retrieved December 10, 2013, from http://www.agimo.gov.au/__data/assets/file/19014/PPP.pdfS.
- Langford J. & Harrison Y. (2003). Partnering for e-government: Challenges for public administrators. *Canadian Public Administration* 44(4), p.393-416
- Larbi, E. (2005), “Public-private partnerships and the poor in water supply projects: the Ghanaian experience”, WELL Fact Sheet – Regional Annex, available at: www.lboro.ac.uk/well/resources/factsheets/factsheetshtm/RSA%20PPP%20and%20the%20oor. (accessed 20 June, 2014).
- Larraín, C.O. (2000), Chile’s Government Procurement E-System. World Bank Group, Governance and public sector reform sites, E-Government, Washington, DC, USA.
- Layne, K & Lee, J. (2001). Developing fully functional e-government: A four stage model. *Government Information Quarterly*, 18,(2) p.122-136
- Li, B., Akintoye, A., Edwards, P.J. and Hardcastle, C. (2005). Critical success factors for PPP/PFI projects in the UK construction industry. *Construction Management and Economics*, 23(5): 459–471.
- Matavire, R, Chigona, W., Roode, D., Sewchurran, E., Davids, Z., Mukudu, A & Boamah-Abu, C. (2010). Challenges of e-government project implementation in a South African context. *The Electronic Journal Information Systems Evaluation* 13(2) p. 153 – 164.
- Mimicopoulos, M. G. (2004). *E-government funding activities and strategies*. New York: United Nations
- Montanari, J. R., & Bracker, J. S. (1986). The strategic management process at the public planning unit level. *Strategic Management Journal*, 7, p. 251-265.

- Montealegre R., (1999). A case for more case study research in the implementation of information technology in less-developed countries. *Information Technology for Development*, 8(4), p. 199-207
- Mutula, S. M. (2008). Comparison of sub-Saharan Africa's e-government status with developed and transitional nations Information. *Management and Computer Security*, 16(3), p. 235-250
- Myers, M. D. & Avison, D. (2002) An introduction to qualitative research in information systems. Sage Publications. (Introducing Qualitative Methods Series), CA.
- Nabafu, R. & Maiga, G. (2012). A model of success factors for implementing local e-government in Uganda. *Electronic Journal of e-Government*, 10(1), p. 31 – 46.
- NASCIO, (2008). Innovative funding for state IT: model, trends and perspectives
- Ndou, V. D. (2004). E-government for developing countries: Opportunities and challenges. *The Electronic Journal on Information Systems in Developing Countries*, 18(1), p.1-24
- Neuman, L. W. (2003). Content analysis. In social research methods: Qualitative and quantitative approaches, 5th Edition Boston: Allyn and Bacon.
- Nguyen, H. T. (2004). Beyond ROI: A new framework for measuring the value of technology investments. Chicago: Government Finance Officers Association
- Nyarko, K.B. , Oduro-Kwarteng, S., Owusu-Antwi, P. (2011) Local authorities, community and Private Operators Partnerships in small towns water service delivery in Ghana. *Physics and Chemistry of the Earth* 36 1078–1084
- OECD, (2003). The case for e-government: Excerpts from the OECD report, the e-government imperative. *OECD Journal On Budgeting*, 3(1) p. 1608-7143
- Okot-Uma, R. W. (2004). Building Cyberlaw Capacity for eGovernance: Technology Perspectives. Commonwealth Regional Pacific Workshop on Law and Technology. 1-5 November 2004. Wellington, New Zealand
- Orlikowski, W. J. & Baroudi, J. J. (1991) Studying information technology in organizations: Research approaches and assumptions. *Information systems research*, 2, 1-28.
- Osumanu, I.K. (2008), Private sector participation in urban water and sanitation provision in Ghana: experiences from the Tamale Metropolitan Area (TMA), *Environmental Management*, 42, pp. 102-110.
- Overgaard, J. (2011). The impact of the financial crisis on Danish e-government strategy. *European Journal of ePractice*, 11, 1988-625

- Owusu-Manu D., Badu E. and Edwards D.J. (2008) Conceptual paradigm and rethinking project finance strategy for highway projects financing in Ghana. *PentVars Business Journal*, 3, 3, 85–93.
- Reddick, C. G., & Frank, H. A. (2007). The perceived impacts of E-Government on U.S. cities: A survey of Florida and Texas city managers. *Government Information Quarterly*, 24(3), 576–594.
- Reeder, F. S.,(2005), Identifying Effective Funding Models for E-government. In Mehdi Khosrow-Pour (ed) *Practicing E-Government: A Global Perspective*. Idea Group Inc www.igi-global.com/chapter/identifying-effective-funding-modelsgovernment/ Accessed 28/02/14
- Robbins D. A., & Miller, G. J. (2008). Using Capital Budgeting for Managing E-Government Expenditures. *Intl Journal of Public Administration*, 31, 137–150, DOI: 10.1080/01900690701410968
- Schuppan, T. (2009): E-government in developing countries: Experiences from sub-Saharan Africa. *Government Information Quarterly* 26(1), p. 118–127.
- Schwartz, R. & Deane, A. (2003). Deploying e-government programs: The strategic importance of ‘I’ before ‘e’, *Info*, 5(4), p. 10-19.
- Sharma S. (2007). Exploring best practices in Public–Private Partnership (PPP) in e-Government through select Asian case studies. *The International Information and Library Review* 39, p. 203–210
- Siau, K., & Long, Y. (2006). Using social development lenses to understand e-government development. *Journal of Global Information Management* 14(1), p. 47–62.
- Stone & Webster (2002), Corruption revelations rock Ghanaian water sector. *Global Water Intelligence*, Vol. 3 No. 8
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage Publications, Inc.
- The Business and financial times (2013, January 28) US\$1.5bn World Bank funds held up Monday. The Business and financial times. Retrieved on 3 Feb. 2014 from <http://www.thebftonline.com/content/us15bn-world-bank-funds-held>.
- Themistocleous, M. & Irani, Z. (2002). Novel taxonomy for application integration, Benchmarking: *An International Journal*, 9(2), p. 154-65.
- Tolbert, C.J., & K. Mossberger. (2006). The effects of e-government on trust and confidence in government. *Public Administration Review*, 66(3) p. 354–69
- Torres, L., Pina, V., & Acerete, B. (2005). E-Government developments on delivering public

- services among EU cities. *Government Information Quarterly*, 22(2), 217–238.
- Udo, G.J. & Edoho, F.M., (2000). Information technology transfer to African nations. *Journal of Technology Transfer*, 25, p. 329-342
- UNDESA, (2009). Compendium of innovative e-government practices. Public Administration and Development Management volume iii.
- United Nations, (2003). World Public Sector Report: UN Global E-government Survey. New York
- United Nations, (2005). UN Global E-government Readiness Report 2005 : From E-government to E-inclusion United Nations, New York
- United Nations, (2008). UN e-government survey 2008. From EGovernment to Connected Governance. Retrieved from: http://www.unpan.org/egovkb/global_reports/08report.htm
- United Nations, (2010). UN e-government survey 2010. Leveraging E-government at a Time of Financial and Economic Crisis. Retrieved from: http://www.unpan.org/egovkb/global_reports/08report.htm (accessed 6/10/2013)
- Wade, R. R., & Grant, G. G. (2010) Critical issues pertaining to the planning and implementation of E-Government initiatives, *Government Information Quarterly*, 27, p. 26–33
- Weerakkody, V. & Dhillon, G. (2008). Moving from e-government to t-government: A study of process reengineering challenges in a UK local authority context. *International Journal of Electronic Government Research*, 4(4), p. 1-16.
- Weerakkody, V., El-Haddadeh R., & Al-Shafi S. (2011) Exploring the complexities of e-government implementation and diffusion in a developing country: Some lessons from the State of Qatar. *Journal of Enterprise Information Management*, 24(2), p. 172-196.
- West, D. M. (2004). E-government and the transformation of service delivery and citizen attitudes. *Public Administration Review*, 64, (1), 15–27
- Wettenhall, R. (2007). A Genuine Public Private Partnership? *The International Journal of Public Sector Management*, 20(5). <http://dx.doi.org/10.1108/09513550710772512>
- Whitson, T. L. & Davis, L. (2001) Best practices in electronic government: Comprehensive electronic information dissemination for science and technology. *Government Information Quarterly*, 18, 79-91.
- Wild, R., & Griggs, K. (2006). A funding choice decision model for financing promising e-government services. *Electronic Government: An International Journal*, 3(3), 241-255.

- Wing, L. (2005). Barriers to e-government integration. *The Journal of Enterprise Information Management*, 18(5), p. 511-530.
- World Bank, (2002). The e-government handbook for developing countries: A Project of InfoDev and The Center for Democracy and Technology.
- World Bank, (2004). Building Blocks of e-Governments: Lessons from Developing Countries, Development Economics Vice Presidency and Poverty Reduction and Economic Management Network (PREM Notes for Public Sector), No. 91
- World Bank, (2009). Public-Private Partnerships In E-Government: Knowledge Map. An infoDev publication prepared by: The Institute for Public-Private Partnerships
- World Bank, (2010). Project paper on an additional financing credit: eGhana project. Report no: 54603
- World Bank, (2011a) Global E-Government Outlook: The World Bank – Leader in International ICT Development and EGovernment Initiatives.
- World Bank, (2011b). Information and Communication Technologies in Developing Countries: Connecting People, Transforming Service Delivery, and Fostering Innovation.
- Wulf L. D., (2004) Ghana in Wulf L. D and Sokol J. B., Customs Modernization Initiatives: case studies. The World Bank, Washington.
- Yin, R. (2003). Case study research design and methods, 3rd ed. Thousand Oaks, CA: Sage Publications, Inc.

Consent Form for Respondents

I have read the Information Sheet for Respondents for this study and have had the details of the study explained to me.

My questions about the study have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I also understand that I am free to withdraw from the study at any time, or to decline to answer any particular questions.

I agree to provide information to the researcher under the conditions of confidentiality and anonymity set out on the Information Sheet.

Name:

Signature.....

Date:

19. What other incentives are needed to attract private participation in funding e-government projects in Ghana?

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20. What recommendation can you make in addressing these challenges?

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